| | |
|---|---|
| **From:** | John Kim |
| **To:** | James Strang (FIN) (James.Strang@ontario.ca) |
| **Cc:** | Felix Fung (MOF) (Felix.Fung@ontario.ca); Madeleine Morgenstern (PPAGS); Shajee Kathirgamanathan; Tomasz Bugajski |
| **Subject:** | 3 2016-09-16 RAN OPG Business Plan v3_Markup.doc |
| **Date:** | Thursday, September 22, 2016 7:50:37 AM |
| **Attachments:** | 3 2016-09-16 RAN OPG Business Plan v3_Markup.doc |

---

Hi James,

Some additional edits from Ron.

Thanks,

John.

**TREASURY BOARD / MANAGEMENT BOARD OF CABINET**
**REQUEST ASSESSMENT NOTE**

| | |
|---|---|
| **Ministry:** | Energy |
| **Meeting Date:** | September 27, 2016 |
| **Agenda Class:** | Discussion (In Camera) |
| **Last reviewed by:** TB/MBC March 24, 2015 | **Tracking to:** Cabinet (October 5, 2016) |

| **SUBMISSION TITLE:** | 2016-2018 Business Plan for Ontario Power Generation |
|---|---|

## I. DECISION BEFORE THE BOARD

- Receive Ontario Power Generation's (OPG) 2016-2018 Business Plan framework with requirement to align with Treasury Board Secretariat's Executive Compensation Framework Regulation

## II. RECOMMENDATIONS:

| | |
|---|---|
| • Receive the 2016-2018 business plan for Ontario Power Generation | *Receive* |
| • Note Minister of Energy will provide concurrence with OPG's Business Plan, which will include a caveat that OPG align its compensation strategy with requirements of Treasury Board Secretariat's Executive Compensation Framework Regulation. | *Note* |

## III. FINANCIAL SUMMARY

| **$ Millions** | **2014-15** | **2015-16** | **2016-17** |
|---|---|---|---|
| Initiative cost requested | 0.0 | 0.0 | 0.0 |
| Initiative cost recommended | 0.0 | 0.0 | 0.0 |
| Recommended program base | 0.0 | 0.0 | 0.0 |
| Offset Recommended (Specify Ministry/Program) | 0.0 | 0.0 | 0.0 |
| Total Fiscal Impact | 0.0 | 0.0 | 0.0 |

## IV. KEY COMMENTS AND CONSIDERATIONS

As stipulated as part of the 2013-14 Results-based Planning process, the Ministry of Energy is submitting ~~Review of the~~OPG's annual business plans for review by Treasury Board ~~was stipulated as part of the 2013-14 Results-based Planning process~~.

Note that it is under the responsibility of the Minister of Energy on whether or not to provide the Minister's concurrence of OPG's annual multi-year business plan.

Under the memorandum of agreement (MOA, July 2015) between the Province (as sole shareholder and the Ministry of Energy as representative of the shareholder) and OPG, the company is required to annually submit its board-approved multi-year business plan to the Minister of Energy for concurrence. The concurrence letter from the Minister to the company will note key elements of the business plan, how these elements relate to the policy direction and priorities of the Province, and the government's expectation for the performance of the company including indicating any elements of the business plan the government does not concur. Appendix C provides more information on the concurrence process.

In March 2016, due to the timing of government decisions on Darlington nuclear refurbishment, OPG submitted a preliminary non-Board--approved draft of its business plan to the Ministry. Financial figures from the preliminary draft business plan were not incorporated into the already finalized Province's fiscal plan for the 2016 Budget. The Ministry of Energy indicates it is generally supportive of the fiscal, financial and operational strategies laid out in the business plan.

The earnings before tax (net income and income tax payments in lieu – PILs) of OPG are consolidated on the Province's financial statements and have one-for-one impact on the Province's surplus/deficit position. OPG is expected to submit its next multi-year business plan later this year for the period starting January 1, 2017.

***Overview of Current Business Plan***

OPG's 2016-18 Business Plan details key company undertakings such as business transformation and nuclear refurbishment that will have a substantial electricity system benefit, ratepayer and shareholder impacts. These items were flagged in the previous year's multi-year business plan as well.

- Key Income Statement Forecasts:
  - The figures in the OPG Board approved 2016-2018 Business Plan show a decrease in earnings before tax of $289 million in 2016-17 and an improvement of $194 million in 2017-18 over the estimates in the 2016 Budget, which was largely based on the estimates from the 2015 Budget. OPG is projecting generally growing net income contributions to the Province's fiscal plan over the planning period. These estimates are highly dependent on electricity and financial market conditions, regulatory decisions by the Ontario Energy Board (OEB), potential changes to accounting standards or the basis of consolidation in Public Accounts, operational performance, and/or government policy, which can change materially. The first table in Appendix G shows the changes to Province's fiscal plan.
  - Annual Operations, Maintenance & Administration (OM&A) expenses from ongoing operations decline by ~$120 million in 2018 and by ~$230 million in 2021, primarily due to lower pension and other post-employment benefit (OPEB) costs. The plan also incorporates continued efficiency improvements expected to be achieved through business unit and support group initiatives, including attrition-based staff reductions in certain areas.
  - The cost of OPG generated electricity to customers is projected to remain ~40% below the average non-OPG cost of electricity to 2018, and over ~30% by 2021. Note: OPG provides predominantly, lower-cost baseload generating capability, rather than more expensive peaking generating capability.
  - Headcount Efficiencies – During the planned period, headcount from ongoing operations is forecasted to fall from 9,302 in 2016 to 8,811 in 2021.
    - Last year's concurrence letter included a caveat that OPG reduce its non-nuclear headcount by an additional 5% of 2015 levels by 2020. Using the 2015 business plan headcount level for 2015 (3716, which is consistent with the 2014 actual headcount of 3724), the 2020 projected headcount (3390) is an 8.8% reduction from 2015 Plan.
  - Key Projects: The plan assumes ongoing operations at Pickering for about four years beyond 2020, and that the execution of the Darlington refurbishment is consistent with approved budgets and as scheduled.

- Rate Application to the OEB
  - Rate Application – In May 2016, OPG filed a 5-year nuclear and hydroelectric rate application with the OEB covering the 2017-2021 period. The rate application includes a nuclear rate smoothing proposal to avoid price spikes that would arise during the Darlington refurbishment, by deferring the recovery of a portion of nuclear revenues to the post-refurbishment period.
  - Ratepayer Costs –OPG has estimated that the combined monthly bill impacts of new nuclear and hydroelectric rates to the typical residential customer ~~is expected~~ to average an annual increase of about $1.05 per month over the 2017-2021 period. The expected average annual impact on a typical residential customer's monthly bill over the period to 2021 is estimated to be ~0.7%.
- OPG's Executive Compensation Framework (Appendix F provides more information)
  - OPG's Business plan contains the company's proposed executive compensation framework. OPG has expressed an urgent need to adjust its compensation framework to ensure that effective leadership is in place for successful delivery on its key priorities and projects.
  - OPG's proposed compensation framework would target the 50th percentile relative to benchmarked peers for most roles. Treasury Board Secretariat (TBS) issued an Executive Compensation Framework Regulation that caps salary and performance-related payments for executives at no more than the 50th percentile of appropriate comparators.
  - ~~Acceptance~~ Concurrence of OPG's Business Plan ~~is required for fulfillment of~~ under the Memorandum of Agreement (MOA) ~~requirements, and~~ signals government support of OPG and its rate application.
    - The Ministry of Energy indicates conditional concurrence with OPG's Business plan would be explicit in that concurrence does not extend to OPG's proposed compensation framework, as embedded in its Business Plan. OPG would need to develop a new framework that demonstrates progress to meet the requirements outlined in TBS' regulation, working with the Minsitry of Energy and TBS. A new framework would require concurrence to implement.
- Capital Structure & Independent Borrowing Platform.
  - OPG is evaluating options to improve its actual capital structure to be more aligned with OEB's deemed capital structure used to set OPG's regulated rates.
  - OPG is also looking at the option to pursue a public capital market financing strategy. OPG indicates its 2016-2018 Business Plan does not reflect the impacts of any public financing strategy. OPG currently borrows for general corporate purposes from the Ontario Electricity Financial Corporation (an agency of the Ministry of Finance).
  - Once OPG has completed its evaluation, it will present options ~~for proceeding~~ for Shareholder concurrence.

**Commented [RK1]:** Should not presume proceeding with public capital borrowing. Options could include continuing to borrow from OEFC/the Province.

*Other Key Fiscal Risks:*

Regulatory risks: Potential disallowance of recovery of OPG's current or future deferral and variance account balances (including for the proposed nuclear rate smoothing), future treatment of pension costs.

Accounting risks: Any change in the basis of accounting used for consolidation of OPG on the Province's financial statements could result in potentially significant fiscal impacts.

Financing Costs: Higher cost public capital market borrowing would have a negative fiscal impact.

| | | | |
|---|---|---|---|
| **Name of analyst:** | James Strang | **Phone number:** | 7-2071 |
| **Date:** | September 20, 2016 | **Log number:** | |
| **Branch / Division:** | General Government, Planning and Resources Branch, PEM, TBS | | |

## APPENDIX A: PROPOSED MINUTE

Note receipt of a Business Plan for Ontario Power Generation.

In this regard,

i.) Note the Minister of Energy will provide Ontario Power Generation (OPG) with a concurrence letter for its Business Plan, with the caveat that acceptance of OPG's compensation strategies will be subject to OPG's future alignment with requirements of Treasury Board Secretariat's Executive Compensation Framework Regulation.

ii.) Direct the Ministry, in consultation with the Ministry of Finance / Ontario Financing Authority, to report back to the Board in early January each year with the approved or latest draft business plans for Ontario Power Generation for fiscal planning purposes.

| **FINANCIAL IMPACTS: CHANGES TO EXPENSE AND REVENUE** | | | | | **TABLE B1** |
|---|---|---|---|---|---|
| | | ***Fiscal Plan Basis*** | | | ***Appropriations Basis*** |
| **$ Millions** | | **2014-15** | **2015-16** | **2016-17** | **2014-15** |
| Initiative cost recommended | | 0.0000 | 0.0000 | 0.0000 | |
| *Expense changes:* | | | | | |
| Operating item | Oper | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Capital item | Cap | 0.0000 | 0.0000 | 0.0000 | 00000 |
| | | | | | |
| | | | | | |
| *Revenue changes:* | | | | | |
| Revenue increase/offset | | 0.0000 | 0.0000 | 0.0000 | |
| Revenue decrease | | 0.0000 | 0.0000 | 0.0000 | |
| **Total Fiscal Impact (draw from c-funds)** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## APPENDIX C: CONCURRENCE OVERVIEW

Under agreements between the Province (as sole shareholder) and OPG, the company is required to annually submit its multi-year business plan to the Minister of Energy for concurrence. Review of the business plan by Treasury Board prior to concurrence was stipulated as part of the 2013-14 Results-based Planning process (see below).

Concurrence is typically provided to OPG via a letter from the Minister of Energy. The letter will note key elements of the business plan, how these elements relate to the policy direction and priorities of the Province, and the government's expectation for the performance of the company. The letter may also indicate any elements of the business plan of which the government does not concur and/or provide additional guidance on expectations going forward.

The current submission looks at the multi-year business plan for OPG covering 2016-2018. Concurrence with the plan is still pending.

Below is the 2013-14 Results-based Plan Minute:

Directed the Ministry of Energy and its agencies, Ontario Power Generation Inc. and Hydro One Inc., in consultation with the Ontario Financing Authority, to report back:

- Annually each autumn with the respective multi-year business plans of the agencies as approved by the Boards of the companies, for review by Treasury Board/Management Board of Cabinet.
  - In this regard, the report should include the following, on a calendar and government fiscal year basis:
  - Multi-year financial and operational targets, including net income and earnings-before-tax.
  - Projected revenues and cash flows to the Province, including the Ontario Electricity Financial Corporation.
  - Planned financings from the Ontario Electricity Financial Corporation.
- Quarterly with financial projection updates and progress reports on the agencies' respective business plan targets and any other new developments, initiatives or risks that may have a material fiscal impact on the Province including variance analysis of last quarter and year-to-date against the annual business plan reviewed by Treasury Board/Management Board of Cabinet.

## APPENDIX D: PREMIER'S ADVISORY COUNCIL ON GOVERNMENT ASSETS

In April 2014, the Premier established a Premier's Advisory Council on Government Assets (PAC) to review and identify opportunities to optimize the value and performance of Ontario government business enterprises including OPG and Hydro One. In April 2015, PAC presented the Premier with a report detailing the Council's ~~initial~~final findings and recommendations.

- For OPG, PAC recommended a detailed focus on the Darlington refurbishment project, as well as specific efficiency enhancements.
- For Hydro One, PAC recommended selling, over time, a majority interest in Hydro One through share sales to the public.

The government has moved forward with these recommendations. Hydro One completed its first phase of share sales in November 2015 through an initial public offering (IPO), and ~~the~~a secondary offering in April 2016. In addition, the Province has approved the Darlington refurbishment project, announced in January 2016.

## APPENDIX E: SUMMARY OF KEY HIGHLIGHTS FROM BUSINESS PLANS

The Ministry indicates OPG financial and ratepayer forecasts show some changes from last year's business plan projections, as reviewed by Treasury Board in March 2015. This is in part because the rate application currently before the Ontario Energy Board include a number of significant changes, as discussed below.

*Rate Application:*

OPG is proceeding with a rate submission, currently under review by the Ontario Energy Board (OEB). The outcome of these proceedings will have a substantial impact on OPG's ability to achieve business plan targets.

In May 2016, OPG filed a 5-year nuclear and hydroelectric rate application with the OEB covering the 2017-2021 period. Consistent with the amendments to Ontario Regulation 53/05, the rate application includes a nuclear rate smoothing proposal to avoid price spikes that would arise during the Darlington refurbishment, by deferring the recovery of nuclear revenues to the post-refurbishment period. The business plan assumes a nuclear base rate increases of 11 per cent per year beginning in 2017, until the end of the Darlington refurbishment period with the nuclear rate smoothing and the hydroelectric base rate increases of about 1.5 per cent per year.

OPG has estimated that the combined bill impacts of new nuclear and hydroelectric rates to the typical residential customer is expected to average about $1.05 per month annually over the 2017-2021 period. The expected average annual impact on a typical residential customer's monthly bill over the period to 2021 is estimated to be ~0.7%. The cost of OPG generated electricity to customers is projected to remain ~40% below the average non-OPG cost of electricity to 2018, and ~35% by 2021.

It will be up to the OEB to approve OPG's rates through its rate application process, which includes public hearings and an extensive intervener process.

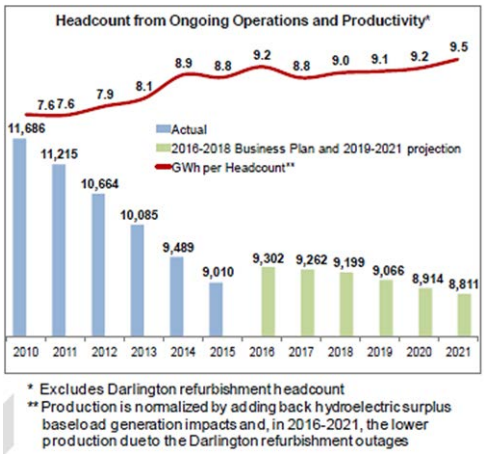
*Finding Efficiencies (Benefits Ratepayers):*

As part of a company-wide business transformation, OPG has saved over $1 billion in costs from January 2011 to December 2016 through headcount reductions of approximately 2,800 employees from on-going operations.

OPG has implemented increased pension contributions and other pension reforms for PWU, Society and Management staff to better align with the broader public sector. Through negotiations, OPG has achieved 1% compensation increases for PWU and Society for each of the next 3 years. As of the end of 2015 OPG had approximately 9,250 staff, with 90% represented by two unions. Of the 1,027 staff not represented by a union, 80 are Executives who would be covered by the proposed framework.

OPG has reduced management headcount by 19% per cent since 2010. OPG has also reduced total base salary costs for management by 18% since 2010.

OPG's headcount reductions forecasted for 2020 are consistent with the direction in the last concurrence letter to reduce non-nuclear headcounts by 5% based on 2015 levels by 2020. Non-nuclear headcount is projected to be approximately 3,400 in 2020, representing an approximate nine percent reduction from the 2015 staffing level included in OPG's 2015-2017 Business Plan, submitted last year. See graph on next page.




*Key OPG Risks:*

- All figures included in OPG's 2016-2018 Business Plan are based on USGAAP basis. Any decision to consolidate OPG's financials on the Province's books on an International Financial Reporting Standards (IFRS) may result in negative fiscal impacts. Ministry of Energy staff understand that staff from the Office of the Provincial Controller's Office are working with OPG to better understand impacts.

- Adverse OEB decisions that do not allow for the full recovery of costs as planned will reduce OPG's earnings and cash flows, and could stress credit metrics (e.g., disallowance of compensation costs). In line with US GAAP, OPG accounts for pension and OPEB on an accrual basis. If the outcome of the OEB's generic proceeding is to account for pension and OPEB on a cash basis, OPG would need to write-off the amounts in the accrual account (balance of ~$450M at the end of 2016 or over ~$900M by the end of 2021), with a one-for-one fiscal impact.

- An inability to achieve nuclear production targets would reduce OPG's earnings. Technical challenges associated with ongoing Pickering operations could result in difficulties reaching proposed forecasts. In addition, the OEB has increased OPG's Nuclear Generation forecasts in previous applications.

- There are important financial and reputation risks related to the Darlington Refurbishment Project that if the actual costs exceed the budgeted amounts or if OPG is not able to meet its schedule. Failure to meet the refurbishment objectives of the project will potentially have ongoing impact to the operational performance of the nuclear station, leading to long-term impacts to OPG.

- OPG was requested to work with the Office of the Provincial Controller and the Office of the Auditor General of Ontario to assess the impact of transitioning to the International Financial Reporting Standards (IFRS), in consolidating OPG to the Province's Accounts. Adoption of IFRS by the Province in consolidating OPG's financial results could have significant implications, including increased income volatility and material income impacts starting in 2015-16 fiscal year and up to $1 billion in 2016-17.

*Auditor and Ombudsman Reviews:*

On December 2, 2015, the Auditor General tabled her 2015 Annual Report which included a follow-up to the 2013 Value-for-money audit of OPG's Human Resources. The Auditor General found that OPG had fully implemented 8 of the 14 recommendations, with another 6 in the process of being implemented. The follow up found that OPG had made reasonable progress on all recommendations made in the original report. On January 13, 2016, the Minister of Energy wrote to OPG's requesting a status update in June 2016 on the progress of the remaining recommendations.

*Large Renewable Procurement:*

OPG was a successful applicant in the IESO's Large Renewable Procurement program as announced on March 10, 2016. OPG has been awarded a contract for a 44 MW Nanticoke Solar Photovoltaic project in Haldimand County.

## APPENDIX F: EXECUTIVE COMPENSATION

The Ministry has provided the following overview of OPG's proposed executive compensation framework:

OPG has indicated that an improved executive compensation framework is necessary to deliver on key projects, which is consistent with the commercial vision for the company.

Within its Business Plan, OPG proposed a compensation framework that would allow the company to begin to move its executives to the 50th percentile of the comparable benchmarks, established in a third-party review of compensation.

To align with requirements under TBS' compensation framework, OPG must revisit its current proposal and submit a compliant strategy to the Ministry of Energy in accordance with the regulation.

- OPG's current proposal sought to move ~80 executives up to the 50th percentile of comparable benchmarks and help OPG with its challenge of retaining and attracting the necessary skills to deliver on key government priorities (e.g., Darlington refurbishment).
- TBS' Compensation Framework Regulation caps salary and performance-related payments for designated executives in the public sector, including those at OPG, at no more than the 50th percentile of appropriate comparators. OPG would be required to seek public comment as part of developing its executive compensation program and post a compliant program to its public website on or before September 5, 2017.

OPG has indicated that for executive cohort, the following efficiencies have been realized:

- Reductions in the executive group headcount has resulted in cumulative savings of $10M, with an additional $5M/year going forward.
- Permanent elimination of 12 executive positions since 2012.
- Where executive vacancies have been filled, replacements are at or below predecessor cost.
- Increased employee pension contributions by 1% in 2016 and 2% in 2017 with reduced company contributions.
- New hires are at pension rule of 90 rather than rule of 84.

Other Considerations:

Further, financial advisors have made the following recent recommendations on OPG's executive compensation proposal:

- The 50th percentile target (of benchmarked peers) should measure total compensation including pension accumulation of the OPG employees, not just salaries.
- OPG should introduce a more affordable and less risky defined contribution plan to replace the existing defined benefit plans for new hires.
- OPG should substitute net income with some measure of operating productivity or cost structure in the Medium Term Incentive Plan (MTIP) performance targets.
- OPG should change the MTIP payout target from 70% to 80% and make the payout matrix less flat.
- Voluntarily expand the group of Named Executive Officers disclosed in Annual Information Forms.
- Introduce a policy that all newly externally hired management staff be given a defined contribution pension plan instead of a defined benefit plan.

## APPENDIX G: PROVINCIAL FISCAL PLAN IMPLICATIONS OF BUSINESS PLANS PROCEEDING –

Ontario Power Generation is a Government Business Enterprises (GBE), and consolidated to the Province's financials on a modified equity basis. The Province's Fiscal Plan reflects the entity as Income from Business Enterprises and Electricity Payments-in-Lieu of Taxes (PILs) (As Revenue only).

| **Revenue** ($millions) | **2015-16** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|---|
| **2016 Ontario Budget** | | | | |
| Ontario Power Generation | | | | |
| Net Income | 257 | 471 | 586 | 673 |
| Income Tax | 100 | 224 | 159 | 182 |
| **Consolidation Adj[1]** | 241 | | | |
| **2016- 2018 OPG Business Plan** | | | | |
| Ontario Power Generation | | | | |
| Net Income | 278 | 302 | 694 | 686 |
| Income Tax | 105 | 104 | 245 | 155 |
| **Consolidation Adj[1]** | 247 | | | |
| **Change in GBE Net Income & Consolidation Adjustment +/(-)** | | | | |
| Ontario Power Generation | 27[2] | (169) | 108 | 13 |
| **Change in GBE Income Tax PILs +/(-)** | | | | |
| Ontario Power Generation | 38 | (120) | 86 | (27) |
| **TOTAL OF OPG CHANGES** | **65** | **(289)** | **194** | **(14)** |

1. Includes Provincial consolidation adjustments totalling $241M for 2015-16 in Budget 2016 and $247M in Public Accounts for unrealized gains or losses on the nuclear funds net of Bruce variance account.
2. Change in OPG net income in 2015-16 of $21M plus change in ONFA-related consolidation adjustment, for comparison purpose only, of $6M in 2015-16.

OPG's fiscal results are also impacted by Other PILs to the Ontario Electricity Financial Corporation (OEFC) and the Province. The following table reflects these others impacts in addition to the latest net income and income tax PILs from OPG's August update.

| **Revenue** ($millions) | **2015-16** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|---|
| **2016 Ontario Budget** | | | | |
| Combined Other PILs & Other GRC | 341 | 342 | 351 | 359 |
| Other PILs (GRC to OEFC, Proxy Property Tax) | 214 | 213 | 223 | 232 |
| Other GRC (to MOF & Niagara Parks Commission)[1] | 127 | 129 | 128 | 137 |
| **2016-18 OPG Business Plan** | | | | |
| Combined Other PILs & Other GRC[2] | 335 | 353 | 358 | 366 |
| Other PILs (GRC to OEFC, Proxy Property Tax)[3] | 215 | 215 | 220 | 220 |
| Other PILs (GRC to MOF & Niagara Parks Commission)[3] | 120 | 135 | 140 | 140 |
| **OPG Monthly Update (August 2016)** | | | | |
| Net Income | - | 361 | - | - |
| Income Tax PILs to OEFC | - | 98 | - | - |

1. The GRC to MOF & Niagara Parks Commission (NPC) is provided to enable comparison to the 2016-18 Business Plan.
2. Include GRC to OEFC, GRC to MOF and NPC and Proxy Property Tax, provided to TBS by Energy on September 14, 2016.
3. Preliminary 2016-19 Business Plan forecast provided by Energy, January 29, 2016. (Do not add to the Combined Other PILs & Other GRC row, likely due to rounding.)

| | |
|---|---|
| **From:** | John Kim |
| **To:** | James Strang (FIN) (James.Strang@ontario.ca) |
| **Cc:** | Tomasz Bugajski; Felix Fung (MOF) (Felix.Fung@ontario.ca); Madeleine Morgenstern (PPAGS); Shajee Kathirgamanathan |
| **Subject:** | 3 2016-09-16 RAN OPG Business Plan v4_Markup.doc |
| **Date:** | Thursday, September 22, 2016 7:49:46 PM |
| **Attachments:** | 3 2016-09-16 RAN OPG Business Plan v4_Markup.doc |

---

Hi James,

Pls. see attached with minor edits from our ADM, related to the independent borrowing section.

Thanks,

John.

**TREASURY BOARD / MANAGEMENT BOARD OF CABINET**
**REQUEST ASSESSMENT NOTE**

| | |
|---|---|
| **Ministry:** | Energy |
| **Meeting Date:** | September 27, 2016 |
| **Agenda Class:** | Discussion (In Camera) |
| **Last reviewed by:** TB/MBC March 24, 2015 | **Tracking to:** Cabinet (October 5, 2016) |

| **SUBMISSION TITLE:** | 2016-2018 Business Plan for Ontario Power Generation |
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## IV. KEY COMMENTS AND CONSIDERATIONS

As stipulated as part of the 2013-14 Results-based Planning process, the Ministry of Energy is submitting OPG's annual business plans for review by Treasury Board to facilitate incorporating implications into the Province's fiscal plan.~~.~~

~~Note that~~ ~~I~~it is under the responsibility of the Minister of Energy on whether or not to provide the Minister's concurrence of OPG's annual multi-year business plan. The Treasury Board submission provides the Minister of Energy with an opportunity to highlight why concurrence is being given and any conditions placed on it. Appendix C provides more information on the concurrence process and the 2013-14 minute.

Under the memorandum of agreement (MOA, July 2015) between the Province (as sole shareholder and the Ministry of Energy as representative of the shareholder) and OPG, the company is required to annually submit its board-approved multi-year business plan to the Minister of Energy for concurrence.

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The concurrence letter from the Minister to the company will note key elements of the business plan, how these elements relate to the policy direction and priorities of the Province, and the government's expectation for the performance of the company including indicating any elements of the business plan the government does not concur.
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- Key Projects: The plan assumes ongoing operations at Pickering for about four years beyond 2020, and that the execution of the Darlington refurbishment is consistent with approved budgets and as scheduled.

- Rate Application to the OEB
  - Rate Application – In May 2016, OPG filed a 5-year nuclear and hydroelectric rate application with the OEB covering the 2017-2021 period. The rate application includes a nuclear rate smoothing proposal to avoid price spikes that would arise during the Darlington refurbishment, by deferring the recovery of a portion of nuclear revenues to the post-refurbishment period.
  - Ratepayer Costs –OPG has estimated that the combined monthly bill impacts of new nuclear and hydroelectric rates to the typical residential customer to average an annual increase of about $1.05 per month over the 2017-2021 period. The expected average annual impact on a typical residential customer's monthly bill over the period to 2021 is estimated to be ~0.7%.
- OPG's Executive Compensation Framework (Appendix F provides more information)
  - OPG's Business plan contains the company's proposed executive compensation framework. OPG has expressed an urgent need to adjust its compensation framework to ensure that effective leadership is in place for successful delivery on its key priorities and projects.
  - OPG's proposed compensation framework would target the 50th percentile relative to benchmarked peers for most roles. Treasury Board Secretariat (TBS) issued an Executive Compensation Framework Regulation that caps salary and performance-related payments for executives at no more than the 50th percentile of appropriate comparators.
  - Concurrence of OPG's Business Plan under the Memorandum of Agreement (MOA) signals government support of OPG and its rate application.
    - The Ministry of Energy indicates conditional concurrence with OPG's Business plan would be explicit in that concurrence does not extend to OPG's proposed compensation framework, as embedded in its Business Plan. OPG would need to develop a new framework that demonstrates progress to meet the requirements outlined in TBS' regulation, working with the Minsitry of Energy and TBS. A new framework would require concurrence to implement.
- Capital Structure & Independent Borrowing Platform.
  - OPG is evaluating options to improve its actual capital structure to be more aligned with OEB's deemed capital structure used to set OPG's regulated rates.
  - OPG is also looking at the option to pursue a public capital market financing strategy. OPG indicates its 2016-2018 Business Plan does not reflect the impacts of any public financing strategy. OPG currently borrows for general corporate purposes from the Ontario Electricity Financial Corporation (an agency of the Ministry of Finance).
  - OPG and ENERGY have been meeting in the spring and summer with Ministry of Finance / Ontario Financing Authority, TBS and other officials on this.
  - Once OPG has completed its evaluation, it will present options for ~~Shareholder~~ Provincial concurrence.

*Other Key Fiscal Risks:*

Regulatory risks: Potential disallowance of recovery of OPG's current or future deferral and variance account balances (including for the proposed nuclear rate smoothing), future treatment of pension costs.

Accounting risks: Any change in the basis of accounting used for consolidation of OPG on the Province's financial statements could result in potentially significant fiscal impacts.

Financing Costs: Higher cost public capital market borrowing (vs the Province's borrowing cost for OEFC to lend to OPG) would have a negative fiscal impact.

| | | | |
|---|---|---|---|
| **Name of analyst:** | James Strang | **Phone number:** | 7-2071 |
| **Date:** | September 22, 2016 | **Log number:** | |
| **Branch / Division:** | General Government, Planning and Resources Branch, PEM, TBS | | |

## APPENDIX A: PROPOSED MINUTE

Note receipt of a Business Plan for Ontario Power Generation.

In this regard,

i.) Note the Minister of Energy will provide Ontario Power Generation (OPG) with a concurrence letter for its Business Plan, with the caveat that acceptance of OPG's compensation strategies will be subject to OPG's future alignment with requirements of Treasury Board Secretariat's Executive Compensation Framework Regulation.

ii.) Direct the Ministry, in consultation with the Ministry of Finance / Ontario Financing Authority, to report back to the Board in early January each year with the approved or latest draft business plans for Ontario Power Generation for fiscal planning purposes.

| FINANCIAL IMPACTS: CHANGES TO EXPENSE AND REVENUE | | | | | TABLE B1 |
|---|---|---|---|---|---|
| | | *Fiscal Plan Basis* | | | *Appropriations Basis* |
| **$ Millions** | | **2014-15** | **2015-16** | **2016-17** | **2014-15** |
| Initiative cost recommended | | 0.0000 | 0.0000 | 0.0000 | |
| *Expense changes:* | | | | | |
| Operating item | Oper | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Capital item | Cap | 0.0000 | 0.0000 | 0.0000 | 00000 |
| | | | | | |
| | | | | | |
| *Revenue changes:* | | | | | |
| Revenue increase/offset | | 0.0000 | 0.0000 | 0.0000 | |
| Revenue decrease | | 0.0000 | 0.0000 | 0.0000 | |
| **Total Fiscal Impact (draw from c-funds)** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## APPENDIX C: CONCURRENCE OVERVIEW

Under agreements between the Province (as sole shareholder) and OPG, the company is required to annually submit its multi-year business plan to the Minister of Energy for concurrence. Review of the business plan by Treasury Board prior to concurrence was stipulated as part of the 2013-14 Results-based Planning process (see below).

Concurrence is typically provided to OPG via a letter from the Minister of Energy. The letter will note key elements of the business plan, how these elements relate to the policy direction and priorities of the Province, and the government's expectation for the performance of the company. The letter may also indicate any elements of the business plan of which the government does not concur and/or provide additional guidance on expectations going forward.

The current submission looks at the multi-year business plan for OPG covering 2016-2018. Concurrence with the plan is still pending.

Below is the 2013-14 Results-based Plan Minute:

Directed the Ministry of Energy and its agencies, Ontario Power Generation Inc. and Hydro One Inc., in consultation with the Ontario Financing Authority, to report back:

- Annually each autumn with the respective multi-year business plans of the agencies as approved by the Boards of the companies, for review by Treasury Board/Management Board of Cabinet.
  - In this regard, the report should include the following, on a calendar and government fiscal year basis:
  - Multi-year financial and operational targets, including net income and earnings-before-tax.
  - Projected revenues and cash flows to the Province, including the Ontario Electricity Financial Corporation.
  - Planned financings from the Ontario Electricity Financial Corporation.
- Quarterly with financial projection updates and progress reports on the agencies' respective business plan targets and any other new developments, initiatives or risks that may have a material fiscal impact on the Province including variance analysis of last quarter and year-to-date against the annual business plan reviewed by Treasury Board/Management Board of Cabinet.

## APPENDIX D: PREMIER'S ADVISORY COUNCIL ON GOVERNMENT ASSETS

In April 2014, the Premier established a Premier's Advisory Council on Government Assets (PAC) to review and identify opportunities to optimize the value and performance of Ontario government business enterprises including OPG and Hydro One. In April 2015, PAC presented the Premier with a report detailing the Council's final findings and recommendations.

- For OPG, PAC recommended a detailed focus on the Darlington refurbishment project, as well as specific efficiency enhancements.
- For Hydro One, PAC recommended selling, over time, a majority interest in Hydro One through share sales to the public.

The government has moved forward with these recommendations. Hydro One completed its first phase of share sales in November 2015 through an initial public offering (IPO), and a secondary offering in April 2016. In addition, the Province has approved the Darlington refurbishment project, announced in January 2016.

## APPENDIX E: SUMMARY OF KEY HIGHLIGHTS FROM BUSINESS PLANS

The Ministry indicates OPG financial and ratepayer forecasts show some changes from last year's business plan projections, as reviewed by Treasury Board in March 2015. This is in part because the rate application currently before the Ontario Energy Board include a number of significant changes, as discussed below.

*Rate Application:*

OPG is proceeding with a rate submission, currently under review by the Ontario Energy Board (OEB). The outcome of these proceedings will have a substantial impact on OPG's ability to achieve business plan targets.

In May 2016, OPG filed a 5-year nuclear and hydroelectric rate application with the OEB covering the 2017-2021 period. Consistent with the amendments to Ontario Regulation 53/05, the rate application includes a nuclear rate smoothing proposal to avoid price spikes that would arise during the Darlington refurbishment, by deferring the recovery of nuclear revenues to the post-refurbishment period. The business plan assumes a nuclear base rate increases of 11 per cent per year beginning in 2017, until the end of the Darlington refurbishment period with the nuclear rate smoothing and the hydroelectric base rate increases of about 1.5 per cent per year.

OPG has estimated that the combined bill impacts of new nuclear and hydroelectric rates to the typical residential customer is expected to average about $1.05 per month annually over the 2017-2021 period. The expected average annual impact on a typical residential customer's monthly bill over the period to 2021 is estimated to be ~0.7%. The cost of OPG generated electricity to customers is projected to remain ~40% below the average non-OPG cost of electricity to 2018, and ~35% by 2021.

It will be up to the OEB to approve OPG's rates through its rate application process, which includes public hearings and an extensive intervener process.

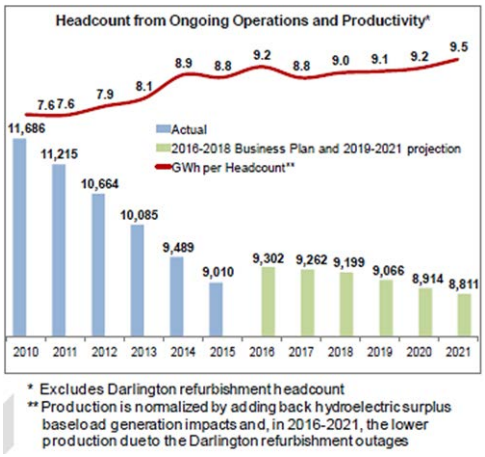
*Finding Efficiencies (Benefits Ratepayers):*

As part of a company-wide business transformation, OPG has saved over $1 billion in costs from January 2011 to December 2016 through headcount reductions of approximately 2,800 employees from on-going operations.

OPG has implemented increased pension contributions and other pension reforms for PWU, Society and Management staff to better align with the broader public sector. Through negotiations, OPG has achieved 1% compensation increases for PWU and Society for each of the next 3 years. As of the end of 2015 OPG had approximately 9,250 staff, with 90% represented by two unions. Of the 1,027 staff not represented by a union, 80 are Executives who would be covered by the proposed framework.

OPG has reduced management headcount by 19% per cent since 2010. OPG has also reduced total base salary costs for management by 18% since 2010.

OPG's headcount reductions forecasted for 2020 are consistent with the direction in the last concurrence letter to reduce non-nuclear headcounts by 5% based on 2015 levels by 2020. Non-nuclear headcount is projected to be approximately 3,400 in 2020, representing an approximate nine percent reduction from the 2015 staffing level included in OPG's 2015-2017 Business Plan, submitted last year. See graph on next page.




*Key OPG Risks:*

- All figures included in OPG's 2016-2018 Business Plan are based on USGAAP basis. Any decision to consolidate OPG's financials on the Province's books on an International Financial Reporting Standards (IFRS) may result in negative fiscal impacts. Ministry of Energy staff understand that staff from the Office of the Provincial Controller's Office are working with OPG to better understand impacts.

- Adverse OEB decisions that do not allow for the full recovery of costs as planned will reduce OPG's earnings and cash flows, and could stress credit metrics (e.g., disallowance of compensation costs). In line with US GAAP, OPG accounts for pension and OPEB on an accrual basis. If the outcome of the OEB's generic proceeding is to account for pension and OPEB on a cash basis, OPG would need to write-off the amounts in the accrual account (balance of ~$450M at the end of 2016 or over ~$900M by the end of 2021), with a one-for-one fiscal impact.

- An inability to achieve nuclear production targets would reduce OPG's earnings. Technical challenges associated with ongoing Pickering operations could result in difficulties reaching proposed forecasts. In addition, the OEB has increased OPG's Nuclear Generation forecasts in previous applications.

- There are important financial and reputation risks related to the Darlington Refurbishment Project that if the actual costs exceed the budgeted amounts or if OPG is not able to meet its schedule. Failure to meet the refurbishment objectives of the project will potentially have ongoing impact to the operational performance of the nuclear station, leading to long-term impacts to OPG.

- OPG was requested to work with the Office of the Provincial Controller and the Office of the Auditor General of Ontario to assess the impact of transitioning to the International Financial Reporting Standards (IFRS), in consolidating OPG to the Province's Accounts. Adoption of IFRS by the Province in consolidating OPG's financial results could have significant implications, including increased income volatility and material income impacts starting in 2015-16 fiscal year and up to $1 billion in 2016-17.

*Auditor and Ombudsman Reviews:*

On December 2, 2015, the Auditor General tabled her 2015 Annual Report which included a follow-up to the 2013 Value-for-money audit of OPG's Human Resources. The Auditor General found that OPG had fully implemented 8 of the 14 recommendations, with another 6 in the process of being implemented. The follow up found that OPG had made reasonable progress on all recommendations made in the original report. On January 13, 2016, the Minister of Energy wrote to OPG's requesting a status update in June 2016 on the progress of the remaining recommendations.

*Large Renewable Procurement:*

OPG was a successful applicant in the IESO's Large Renewable Procurement program as announced on March 10, 2016. OPG has been awarded a contract for a 44 MW Nanticoke Solar Photovoltaic project in Haldimand County.

## APPENDIX F: EXECUTIVE COMPENSATION

The Ministry has provided the following overview of OPG's proposed executive compensation framework:

OPG has indicated that an improved executive compensation framework is necessary to deliver on key projects, which is consistent with the commercial vision for the company.

Within its Business Plan, OPG proposed a compensation framework that would allow the company to begin to move its executives to the 50th percentile of the comparable benchmarks, established in a third-party review of compensation.

To align with requirements under TBS' compensation framework, OPG must revisit its current proposal and submit a compliant strategy to the Ministry of Energy in accordance with the regulation.

- OPG's current proposal sought to move ~80 executives up to the 50th percentile of comparable benchmarks and help OPG with its challenge of retaining and attracting the necessary skills to deliver on key government priorities (e.g., Darlington refurbishment).
- TBS' Compensation Framework Regulation caps salary and performance-related payments for designated executives in the public sector, including those at OPG, at no more than the 50th percentile of appropriate comparators. OPG would be required to seek public comment as part of developing its executive compensation program and post a compliant program to its public website on or before September 5, 2017.

OPG has indicated that for executive cohort, the following efficiencies have been realized:

- Reductions in the executive group headcount has resulted in cumulative savings of $10M, with an additional $5M/year going forward.
- Permanent elimination of 12 executive positions since 2012.
- Where executive vacancies have been filled, replacements are at or below predecessor cost.
- Increased employee pension contributions by 1% in 2016 and 2% in 2017 with reduced company contributions.
- New hires are at pension rule of 90 rather than rule of 84.

Other Considerations:

Further, financial advisors have made the following recent recommendations on OPG's executive compensation proposal:

- The 50th percentile target (of benchmarked peers) should measure total compensation including pension accumulation of the OPG employees, not just salaries.
- OPG should introduce a more affordable and less risky defined contribution plan to replace the existing defined benefit plans for new hires.
- OPG should substitute net income with some measure of operating productivity or cost structure in the Medium Term Incentive Plan (MTIP) performance targets.
- OPG should change the MTIP payout target from 70% to 80% and make the payout matrix less flat.
- Voluntarily expand the group of Named Executive Officers disclosed in Annual Information Forms.
- Introduce a policy that all newly externally hired management staff be given a defined contribution pension plan instead of a defined benefit plan.

## APPENDIX G: PROVINCIAL FISCAL PLAN IMPLICATIONS OF BUSINESS PLANS PROCEEDING –

Ontario Power Generation is a Government Business Enterprises (GBE), and consolidated to the Province's financials on a modified equity basis. The Province's Fiscal Plan reflects the entity as Income from Business Enterprises and Electricity Payments-in-Lieu of Taxes (PILs) (As Revenue only).

| **Revenue** ($millions) | **2015-16** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|---|
| **2016 Ontario Budget** | | | | |
| Ontario Power Generation | | | | |
| Net Income | 257 | 471 | 586 | 673 |
| Income Tax | 100 | 224 | 159 | 182 |
| **Consolidation Adj[1]** | 241 | | | |
| **2016- 2018 OPG Business Plan** | | | | |
| Ontario Power Generation | | | | |
| Net Income | 278 | 302 | 694 | 686 |
| Income Tax | 105 | 104 | 245 | 155 |
| **Consolidation Adj[1]** | 247 | | | |
| **Change in GBE Net Income & Consolidation Adjustment +/(-)** | | | | |
| Ontario Power Generation | 27[2] | (169) | 108 | 13 |
| **Change in GBE Income Tax PILs +/(-)** | | | | |
| Ontario Power Generation | 38 | (120) | 86 | (27) |
| **TOTAL OF OPG CHANGES** | **65** | **(289)** | **194** | **(14)** |

1. Includes Provincial consolidation adjustments totalling $241M for 2015-16 in Budget 2016 and $247M in Public Accounts for unrealized gains or losses on the nuclear funds net of Bruce variance account.
2. Change in OPG net income in 2015-16 of $21M plus change in ONFA-related consolidation adjustment, for comparison purpose only, of $6M in 2015-16.

OPG's fiscal results are also impacted by Other PILs to the Ontario Electricity Financial Corporation (OEFC) and the Province. The following table reflects these others impacts in addition to the latest net income and income tax PILs from OPG's August update.

| **Revenue** ($millions) | **2015-16** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|---|
| **2016 Ontario Budget** | | | | |
| Combined Other PILs & Other GRC | 341 | 342 | 351 | 359 |
| Other PILs (GRC to OEFC, Proxy Property Tax) | 214 | 213 | 223 | 232 |
| Other GRC (to MOF & Niagara Parks Commission)[1] | 127 | 129 | 128 | 137 |
| **2016-18 OPG Business Plan** | | | | |
| Combined Other PILs & Other GRC[2] | 335 | 353 | 358 | 366 |
| Other PILs (GRC to OEFC, Proxy Property Tax)[3] | 215 | 215 | 220 | 220 |
| Other PILs (GRC to MOF & Niagara Parks Commission)[3] | 120 | 135 | 140 | 140 |
| **OPG Monthly Update (August 2016)** | | | | |
| Net Income | - | 361 | - | - |
| Income Tax PILs to OEFC | - | 98 | - | - |

1. The GRC to MOF & Niagara Parks Commission (NPC) is provided to enable comparison to the 2016-18 Business Plan.
2. Include GRC to OEFC, GRC to MOF and NPC and Proxy Property Tax, provided to TBS by Energy on September 14, 2016.
3. Preliminary 2016-19 Business Plan forecast provided by Energy, January 29, 2016. (Do not add to the Combined Other PILs & Other GRC row, likely due to rounding.)

**From:** John Kim
**To:** Ronald Kwan
**Subject:** A call from OPCD
**Date:** Friday, January 13, 2017 4:13:14 PM

---

Hi Ron,

Helen Graham and Cindy Veinot gave me a call. Helen called first and then asked me to a call with Cindy.

So DM of Energy appears to have engaged DM of TBS which is how OPCD received the deck. Energy asked for comments from an accounting perspective which is how OPCD seemed to have gotten engaged.

They wanted mostly clarification on Global Adjustment and what it covers. Cindy's comments were to the point that she would not see how this will not lead to a fiscal hit. That you cannot create a receivable/asset , unless there is a counterparty or unless it is a rate regulated entity.

I'm running out of steam so will be heading out shortly but will try to provide you with a note this weekend.

Thanks,

John.

Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

**From:** Shajee Kathirgamanathan
**To:** John Kim
**Subject:** Cabinet Briefing Note
**Date:** Thursday, September 08, 2016 6:01:29 PM
**Attachments:** Cabinet Note - Electricity Price Mitigation v8.docx

---

Hi John,

Here's the revised Cabinet Briefing note.

File attached also found here:
S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note\Cabinet Note - Electricity Price Mitigation v8.docx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Senior Advisor
Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

**Tab x**

**CABINET BRIEFING NOTE**

| | |
|---|---|
| **Committee:** | Cabinet |
| **Meeting Date:** | September ~~14~~13, 2016 |
| **Ministry:** | ENERGY |
| **Last reviewed by:** | **Tracking to:** Cabinet – September ~~14~~13, 2016 |

**[BASED ON DRAFT CABINET SUBMISSION]**

**SUBMISSION TITLE:** Electricity Price Mitigation (Ontario Rebate for Electricity Consumers)

## I. REQUEST/DECISION REQUIRED:

The Ministry of Energy is proposing measures to provide relief to various electricity consumer classes. These measure include:

1.a. Provide an ~~pre-tax~~ 8% rebate equal to the provincial portion of HST to consumers eligible for the ~~to~~ Regulated Price Plan (RPP) ~~consumers~~;

1.b. Updating Rural or Remote Rate Protection (RRRP);

2.a. Expanding the Industrial Conservation Initiative (ICI) eligibility to customers above 1MW in all sectors;

~~2.b.~~ Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest 1% reduction in rates, with modest savings from proceeds intended for electricity relief through the Climate Change Action Plan to provide fiscal offsets.

~~2.c.~~

~~2.d.~~2.b. ~~[Approve in principle an expenditure increase estimated at $261M [estimate subject to refinement from ENERGY] in 2016-17 for the Electricity Price Mitigation, offset from the Treasury Board Contingency Fund.]~~

**Commented [SK21]:** Re-ordered/numbered to align with revised deck.

**Commented [SK22]:** Unclear if this is necessary for the cabinet note as the TB/MBC note may be worried more on fiscal implications.

**Commented [RK3]:** Remove from here, but should be part of fiscal impact part of the note.

**Commented [SK24R3]:** Will do. It's in the financial summary section.

## II. KEY POINTS:

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online.

As part of the 2016 Budget, the government committed to mitigating electricity cost impacts that were anticipated from the cap and trade program. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable for residential and industrial consumers. This included a commitment to provide a modest benefit of up to $2 per month, on average, to residential consumers.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a

cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the CCAP commitment and additional price mitigation, the Ministry of Energy has developed price mitigation options that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

| | Measure | Targeted Recipients | Impact (annually) | |
|---|---|---|---|---|
| | | | Fiscal | Rate Base |
| **1.a** | 8% Rebate to Regulated Price Plan eligible consumers | Residential, small business, small farms and other small users | $1B | - |
| **1.b** | Updating Rural or Remote Rate Protection | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. | - | $110M |
| **2.a** | Expanding ICI eligibility to customers above 1MW in all sectors | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors | - | $47M/ $82M* |
| **2.b** | Redirecting cap and trade proceeds recycling:<br>• As part of the original CCAP policy, $330M of the cap & trade proceeds was to be recycled for electricity price mitigation for residential and non-residential users.<br>• Under this proposal, $270 M would be used to mitigate non-residential users<br>• provides $60M for potential fiscal offsets to the 8% rebate | Commercial and industrial electricity customers | ($60M)** | - |

*Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.
**To meet the Budget 2016 commitment, the Climate Change Action Plan (CCAP) committed $1.3B from the Greenhouse Gas Reduction Account (GGRA) or about $330M annually. Current proposal will require $60M less or $270M annually. Assumes the $60M is diverted to in-plan initiatives.

- ENERGY provided the following overview of bill impacts:

| Regulated Price Plan (Residential) Impact[1]* | | Class B (Commercial)[4] | Class A (Industrial)[4] | |
|---|---|---|---|---|
| Average[2] (750 kWh/month) | Rural[3]** (1000 kWh/month) | | Existing | New |

**Commented [SK25]:** Table below from the latest ENERGY Deck (FPC Major Project Morning of Sept 8).

| | | | | |
|---|---|---|---|---|
| -$~~10~~11/month (-~~6~~8%) | -$45/month (-20%) | -$1/MWh (-1%) | -$1/MWh (-1%) | Up to -$52/MWh (-34%) |

~~Note: The impact of cap and trade would not be added to electricity bills until 2017 and impact of ICI would not be added until 2018. All impacts included here for illustrative purposes~~

1~~*~~. ENERGY did not provide the monthly impact for other Regulated Price Plan not classified as Residential (eg. farms, small businesses) that would benefit from the 8% Rebate to Regulated Price Plan.

2. Regulated Price Plan Impact represents the pre-tax values of 8% rebate and does not include the impact of ICI expansion and RRRP update (total impact of $1.31/month based on 750 kWh/month).

3.~~**~~ Rural customers refers to those Hydro One customers eligible to receive RRRP (R2 rate class customers). Impact shown is pre-tax and does not include the impact of ICI expansion and RRRP update (total impact of $1.74/month based on 1000 kWh/month).

4. The impact of cap and trade would not be added to electricity bills until 2017 and impact of ICI would not be added until 2018.

**1.a. 8% Rebate to Regulated Price Plan (RPP)**

- An 8% rebate ~~on the pre-tax portion~~ for Regulated Price Plan (RPP) eligible consumers would be equal to the provincial portion of HST and funded by the tax base.
- The $1 billion figure is a 2017 to 2020 calendar year average of cost estimates developed by Ministry of Energy staff, as follows:

| *$ millions* | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|
| | 1,003 | 1,014 | 975 | 1,049 |
| Avg. 2017-20 | 1,010 | | | |

- On a fiscal year basis, the above estimates become:

| *$ millions* | **2016-17** | **2017-18** | **2018-19** | **2019-20** |
|---|---|---|---|---|
| | 261 | 1,006 | 1,004 | 994 |
| 3-Year Avg. | 1,001 | | | |

- Ministry of Energy staff are in the process of developing a refined estimate of the cost.

- The rebate would appear directly on bills. As such, Local Distribution Companies (LDC) would be the delivery mechanism for the rebate.
  - While non-Regulated Price Plan eligible consumers would not see a benefit from the 8% rebate under this option, all industrial and commercial consumers would receive proceeds recycling through the Greenhouse Gas Reduction Account (GGRA).
  - Commercial and industrial consumers would also continue to receive input tax credits and Public Service Bodies would continue to receive PSB rebates.
- New legislation would be required and closely mirror the Ontario Clean Energy Benefit (OCEB) Act, 2010. More details further below.
- On-bill rebate delivery would likely require adjustments to Local Distribution Company (LDC) billing systems, which could impact delivery costs and timelines.
- In the past, LDCs have asked for at least six months' notice when implementing billing system changes.

  - One option to address any timing concerns is to allow LDCs to provide retroactive payments if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- The rebate would not be directly linked to HST.

**1.b. Updating (Increasing) Rural or Remote Rate Protection**

- RRRP funding supporting Hydro One R2 (rural) customers capped at current levels since 2004.
- The current program provides a monthly subsidy of ~~a about~~ $~~32~~31.50/month.
- Proposal will provide an additional $110 million in support to approximately 329,000 R2 customers to $235 million annually.
- Proposal will increase the subsidy by about $28/month and equalize R2 bills with Hydro One R1 (medium) density customers at 1,000 kWh.
- All residential consumers would see an average cost increase of about $0.60/month.
- ENERGY is considering options to periodically adjust the amount of rate protection eg. indexed at inflation or “trued up” on a regular basis.

**2.a. Expanding ICI Eligibility to customers above 1MW in all sectors**

- Lower threshold for participation in ICI to 1 MW and remove sectoral restrictions.
- Most newly eligible ICI participants who choose to opt-in to the program would be able to reduce their electricity costs substantially. All other consumers would see a relatively small increase in their bills.
- Expanding the ICI will reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods (80MW in the short term and 165 MW in the long term)
- Bill savings to new participants up to 21% in the short term and up to 34% long-term.
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - Companies that would become eligible under such an expansion include Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.
- Class B consumers would have a collective increase in the Global Adjustment of $47M in the short term and $~~87M~~ 82M in the long term from this initiative.
- Residential consumers would see an average cost increase of $0.42/month in the short term and $0.74/month in the long term.

**2.b. Redirect Cap and Trade Proceeds Recycling**

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers.
- Ontario’s Climate Change Action Plan (CCAP) includes up to $1.32 billion over 4 years to help keep electricity rates affordable for residential and industrial consumers.
- ~~The GGRA allocated $120M to average residential consumers, $170M to commercial and $40M to industrial consumers.~~

**Commented [SK26]:** Suggest deletion. This breakdown is not in the latest deck. Furthermore the chart on Slide 21 shows $335M original allocation, not $330M.

**Tab x**

- The 8% rebate to the Regulated Price Plan consumers fulfills the commitment to reduce residential rates by $2/month.
    - Proposal would lead to savings of the $120M in GGRA proceeds previously allocated to residential consumers, and help offset the fiscal impact of the 8% rebate to the Regulated Price Plan consumers.
- To provide price mitigation to commercial and industrial electricity consumers, ENERGY is proposing to direct an additional $60M of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to mitigate impacts.
- The current proposal would require an estimated $60 million less per year, or $0.24 billion less over the first compliance period.

## III. KEY CONSIDERATIONS

- This request ~~on~~for an 8% rebate does not align with the 2016 Budget fiscal plan and there are no proposed offsets.

- Due to the nature of the ICI Global Adjustment mechanism and cost recovery of the RRRP, the rate base proposals (~~#~~#21b and ~~#3~~#2a), while benefiting the targeted recipients, would **come at a cost to all other electricity rate payers in Ontario**.

- ~~This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets.~~

- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
    - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC) were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
    - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
    - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

-

**8% Rebate to Regulated Price Plan**

- The 8% ~~pre-tax~~ rebate would provide a typical residential consumer about an $11 per month benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average, cap and trade commitment.

- This 8% ~~pre-tax~~ rebate equal to the provincial portion of HST is similar to the previous Ontario Clean Energy Benefit (See Appendix for background) which provided a 10% post-tax rebate.
- The proposal indicates the Regulated Price Plan consumption amount to be 58TWh [Slide 2 in latest, FPC-Major Projects Deck]. Unclear if this applies to all eligible RPP consumers. Preliminary MOF consumption for the OCEB program approximated 64-68TWh of annual electricity consumption.
- The OCEB legislation was set out with an end date, and was subsequently modified to be capped at 3,000 kWh per month for all electricity customers after 8 months of the program.
    - This proposal does not specify any consumption caps nor an end date.
- Due to the lack of a cap, compared to OCEB, this proposal is more generous to the high volume RPP users.
    - OCEB rebate was applicable for up to 36,000 kWh annually (12 months times 3,000 kWh cap per month) while this proposal would be **more generous for those consuming more than 50,850 kWh** annually.

**Commented [SK7]:** 36000*0.113/0.08 = 50,850

36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate
0.08 – pre-tax effective rebate (8%)

  - Furthermore, highest volume users in this proposal would receive **up to 392% more** than under the OCEB program.
- Unclear why any proposals for a cap would be any more complex or onerous to LDCs than prior OCEB cap (instituted beginning September 2012 to termination of OCEB program in December 2015). However, cap may affect some types of consumers more than others, such as small businesses, condo dwellers in separately-metered units paying for electricity usage in the common elements, and residential consumers heating with electricity.

- ~~Blanket r~~Reduction in electricity prices for all users irrespective of consumption amounts hamper efforts to conserve electricity, and mutes TOU price signals.
- [Businesses ~~that fall under the Regulated Price Plan~~ pay little to no HST due to the Input Tax Credit. For those businesses eligible for the Regulated Price plan, ~~T~~the 8% reduction can be deemed a windfall ~~for these users~~.]

**Expanding ICI Eligibility to customers above 1MW in all sectors**

- Not all users with demand above 1MW will be in a position to take full advantage of the ICI expansion (eg. inability to load shift during peaks).
- Consumers in the commercial sector currently do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
  - Expansion of the ICI can give commercial consumers who are able to shift demand during peak hours, the opportunity to opt-in and benefit.

**Updating Rural or Remote Rate Protection**

- According to ENERGY, the RRRP is a $175M program with the majority of program funding ($125.5M) to Hydro One's lowest-density 'R2' customers
- ~~Unclear why customers on RRRP who are not Hydro One's R2 customers are not also targeted for this benefit.~~

**Redirect Cap and Trade Proceeds Recycling**

- Deck implies $60M in savings ~~from 8% Rebate for the RPP consumers.~~compared to earlier climate change electricity price mitigation recycling plan.
  - ~~Unclear, how the redirected amount $60M ($120M-$60M) will be allocated to commercial and industrial users.~~
  - A fiscal offset to the initiative would materialize only if the $60M is diverted to in-plan initiatives.

## IV. Cabinet Committee Discussion Summary

n/a

**Commented [SK28]:** 36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate

36000*0.113 = 4068 [OCEB effective rebated consumption]

Max under proposal: 250,000
pre-tax effective rebate: 0.08
Proposal's effective rebated consumption: 250,000*0.08 = 20,000

(20,000-4068)/4068 = **3.9164**

**Commented [SK29]:** Is this referring to the issue with common elements in condos and how they fall under one bill separate from the units?

**Commented [SK10]:** Will need to verify

**Commented [JK11]:** Which sectors? There was a deck recently that showed the composition of GA in the bills paid by sectors. I believe it was one of the price mitigation decks.

**Commented [SK212R11]:** This is a general statement.

Slide 32 in the 20160902_330pm deck.

**Commented [SK213]:** I'm trying to say that there's a portion of RRRP customers who will not receive this benefit.

Is there a reason these other customers are not also getting the expansion?

## V. Financial Summary

| $ Millions | 2016-17 | 2017-18 | 2018-19 |
|---|---|---|---|
| Initiative cost requested | 261 | 1,006 | 1,004 |
| Requested program base | 261 | 1,006 | 1,004 |
| Total fiscal impact (draw from c-funds) | 261 | 1,006 | 1,004 |

## VI. Performance Measures

[To estimate the impact of the program, the savings provided to the various consumers, and any potential for adjustments to the program, information should be provided from LDCs on consumption profiles and rebate amounts, particularly those affected by the 8% rebate on Regulated Price Plan Consumers.]

| | |
|---|---|
| **Name of analyst:** | Shajee Kathirgamanathan (416-325-1402) |
| **Date:** | September ~~6~~8, 2016 |
| **Branch / Division:** | Electricity Finance Branch / Corporate and Electricity Finance Division |

## APPENDIX A: PROPOSED POLICY MINUTE

[WORK IN PROGRESS, WAITING ON ENERGY'S FINAL SUBMISSION]

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

i) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

ii) Increase the total amount of rate protection available to R2 with low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2004.

iii) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

iv) Expanding eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

2. ENERGY seek necessary TB/MBC approvals.

3. ENERGY seek approvals for:

i) the proposed *Ontario Rebate for Electricity Consumers Act, 2016* – and any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments and consequential legislative amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*, subject to the Legislature's approval of the Act, including the following elements:

   i. The rebate would be available starting January 1, 2017;
   ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
   iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers electricity bills;
   iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way in which electricity vendors providing the rebate are to be reimbursed;

**Commented [SK214]:** This was from the Policy Minute. I assume this is the 'Minute' we are waiting for.

v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;
vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments.
vii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date.

4. ENERGY notes the following amendments:

i) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the *Electricity Act, 1998* to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

ii) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density rural electricity customers and provide for a periodic adjustment mechanism.

5. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

6. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan.

~~CABINET AGREED THAT:~~

~~1. THE MINISTRY OF ENERGY (ENERGY), WITH SUPPORT FROM THE MINISTRY OF FINANCE (MOF), SHALL PREPARE LEGISLATION THAT WOULD PROVIDE AN EIGHT PERCENT (8%) REBATE ON THE PRE-TAX COST OF ELECTRICITY FOR THE FOLLOWING CLASSES OF CONSUMERS:~~
~~A. ALL CONSUMERS ELIGIBLE TO BE BILLED UNDER THE ONTARIO ENERGY BOARD'S REGULATED PRICE PLAN; AND~~
~~B. ANY OTHER CONSUMERS WHO WERE ELIGIBLE FOR FINANCIAL ASSISTANCE UNDER THE *ONTARIO CLEAN ENERGY BENEFIT ACT, 2010* (OCEBA) DURING THE PERIOD THAT PROGRAM WAS IN PLACE.~~

~~2. THE LEGISLATION SHALL BE GENERALLY MODELLED UPON THE OCEBA, AND WOULD INCLUDE THE FOLLOWING ELEMENTS:~~
~~A. THE REBATE WOULD BE AVAILABLE STARTING JANUARY 1, 2017 AND BEFORE SUCH DATE AS MAY BE PRESCRIBED;~~
~~B. THE REBATE WOULD NOT BE SUBJECT TO A CAP UNLESS A CAP IS PRESCRIBED;~~
~~C. THE LEGISLATION WOULD SPECIFY THE TYPES OF COSTS TO WHICH THE REBATE WOULD OR WOULD NOT BE APPLIED, WITH AUTHORITY TO MAKE CHANGES BY REGULATION;~~

D. THE LEGISLATION WOULD ADDRESS INVOICING REQUIREMENTS, INCLUDING AUTHORITY TO PRESCRIBE HOW THE REBATE IS TO APPEAR ON CONSUMER ELECTRICITY BILLS;
E. THE LEGISLATION WOULD INCLUDE AUTHORITY TO PRESCRIBE THE WAY IN WHICH THE REBATE IS TO BE FLOWED THROUGH TO CONSUMERS, AND THE WAY IN WHICH ELECTRICITY VENDORS PROVIDING THE REBATE ARE TO BE REIMBURSED;
F. THE LEGISLATION WOULD INCLUDE RECORD-KEEPING REQUIREMENTS FOR ELECTRICITY VENDORS AND ANY OTHER PRESCRIBED PERSONS; AND
G. THE LEGISLATION WOULD INCLUDE INSPECTION POWERS FOR INSPECTORS APPOINTED BY THE MINISTER OF FINANCE, INCLUDING POWERS RELATED TO RECOVERY OF OVERPAYMENTS.

3. ENERGY AMEND O. REG. 429/04 (ADJUSTMENTS UNDER SECTION 25.33 OF THE ACT) MADE UNDER THE ELECTRICITY ACT, 1998 TO EXPAND ELIGIBILITY FOR CLASS A CONSUMERS AND CLASS A MARKET PARTICIPANTS UNDER THE INDUSTRIAL CONSERVATION INITIATIVE (ICI) TO ALL ELECTRICITY CONSUMERS AND MARKET PARTICIPANTS WITH A PEAK DEMAND ABOVE AN AVERAGE OF ONE MEGAWATT (1MW) WITH NO SECTORAL RESTRICTIONS ON PARTICIPATION.
4. ENERGY AMEND O. REG 442/01 (RURAL OR REMOTE ELECTRICITY RATE PROTECTION) MADE UNDER THE ONTARIO ENERGY BOARD ACT, 1998 TO INCREASE THE TOTAL AMOUNT OF RATE PROTECTION AVAILABLE TO LOW DENSITY HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE RATE PROTECTION PROGRAM BY $110 MILLION, EFFECTIVE JANUARY 1, 2017.
5. ENERGY CONSIDER AND, IF APPROPRIATE, UTILIZE A MECHANISM TO PERIODICALLY ADJUST THE TOTAL ANNUAL AMOUNT OF RATE PROTECTION AVAILABLE TO HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE ELECTRICITY RATE PROTECTION REGULATION / PROGRAM, EFFECTIVE JANUARY 1, 2018.
6. ENERGY TO RECYCLE UP TO AN AVERAGE OF $270 MILLION OF CAP AND TRADE AUCTION PROCEEDS FROM THE GREENHOUSE GAS REDUCTION ACCOUNT PER YEAR OVER THE FIRST COMPLIANCE PERIOD (2017-2020) TO COMMERCIAL AND INDUSTRIAL ELECTRICITY CONSUMERS.
7. ENERGY AND MOF TO WORK WITH CABINET OFFICE (CO) AND PREMIER'S OFFICE (PO) ON COMMUNICATIONS PLAN.

**Tab x**

## APPENDIX B: BACKGROUND – ONTARIO CLEAN ENERGY BENEFIT

- OCEB was in effect from 2011 to 2015, and provided residential, farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax.
    - Effective September 2012 electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month.
- OCEB helped Ontario families through the transition to a more reliable and cleaner electricity system, with the monthly cap balancing the fiscal implications of providing electricity relief.
- OCEB costs totalled $1,006 million in 2013-14 and $1,078 million in 2014-15, with a projected cost for 2015-16 of $860 million (for the 9 months remaining in the program).

| **Eligible Consumers** | |
|---|---|
| **Categories Listed in Legislation (coincides with categories eligible for RPP)** | |
| **Residential** | • a dwelling<br>• a property within the meaning of the Condominium Act, 1998<br>• a residential complex, within the meaning of the Residential Tenancies Act, 2006<br>• a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the Co-operative Corporations Act |
| **Farms** | • carries on a business that is a farming business for the purposes of the Farm Registration and Farm Organizations Funding Act, 1993, and<br>• holds a valid registration number assigned under that Act or the consumer's obligation to file a farming business registration form was waived pursuant to an order made under subsection 22 (6) of that Act |
| **Demand for electricity of 50 kW or less, or consumes not more than 250,000 kWh annually** | Would include small business, smaller broader- public-sector entities, and other small users. |
| **Special Cases (not eligible for RPP, but eligible for OCEB)** | |
| **Consumers On Retail Contracts** | Includes consumers with existing retail contracts and those who sign them during the duration of the program. |
| **Cornwall Electric and Hydro One Remote Communities Inc.** | Included since they are licensed distributors. |
| **Other Consumers Prescribed by Regulation** | 10 First Nations remote unlicensed distributors have been added by regulation. |
| **Exclusions** | |
| **Generators** | Generation station service and the microFIT distribution service charge are excluded in legislation. |

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Emily Kerr; Francisco Chinchon |
| **Cc:** | Gavin He |
| **Subject:** | Comments on Electricity Sector Transformation Proposals v14a.docx |
| **Date:** | Thursday, January 19, 2017 8:23:19 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v14a.docx |

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Good morning. I quickly put an initial marker down so that it could be turned around reasonably quickly. Also saved in the folder.

Thanks,

John.

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

**CONTEXT**

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

**COMMENTS**

- A significant number of Energy's proposals involve shifting costs from the rate base to the tax base.
- While the subset of proposals costed by Energy may have a fairly limited residential rate payer impact (e.g. about $6-7/month for residential, or less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (~~about~~ potentially more than $2 billion in 2017-18 if including yet-to-be-costed items).
- Additional fiscal exposure comes from proposals not yet costed by Energy (e.g., conservation costs, with Energy consulting OPCD on accounting). Energy also presents other proposals where costs and impacts are "TBD".
- In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts (e.g., of about $5.5 Bn in calendar 2017) during the period that GA costs are deferred, depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,535 | 1,225 | 2,035 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**ENERGY'S BROAD POLICY THEMES / RATIONALES**

A key theme / rationale cited by Energy is to no longer use the rate-base to pay for "social programs" by shifting the cost of OESP, RRRP and a proposed First Nation Rate to the tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by ≈ $0.55 in 2017, increasing to ≈ $1.45 in 2022.**<br><br>**Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈** | • Would provide on-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households.<br>• There may be a risk that expanding OESP or RRRP may change the view of the federal government that it is not a taxable benefit. When OESP was created, TPD worked with Finance Canada and Energy to ensure that it was not considered a taxable benefit. | • 2017-18: $162 M<br>• Increasing to $322 M in 2020-21.<br><br>• 2017-18: $666 M<br>• Increasing to $719 M in 2020-21 |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **$1.55 in 2017, increasing to ≈ $1.75 in 2022.** | | |
| | | |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.<br>o Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC] |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax". | • $260 million annually from |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | 2017-18 to 2020-21. |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding the Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • Current legislated March 31, 2018 end of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end.<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not fully address the fiscal impact/accounting treatment, or implementation<br>o Based on preliminary discussions with KPMG, Energy has identified the need to create an asset [to offset the creation of the liability] to be held by an entity yet to be determined, e.g. OEFC, IESO or LDCs<br>o Energy is said to be working with LSB, IESO, MOF, TBS and external accountants on legislative, regulatory and accounting requirements<br>• Likely will lead to significant annual fiscal impact and increase in net debt (estimated by Energy to be up to $~~66~~ 65 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • Annual fiscal impact not yet determined. |
| **Enhance Tax-base RPP Rebat by 5%, to 13%** | • This proposal would increase the funding requirement of the newly established Ontario Rebate for Electricity Consumers (OREC) by about $700 million per fiscal year, to reduce an average residential bill by about $7 each month or $84 annually.<br>• The current OREC provides average savings of about $11 each month or $130 annually. | • About $700 per year |

**DETAIL ON ENERGY PROPOSALS**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative

costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).

  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.

  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
  - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
  - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 1a~~2~~, ~~&~~1b~~3~~, and low GA Financing scenario), or more (e.g., about $5.5 bn in 2017 under ~~option 4~~high GA Financing scenario), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

Under the high GA Financing scenario~~option 4~~, now discussed in the Appendix of the latest deck, net debt could rise by $6~~5~~6 Bn over time, as estimated by Energy, and the cost pressure could be up to $51 per month by 2047. There would be significant interest rate exposure to the fiscal impact and accumulated debt estimates. The size of the deficit and debt impacts could affect the Province's credit rating and cost of debt.

**Commented [GH1]:** This option has been moved to the appendix section, not sure if need to be mentioned.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - ~~Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year~~
  - Option 1a~~2~~: Moderate ~~short-term cost reductions~~GA financing, paying $3.2 and $3.4 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA

  - Option 1b: Moderate GA financing, paying $1.1 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
  - Option 3: Low / GA financing – paying $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off, with limits of no more than $2 billion above the true cost of GA. ~~Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA~~
  - Option 4: High / GA financing – paying $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively, with no limits above the true cost of GA. ~~Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years~~
- Impact of the Level of Financing on Large Industrial Electricity Consumers provided in the deck was based on previous scenarios. It should be updated using above scenarios.
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

**SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION ~~–~~JANUARY 16 DECK**

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S ~~Recommended~~ Discussed Initiatives* | | | | | |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| Conservation Funding | | TBD | TBD | TBD | TBD |
| [Trillium Trust] | 100 | 390 | 390 | 390 | 390 |
| Departure Tax | 260 | 260 | 260 | 260 | 260 |
| DRC removal for Class B | 110 | 450 | | | |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total:[3] | **530** | **2,168** | **1,800** | **1,869** | **1,931** |
| | | | | | |
| Amortise and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total: | **1,225** | **2,035** | **1,715** | **1,826** | **1,826** |
| TOTAL (Excl. GA)[3] | 1,755 | 4,203 | 3,515 | 3,695 | 3,757 |

1. Based on estimated / forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION –JANUARY 18 DECK**

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| Amortize and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| ~~OESP – Expand Eligibility~~ | | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ |
| Low Income Conservation Program | 15 | 60 | 60 | 60 | 60 |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total:[3] | **75** | **1,128** | **1,210** | **1,279** | **1,341** |
| | | | | | |
| ~~Amortise and Debt-Finance Global Adjustment Costs~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total: | **1,225** | **2,035** | **1,715** | **1,826** | **1,826** |
| TOTAL (Excl. GA)[3] | **1,300** | **3,163** | **2,925** | **3,105** | **3,167** |

1. Based on estimated / forecasted numbers [May have some variations from the January 18 deck.]
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**January 16, 2017**

| | |
|---|---|
| **From:** | Francisco Chinchon |
| **To:** | John Kim; Emily Kerr |
| **Cc:** | Ronald Kwan; Gavin He |
| **Subject:** | Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx |
| **Date:** | Sunday, January 15, 2017 8:42:25 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx<br>ATT00001.htm |

Hi all, I added on the TT per Ron's comment.

Francisco

On Jan 15, 2017, at 6:56 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi,
>
> Just started to review. Looks good.
>
> On the table, I marked out some requests – split OESP and RRRP into separate rows, and add a 17-18 fiscal cost / exposure column (including commenting more on and adding in the fiscal risk of the OPG efficiencies related proposal). On the Trillium Trust, it might be fair to point out that Energy raises the prospect of investing in projects that would not otherwise be viewed by the OEB as projects that meet a system benefits test – so not really a rate saving if the projects would not have been done on the rate base. Really a tax-based subsidisation for other policy reasons.
>
> I'll review more later this evening.
>
> Thanks,
> Ron
>
> ---
>
> **From:** Gavin He
> **Sent:** January-15-17 4:40 PM
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
> **Subject:** RE: Rate Mitigation
>
> Hi Ron,
>
> Please find attached updated notes and Energy's deck with proposed edits and comments from SIFB, EFB, and SPFB.
>
> The files are also saved under below folder:
> S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Energy_Jan16
>
> Thanks,

Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge

>
>
> Sent from my iPad

<Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup2.docx>

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which ~~will~~is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has ~~taken steps to~~ expanded the Rural or Remote Electricity Rate Protection program, ~~expected to~~ saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $~~5~~6-~~6~~7/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (about $~~1~~2 billion ~~to $1.3 billion~~in 2017-18), with some proposals not costed (e.g., conservation costs, with Energy consulting OPCD on accounting). ~~Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion).~~ Energy also presents other proposals where costs and impacts are "TBD".

In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts of ~~up to over~~ more than $2 billion annually during the period that GA costs are deferred depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

**Commented [GH1]:** This was included in the debt-financing GA section below, so not sure if we need to mention it here.

Over the past five years, the existing fiscally ~~-~~funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility~~., and provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.~~** | • Significant fiscal exposure -- $0.42-0.845 bn in 2017 to $0.62-1.18 bn in 2022, ~~at current levels,~~ higher if OESP is enhanced. On-bill benefits.<br>• Funding programs through tax base estimated to reduce average monthly residential bill by approximately $2 in 2017, increasing to approximately $3 in 2022.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| **Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.** | • |
| **Amortize ~~Fund~~ conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account. ~~programs through the tax base for the~~** | • It is unclear whether consevation costs could be amortized according to accounting standards. If this option was pursued without establishing Provincial Controller agreement on accounting, there could be a fiscal risk. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion. |

**Commented [RK3]:** Could we add in a fiscal cost columbn instead, to show Energy's estimated 17-18 fiscal cost, or what we think is the exposure (accounting TBC can be footnoted).

**Commented [EK4]:** Updated based on slide 12 in Energy's updated deck.

**Commented [RK2]:** Can we split the OESP and RRRP into two rows,

| | |
|---|---|
| ~~remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time~~ | • Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base. ~~Potentially significant fiscal impact – current program costs are about $0.45 bn~~<br>o Conservation programs do provide an electricity system benefits, but ~~would now be~~ fiscal~~ly~~ funding~~ed, so~~ would result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value (share price) and impact fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• In the case of projects located in First Nation territories it could have an upfront fiscal impact if Province is not able to amortize those projects (TBC with OPCD).<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a windfall. It was fiscally neutral, it represented revenue to OEFC and an expense to Hydro One.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates<br>• OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding th Global Adjustment (GA) |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt |

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| | |
|---|---|
| | • Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022~~Total of about $0.4 to 0.45 Billion/year~~):

~~This w~~Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), ~~-~~and ~~the~~ Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs. ~~Energy notes that~~
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
  - ~~The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).~~
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.

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- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

~~Fund~~ Amortize Conservation Program~~s~~ Costs ~~through the Tax Base~~:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization of conservation costs was not permitted, a fiscal impact could result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

~~This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.~~

- ~~Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.~~

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all

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**Formatted:** List Paragraph, Indent: Left: 0.25", Bulleted + Level: 2 + Aligned at: 0.5" + Indent at: 0.75"
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fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
    - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
    - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
    - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
    - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
    - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
    - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that projects that the OEB does not currently consider eligible (as system benefits probably don't exceed investment costs) could be considered. This would mean moving forward projects for other policy objectives rather than rate mitigation.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income (revenue) to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income (expense) of Hydro One.
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- Having OEFC help implement this measure may require introducing changes to OEFC's objects as is legal mandate is to help reduce and pay down stranded debt.
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
    - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :

**Commented [JK5]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

**Commented [JK6]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost~~delay recovery of part~~ of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.~~by~~ This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to or more than $2 billion annually during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

~~[Check and Update]~~

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ~~OESP,~~ RRRP~~, First Nation rate~~ | | ~~398~~666 | ~~419~~684 | ~~433~~700 | ~~447~~719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| ~~Conservation Programs through Tax Base~~ | ~~110~~ | ~~450~~ | ~~450~~ | ~~450~~ | ~~450~~ |
| [Trillium Trust] | ~~TBD~~100 | ~~TBD~~390 | ~~TBD~~390 | ~~TBD~~390 | ~~TBD~~390 |
| Departure Tax | 260 | ~~TBD~~260 | ~~TBD~~260 | ~~TBD~~260 | ~~TBD~~260 |
| DRC removal for Class B | 110 | 450 | | | |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total: | ~~220~~470 | ~~1,298~~1,927 | ~~869~~1,560 | ~~883~~1,362 | ~~897~~1,419 |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total:[3] | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| TOTAL[3] | 1,~~445~~695 | 3,~~303~~933 | ~~2,584~~3,275 | ~~2,709~~3,188 | ~~2,723~~3,245 |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
~~**December 12**~~January 15**, 2016**

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Gavin He |
| **Subject:** | Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx |
| **Date:** | Saturday, January 14, 2017 2:24:47 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx |

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So Gavin….this template gives you a sense of how you could structure the GA note that Ron left off. He set up the Issue section nicely so start from there.

There could be a section before or after the context on what the proposal is…..as in a Proposal section. Then get into our commentaries.

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its deck.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

Energy's proposals generally involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value, including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |
| **E**nd the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

<u>OESP & RRRP (Total of about $0.4 to 0.45 Billion/year</u>):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

<u>Fund Conservation Programs through the Tax-Base</u>:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**December 12, 2016**

**From:** John Kim
**To:** Francisco Chinchon
**Subject:** Comments on Electricity Sector Transformation Proposals v3_Markup.doc
**Date:** Monday, December 12, 2016 4:53:08 PM
**Attachments:** Comments on Electricity Sector Transformation Proposals v3_Markup.doc

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Could you take one more look?  Hope I addressed your concern….

# Comments on Proposed Initiatives to Transform Ontario's Electricity Sector

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on the potential initiatives, as outlined in its deck.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e. meeting goals towards decarbonize) and modernize the electricity infrastructure (i.e. more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in ~~Hydro One~~ transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting ~~January~~ January 1, ~~2018~~ 2017 for eligible small businesses, farms and residential~~s~~ consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

Energy's proposals generally involve shifting ~~some~~ costs from the rate base to the tax base. ~~A general comment on the proposals would be that w~~While these proposals may have a fairly limited residential rate payer impact (~~,~~e.g. about $5-6/month for residential, ~~(~~less than 5% of the average monthly bill), the proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion)~~;~~. Note these impacts are lower than ~~somewhat down from the impacts from an~~ those prestend in an earlier deck ($1.3 billion to $1.9 billion).

Over the past five years, the fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt etirement Charge
NIERP – Northern Ontario Electricity Rate program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

## Proposals

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This ~~includes~~ would shift~~ing~~ the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), ~~as well as an additional 50% increase,~~ and the Rural or Remote Electricity Rate Program (RRRP), to the tax base.

*Note: that the fiscal exposure ~~is larger~~ would increase if the OESP take up rate is larger, and faster than assumed.*

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time the costs would transition ~~and to transition costs~~ to the new "green bank ~~eneity~~entity" ~~over time~~.

- Energy's rationale for t~~T~~he cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects. Incremental investments would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.) May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy is proposed using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC) ~~and helped reduce stranded debt~~. The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- 
- Using some or all of it for price mitigation would ~~change~~ require restating the net stranded debt paydown by OEFC ~~resulting from~~related to the IPO. [As the departure tax paid was fiscally neutral,

OEFC's uplift was primarily related to the deferred tax benefit and the s.50.3 benefit under the *Electricity Act*.]

- This would ~~also~~ be a one-time measure, ~~(~~potentially spread out over a few years~~)~~, and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) ~~(~~would have an impact of about $0.45 billion~~/year~~ in 2017-18 ~~to 2017-18)~~.

- The end of the DRC had previously been linked with the end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the proposed end date of the DRC.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ~~OCEBe~~ | - | - | - | - | - |
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| ~~OEPTC[3]~~OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| ~~1. OESP, RRRP, First Nation rate~~ | | ~~398~~ | ~~419~~ | ~~433~~ | ~~447~~ |
| ~~2. Conservation Programs through Tax Basee~~ | ~~110~~ | ~~450~~ | ~~450~~ | ~~450~~ | ~~450~~ |
| ~~4. Departure Tax~~ | | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ |
| ~~7. DRC Ended for Class B~~ | ~~110~~ | ~~450~~ | | | |
| **TOTAL** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

**Electricity Finance Branch, Corporate and Electricity Finance Division**
**Ontario Financing Authority**
**December 12, 2016**

**From:** John Kim
**To:** Darren Scanlan
**Subject:** Comments on Electricity Sector Transformation Proposals.doc
**Date:** Monday, December 12, 2016 4:01:50 PM
**Attachments:** Comments on Electricity Sector Transformation Proposals.doc

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So, sorry…

# Comments on Proposed Initiatives to Transform Ontario's Electricity Sector

The Ministry of Energy is providing an update on progress related to transforming the province's electricity sector by elaborating on the potential initiatives, as outlined in its deck.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e. meeting goals towards decarbonize) and modernize the electricity infrastructure (i.e. more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One in Hydro One transmission and distribution systems.

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2018 for eligible small businesses, farms and residential consumer and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month.

## COMMENTS

Energy's proposals generally involve shifting some costs from the rate base to the tax base. A general comment on the proposals would be that while the ~~e~~ proposals may have a fairly limited impact, e.g. about $5-6/month for residential (less than 5% of the average monthly bill), the proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion), somewhat down from the impacts from an earlier deck ($1.3 billion to $1.9 billion).

Over the past five years, the fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt etirement Charge
NIERP – Northern Ontario Electricity Rate program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This includes shifting the cost of the Ontario Electricity Support Program (OESP), as well as an additional 50% increase, and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework and to transition costs to the new "green bank eneity" over time.

- The cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.

- This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
- Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):

- Ending the DRC early for Class B customers (commercial, small industrial) (about $0.45 billion/year to 2017-18)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **OCEB** | - | - | - | - | - |
| **OREC** | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| **Ending DRC[2]** | 330 | 330 | -- | -- | -- |
| **NIERP** | 120 | 120 | 120 | 120 | 120 |
| **NOEC** | 25 | 25 | 25 | 25 | 25 |
| **OEPTC[3]** | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| **1. OESP, RRRP, First Nation rate** | | 398 | 419 | 433 | 447 |
| **2. Conservation Programs through Tax Base** | 110 | 450 | 450 | 450 | 450 |
| **4. Departure Tax** | | TBD | TBD | TBD | TBD |
| **7. DRC Ended for Class B** | 110 | 450 | | | |
| **TOTAL** | **1,415** | **3,303** | **2,584** | **2,709** | **2,723** |

**Electricity Finance Branch, Corporate and Electricity Finance Division**
**Ontario Financing Authority**
**December 12, 2016**

**From:** John Kim
**To:** Shajee Kathirgamanathan
**Subject:** Comments on Electricity Sector Transformation Proposals.doc
**Date:** Monday, December 12, 2016 3:34:33 PM
**Attachments:** Comments on Electricity Sector Transformation Proposals.doc

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Could you take a quick look?

# Comments on Proposed Initiatives to Transform Ontario's Electricity Sector

The Ministry of Energy is providing an update on progress related to transforming the province's electricity sector by elaborating on the potential initiatives, as outlined in its deck.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e. meeting goals towards decarbonize) and modernize the electricity infrastructure (i.e. more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One in Hydro One transmission and distribution systems.

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2018 for eligible small businesses, farms and residential consumer and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month.

## COMMENTS

Energy's proposals generally involve shifting some costs from the rate base to the tax base. A general comment on the proposals would be that while the proposals may have a fairly limited impact, e.g. about $5-6/month for residential (less than 5% of the average monthly bill), the proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion), somewhat down from the impacts from an earlier deck ($1.3 billion to $1.9 billion).

Over the past five years, the fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt etirement Charge
NIERP – Northern Ontario Electricity Rate program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This includes shifting the cost of the Ontario Electricity Support Program (OESP), as well as an additional 50% increase, and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework and to transition costs to the new "green bank eneity" over time.

- The cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.

- This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
- Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):

- Ending the DRC early for Class B customers (commercial, small industrial) (about $0.45 billion/year to 2017-18)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **OCEB** | - | - | - | - | - |
| **OREC** | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| **Ending DRC[2]** | 330 | 330 | -- | -- | -- |
| **NIERP** | 120 | 120 | 120 | 120 | 120 |
| **NOEC** | 25 | 25 | 25 | 25 | 25 |
| **OEPTC[3]** | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| **1. OESP, RRRP, First Nation rate** | | 398 | 419 | 433 | 447 |
| **2. Conservation Programs through Tax Base** | 110 | 450 | 450 | 450 | 450 |
| **4. Departure Tax** | | TBD | TBD | TBD | TBD |
| **7. DRC Ended for Class B** | 110 | 450 | | | |
| **TOTAL** | **1,415** | **3,303** | **2,584** | **2,709** | **2,723** |

**Electricity Finance Branch, Corporate and Electricity Finance Division**
**Ontario Financing Authority**
**December 12, 2016**

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Emily Kerr; Darren Scanlan |
| **Cc:** | Francisco Chinchon |
| **Subject:** | Comments on Electricity Sector Transformation Proposals.doc |
| **Date:** | Monday, December 12, 2016 2:49:31 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals.doc |

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Hi,

This is a file dump of the earlier work….I need to start going through but figured I shred the template we are working with.

John.

**COMMERCIALLY SENSITIVE AND CONFIDENTIAL**

## Comments on Proposed Initiatives to Transform Ontario's Electricity Sector

The Ministry of Energy is providing an update on progress related to transforming the province's electricity sector by elaborating on the potential initiatives, as outlined in its deck.

**CONTEXT**

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e. meeting goals towards decarbonize) and modernize the electricity infrastructure (i.e. more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One in Hydro One transmission and distribution systems.

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2018 for eligible small businesses, farms and residential consumer and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month.

**COMMENTS**

Energy's proposals generally involve shifting some costs from the rate base to the tax base. A general comment on the proposals would be that while the proposals may have a fairly limited impact, e.g. a little over $8/month for residentia (about little over 5% of the average monthly bill), the proposals would not come at a non-material incremental fiscal cost ($1.3 billion to $1.9 billion).

Over the past five years, the fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt etirement Charge
NIERP – Northern Ontario Electricity Rate program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

OESP & RRRP (Total of about $0.4 Billion/year):

This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

Industrial Conservation Initiative (ICI -- About $900+ Million/year):

Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.

- Energy is not initially proposing it be continued instead as taxpayer funded, but notes that about 30% price increase (from $85/MWh to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
- As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $100 million).

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.

- This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
- Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

Other fiscal cost risks (Total of about $0.8+ Bn):

- Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
- Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
- Lowering of the debt interest paid by OPG (about $30 – 70 million/yr between 2017 and 2021),

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **OCEB** | - | - | - | - | - |
| **OREC** | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| **Ending DRC[2]** | 330 | 330 | -- | -- | -- |
| **NIERP** | 120 | 120 | 120 | 120 | 120 |
| **NOEC** | 25 | 25 | 25 | 25 | 25 |
| **OEPTC[3]** | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| **1. OESP** | | 106 | 119 | 127 | 132 |
| **2. RRRP** | | 292 | 300 | 306 | 315 |
| **3. First Nations Delivery Rate** | | 18 | 18 | 18 | 18 |
| **4. Fund ICI through Tax Base** | | 900+ | 900+ | 900+ | 900+ |

Formatted Table

| | | | | | |
|---|---|---|---|---|---|
| **5. Departure Tax** | | TBD | TBD | TBD | TBD |
| **6. Conservation Amortisation** | | TBD | TBD | TBD | TBD |
| **7. DRC Ended for Class B** | 110 | 450 | | | |
| **8. Other** | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,305** | **3,901** | **3,197** | **3,237** | **3,261** |

**Electricity Finance Branch, Corporate and Electricity Finance Division**
**Ontario Financing Authority**
**December 12, 2016**

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Ronald Kwan |
| **Cc:** | Francisco Chinchon; Emily Kerr; Gavin He |
| **Subject:** | Comments on Electricity Sector Transformation Proposals v14a_markup3.docx |
| **Date:** | Thursday, January 19, 2017 11:30:12 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v14a_markup3.docx |

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Hi Ron,

Pls. see attached updated note.

Thanks,

John.

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

**CONTEXT**

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

**COMMENTS**

- A significant number of Energy's proposals involve shifting costs from the rate base to the tax base.
- While the subset of proposals costed by Energy may have a fairly limited residential rate payer impact (e.g. about $6-7/month for residential, or less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (~~about~~ potentially more than $2 billion in 2017-18 if including yet-to-be-costed items).
- Additional fiscal exposure comes from proposals not yet costed by Energy (e.g., conservation costs, with Energy consulting OPCD on accounting). Energy also presents other proposals where costs and impacts are "TBD".
- In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts (e.g., of about $5.5 Bn in calendar 2017) during the period that GA costs are deferred, depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

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- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,535 | 1,225 | 2,035 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**ENERGY'S BROAD POLICY THEMES / RATIONALES**

A key theme / rationale cited by Energy is to no longer use the rate-base to pay for "social programs" by shifting the cost of OESP, RRRP and a proposed First Nation Rate to the tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by ~~≈ $0.55 in 2017, increasing to ≈ $1.45 in 2022,~~$0.83 based on current OESP charge.**<br><br>**Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.** | • Would provide on-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households.<br>• There may be a risk that expanding OESP or RRRP may change the view of the federal government that it is not a taxable benefit. When OESP was created, TPD worked with Finance Canada and Energy to ensure that it was not considered a taxable benefit. | OESP<br>• 2017-18: $162 M<br>• Increasing to $32~~2~~3 M in 2020-21.<br><br>Conservation<br>• 2017-18: $~~666~~457 M |

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| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| • **Estimated to reduce average monthly residential bill by ≈ $~~1.55~~1.60 in 2017, increasing to ≈ $~~1.75~~1.80 in 2022.** | | • Increasing to $~~719~~493 M in 2020-21 |
| ~~**Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.**~~ Create a new low income conservation benefit program that would build on existing programs. | • ~~Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.~~<br>• ~~Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.~~<br>~~•~~ Conservation programs provide electricity system benefits. Fiscal-funding would result in a cross-subsidisation from tax-base.<br>~~•~~ Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan. | • ~~[If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC]~~$60 million per year. |
| ~~**Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding**~~ | • ~~Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects~~<br>• ~~Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small~~<br>• ~~May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle~~<br>• ~~Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return~~<br>• ~~Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].~~ | • ~~Up to $390 million annually from 2017-18 to 2020-21.~~ |

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| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | ~~• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms.~~ | |
| ~~**Dedicate the Departure Tax**~~ | ~~• In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".~~<br>~~• The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.~~<br>~~• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.~~<br>~~• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers.~~ | ~~• $260 million annually from 2017-18 to 2020-21.~~ |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding the Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • Current legislated March 31, 2018 end of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end.<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not fully address the fiscal impact/accounting treatment, or implementation<br>o Based on preliminary discussions with KPMG, Energy has identified the need to create an asset [to offset | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | the creation of the liability] to be held by an entity yet to be determined, e.g. OEFC, IESO or LDCs<br>o Energy is said to be working with LSB, IESO, MOF, TBS and external accountants on legislative, regulatory and accounting requirements<br>o Energy's deck clearly identify that under the current legal framework the GA would not be able to recover interest costs of the deferral<br>• Likely will lead to significant annual fiscal impact and increase in net debt (estimated by Energy to be up to $~~66~~ 65 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • Annual fiscal impact not yet determined. |
| **Enhance Tax-base RPP Rebat by 5%, to 13%** | • This proposal would increase the funding requirement of the newly established Ontario Rebate for Electricity Consumers (OREC) by about $700 million per fiscal year, to reduce an average residential bill by about $7 each month or $84 annually.<br>• The current OREC provides average savings of about $11 each month or $130 annually. | • About $700 per year |

**DETAIL ON ENERGY PROPOSALS INCLUDED IN THE JANUARY 18th DECK**

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Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.5142-0.8562 bn in 2017 to $0.6280-10.1892 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and

  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

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Low Income Conservation Benefit Program

- A new low income conservation benefit program would build on existing programs.
  - Existing low income programs delivered by local distribution companies and IESO help qualified homeowners and social and/or assisted housing providers improve the energy efficiency of their homes.
  - With respect to a new program Energy notes that participants could receive incentives for conservation measures not currently covered, increased incentive amounts, and targeted education and awareness initiatives.

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- Energy notes an illustrative budget of $60 million per year, but states that further analysis is required on costing and implementation details, including alignment with the existing conservation framework.

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~~Amortize Conservation Program Costs:~~

~~Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.~~

- ~~Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.~~
  - ~~Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.~~
  - ~~Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.~~
  - ~~Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.~~

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not proceeding due to cost barriers under the OEB's beneficiary pays principle.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset

~~by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).~~

- ~~The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.~~
- ~~Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.~~
- ~~Having OEFC help implement this measure may require introducing changes to OEFC's objects.~~
- ~~This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.~~

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.

- If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 1a~~2~~, ~~&~~1b~~3~~, and low GA Financing scenario), or more (e.g., about $5.5 bn in 2017 under ~~option 4~~high GA Financing scenario), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

Under the high GA Financing scenario~~option 4~~, now discussed in the Appendix of the latest deck, net debt could rise by $6~~5~~6 Bn over time, as estimated by Energy, and the cost pressure could be up to $51 per month by 2047. There would be significant interest rate exposure to the fiscal impact and accumulated debt estimates. The size of the deficit and debt impacts could affect the Province's credit rating and cost of debt.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - ~~Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year~~
  - Option 1a~~2~~: Moderate ~~short-term cost reductions~~GA financing, paying $3.2 and $3.4 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
  - Option 1b: Moderate GA financing, paying $1.1 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
  - Option 3: Low / GA financing – paying $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off, with limits of no more than $2 billion above the true cost of GA.~~Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA~~
  - Option 4: High / GA financing – paying $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively, with no limits above the true cost of GA.~~Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years~~
- It should be noted that under any of these options the relief period is quite limited when compare to the period under where future ratepayers will have to pay the cost of the deferral. Chart 1a and 1b (slides 10 and 11) illustrate that the impact of the relief would not last beyond 2022 (1a) and 2024 (1b) whill the higher cost caused by the deferral would hit electricity bills until 2042 at the least.

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- Impact of the Level of Financing on Large Industrial Electricity Consumers provided in the deck was based on previous scenarios. It should be updated using above scenarios.
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].
- Preliminary discussions between CEFD and OPCD staff suggest that there are material fiscal and reporting risk associated with this proposal.

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

**SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION –JANUARY 16 DECK**

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S ~~Recommended~~ Discussed Initiatives* | | | | | |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| Conservation Funding | | TBD | TBD | TBD | TBD |
| [Trillium Trust] | 100 | 390 | 390 | 390 | 390 |
| Departure Tax | 260 | 260 | 260 | 260 | 260 |
| DRC removal for Class B | 110 | 450 | | | |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total:[3] | **530** | **2,168** | **1,800** | **1,869** | **1,931** |
| | | | | | |
| Amortise and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total: | **1,225** | **2,035** | **1,715** | **1,826** | **1,826** |
| TOTAL (Excl. GA)[3] | 1,755 | 4,203 | 3,515 | 3,695 | 3,757 |

1. Based on estimated / forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

## SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION –JANUARY 18 DECK

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| Amortize and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| RRRP | | 457 | 469 | 479 | 493 |
| OESP – Enhance Benefit | | 162 | 225 | 279 | 323 |
| ~~OESP – Expand Eligibility~~ | | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ |
| Low Income Conservation Program | | 60 | 60 | 60 | 60 |
| First Nations Rate | | 18 | 18 | 18 | 18 |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total:[3] | **60** | **937** | **1,012** | **1,076** | **1,134** |
| | | | | | |
| ~~Amortise and Debt-Finance Global Adjustment Costs~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total: | **1,225** | **2,035** | **1,715** | **1,826** | **1,826** |
| TOTAL (Excl. GA)[3] | **1,285** | **2,972** | **2,727** | **2,902** | **2,960** |

1. Based on estimated / forecasted numbers [May have some variations from the January 18 deck.]
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

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## Appendix: Options not currently recommended by Energy

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|---|---|---|
| Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | • $260 million annually from 2017-18 to 2020-21. |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion. | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC]. |

- Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.
  - Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base
- Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan

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Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset

by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).

- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

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Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

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**From:** John Kim
**To:** John Kim
**Subject:** Cost Shifting - CEFD Slides-v8.pptx
**Date:** Sunday, November 27, 2016 8:20:59 PM
**Attachments:** Cost Shifting - CEFD Slides-v8.pptx

DRAFT

# Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,200* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,105** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from November LRC Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

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# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month, and provided a full 10 per cent benefit to almost all residential customers and most small retail businesses.<br><br>OCEB expired December 31, 2015, as planned. OCEB was put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. |
| **Ending DRC from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | The government removed the Debt Retirement Charge (DRC) from residential electricity users' bills as of January 1, 2016.<br><br>This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate Program** | 120 | March 2010 | As announced in 2015 Budget, the government committed to ongoing support for northern industrials with $120 million allocated annually.<br>The Northern Industrial Electricity Rate (NIER) was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year. Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER was initially established as a three-year program in Budget 2010, effective April 1, 2010,. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families, and up to $1,148 for qualifying seniors. [1] |

1. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline – Taxpayer-funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

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# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

**From:** John Kim
**To:** Gavin He
**Subject:** Cost Shifting - CEFD Slides-v8.pptx
**Date:** Monday, December 05, 2016 10:32:56 PM
**Attachments:** Cost Shifting - CEFD Slides-v8.pptx

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This one we did recently….

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DRAFT

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  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
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  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

| | |
|---|---|
| **From:** | Usman Zahid |
| **To:** | John Kim; Shajee Kathirgamanathan |
| **Cc:** | Emily Kerr |
| **Subject:** | Cost Shifts in the Electricity Sector |
| **Date:** | Tuesday, November 22, 2016 3:29:34 PM |
| **Attachments:** | Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v5_Markup.pptx |

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Hi John and Shajee,

Attached is the markup of Energy's slide deck on Cost Shifting with comments.

Usman

Ontario

MINISTRY OF
ENERGY

# Cost Shifts in Ontario's Electricity Sector

## Working Draft

November 2016

CONFIDENTIAL DRAFT

# Context

- Necessary investments in Ontario's electricity system have led to increased prices, prompting government to introduced a number of price mitigation programs for all consumer types.
  - In addition to existing rate mitigation programs, the 2016 Throne Speech announced a package of rate mitigation initiatives to address electricity prices for residential, commercial and industrial consumers.

- Ontario has a number of programs in place to manage residential electricity prices, including:
  - Ontario Electricity Support Program (OESP);
  - Rural or Remote Rate Protect (RRRP);
  - Northern Ontario Energy Credit (NOEC);
  - Ontario Energy and Property Tax Credit (OEPTC);
  - Ontario Rebate for Electricity Customers (OREC); and
  - Ending the Debt Retirement Charge (DRC) from residential bills.

- Ontario also has a number of programs in place to manage industrial electricity prices, including:
  - Industrial Conservation Initiative (ICI);
  - Industrial Electricity Incentive (IEI);
  - Industrial Accelerator Program (IAP);
  - Northern Industrial Electricity Rate Program (NIERP);
  - saveONenergy for Business Program; and
  - Demand Response.

# Context (cont'd)

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in Ontario's Electricity Sector

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in Ontario's Electricity Sector (cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

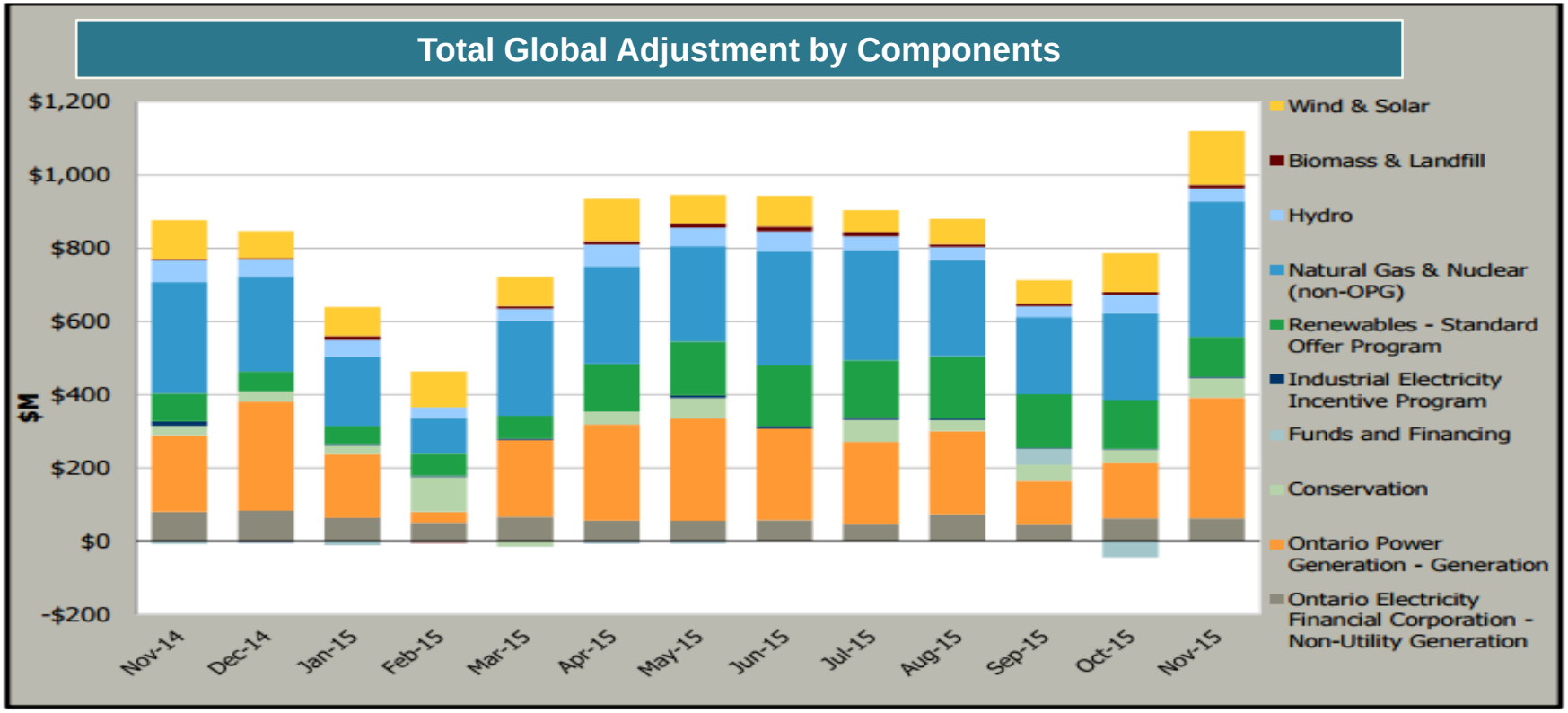
| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,000 |
| Ending DRC[2] | - | - | - | - | 75 | 300 | 300 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[2] | 445 | 445 | 445 | 445 | 445 | 445 | 445 |
| TOTAL | 1,621 | 1,583 | 1,591 | 1,654 | 1,526 | 1,190 | 1,890 |

1. 2016-17 onwards based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on estimates of Energy component of the rebate.

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011 – 2017.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1,190 million.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $1.9 billion.

DRAFT

# Additional Background on Taxpayer funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month, and provided a full 10 per cent benefit to almost all residential customers and most small retail businesses.<br><br>OCEB expired December 31, 2015, as planned. OCEB was put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. |
| **Ending DRC from Residential Bills** | ~300 | Jan 1, 2016 to Mar 31, 2018 | The government removed the Debt Retirement Charge (DRC) from residential electricity users' bills as of January 1, 2016.<br><br>This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,000 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST), an eight per cent savings. |
| **Northern Industrial Electricity Rate Program** | 120 | March 2010 | The Northern Industrial Electricity Rate (NIER) was extended in 2012 for an additional three-year term, effective April 1, 2013, and expiring March 31, 2016, with an allocation up to $120 million per year.<br><br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br><br>NIER was initially established as a three-year program in Budget 2010 and effective as of April 1, 2010, to provide an estimated $150 million per year to eligible large industrial companies in northern Ontario. |
| **Northern Ontario Energy Credit** | 25 | Budget 2010 Announcement | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | 445 | Budget 2010 Announcement | Delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families, and up to $1,148 for qualifying seniors. [1] |

1. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline - Taxpayer funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB.*
*The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

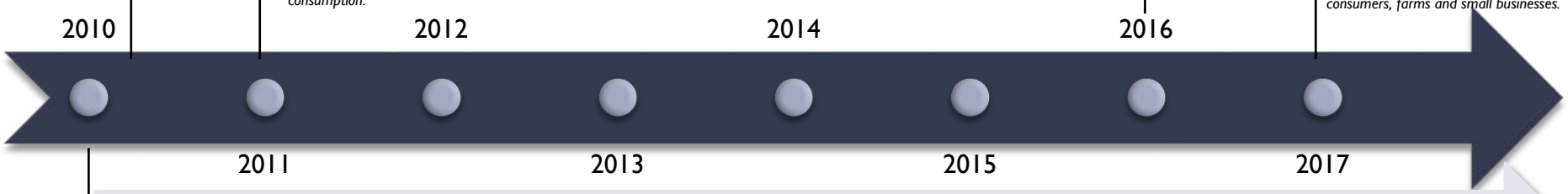
*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills**

*As part of its commitment to reduce electricity cost pressures, the government has removed the Debt Retirement Charge (DRC) from residential electricity users' bills beginning on January 1, 2016. This will save a typical residential user about $70 each year and will mean ending the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*




**Northern Industrial Electricity Rate Program**

## History of Northern Industrial Relief

**November 2006**
*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**
*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**
*The government announced the NIER program, with a projected fiscal cost of $150 million per year, to provide electricity price rebates for qualifying large industrial facilities in Northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**
*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**
*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Emily Kerr |
| **Subject:** | Debt-Financing GA - Sent to MO on 2017-01-10_EFB_v3_Markup.pptx |
| **Date:** | Friday, January 13, 2017 10:08:14 AM |
| **Attachments:** | Debt-Financing GA - Sent to MO on 2017-01-10_EFB_v3_Markup.pptx |

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Hi Emily,

Staff pulled the attached together. If we can somehow combine comments, that'd be great!

Thanks,

John.

Ontario

MINISTRY OF
ENERGY

# Debt Financing the Global Adjustment

January 10, 2017

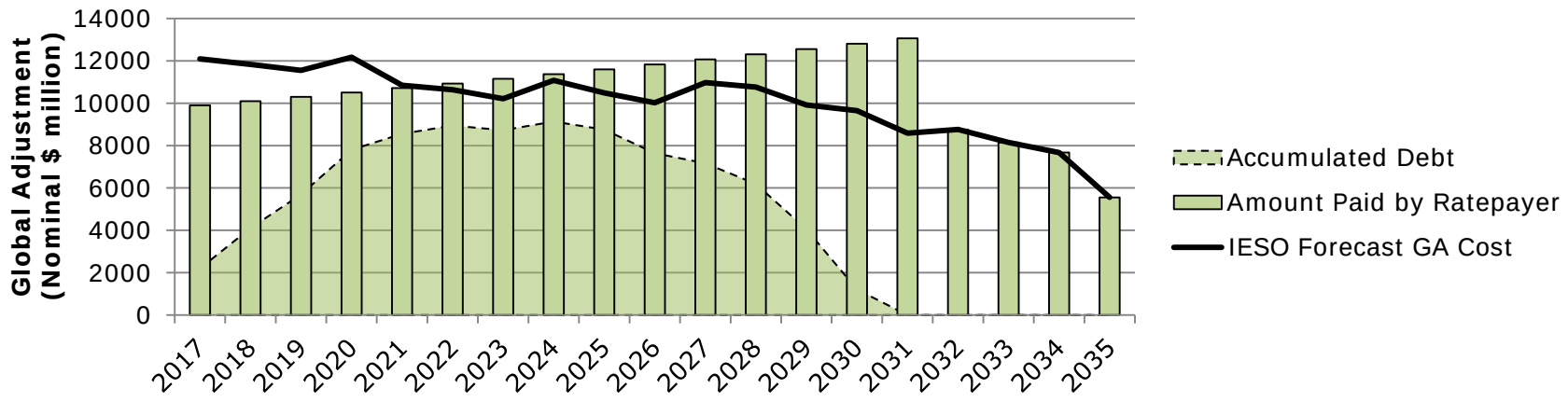
*Working Draft for Discussion Purposes Only*

# Purpose

- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.
- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.
- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

# Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.




**Sample debt financing**: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

# Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

# Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

# GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

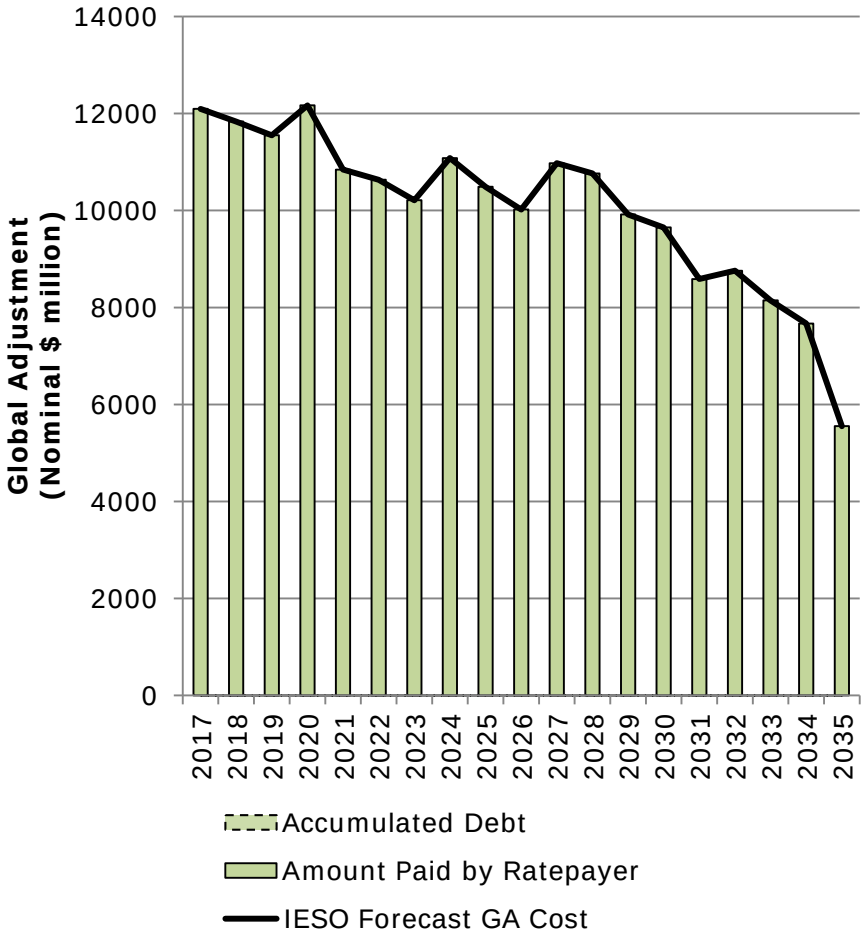
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

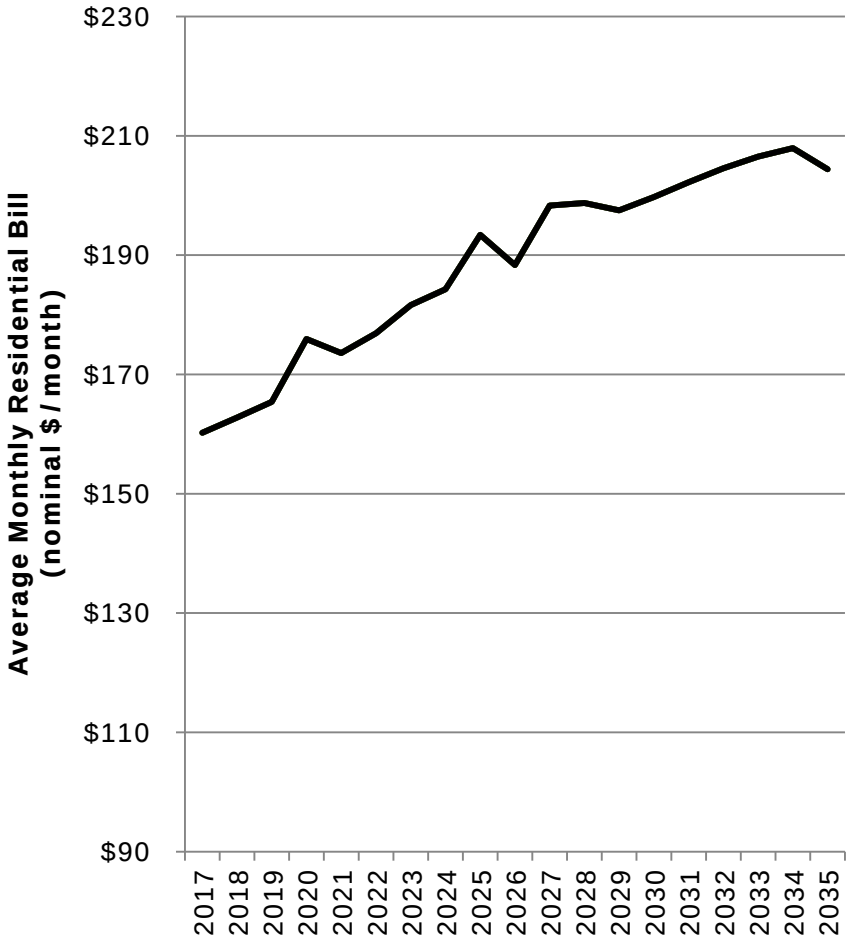
3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

# 1. Status Quo – Global and Residential Impacts

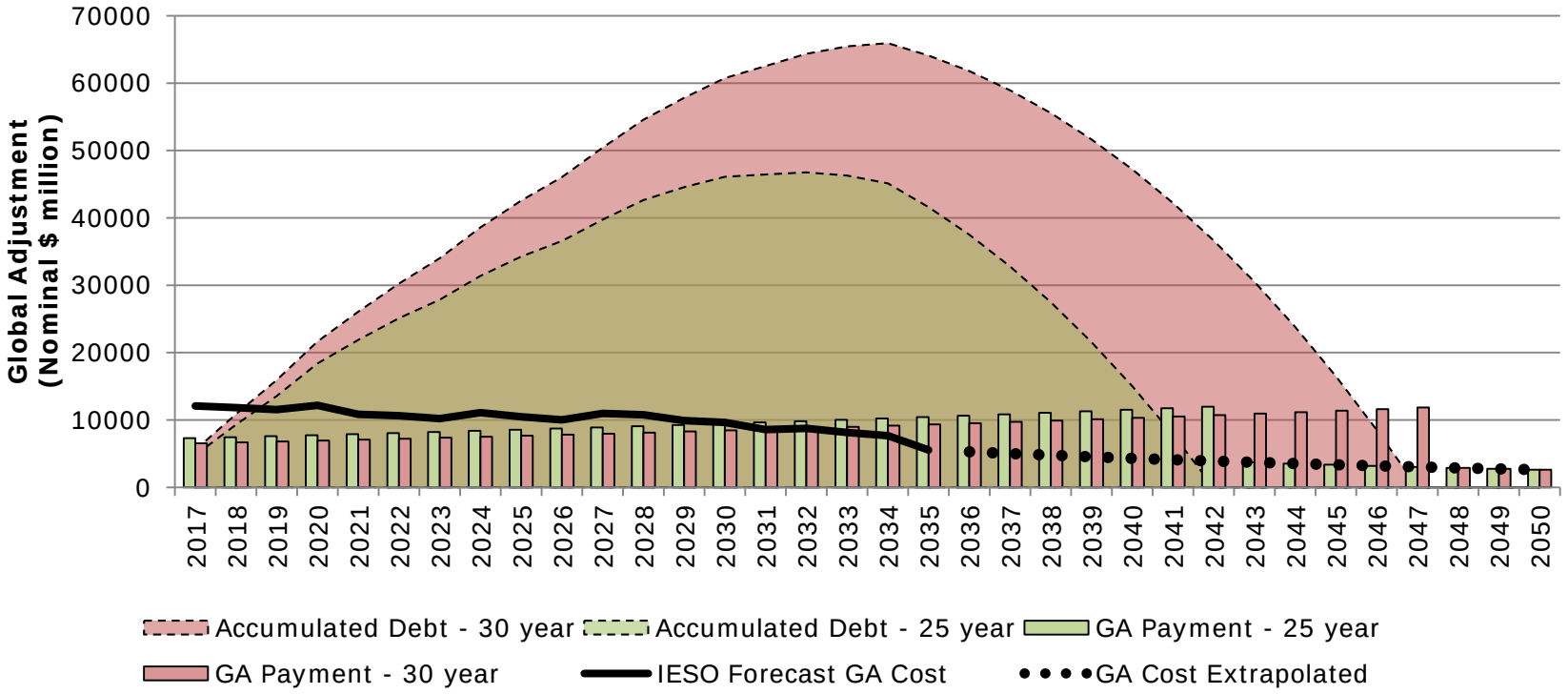
- Ratepayers continue paying the true cost of GA.



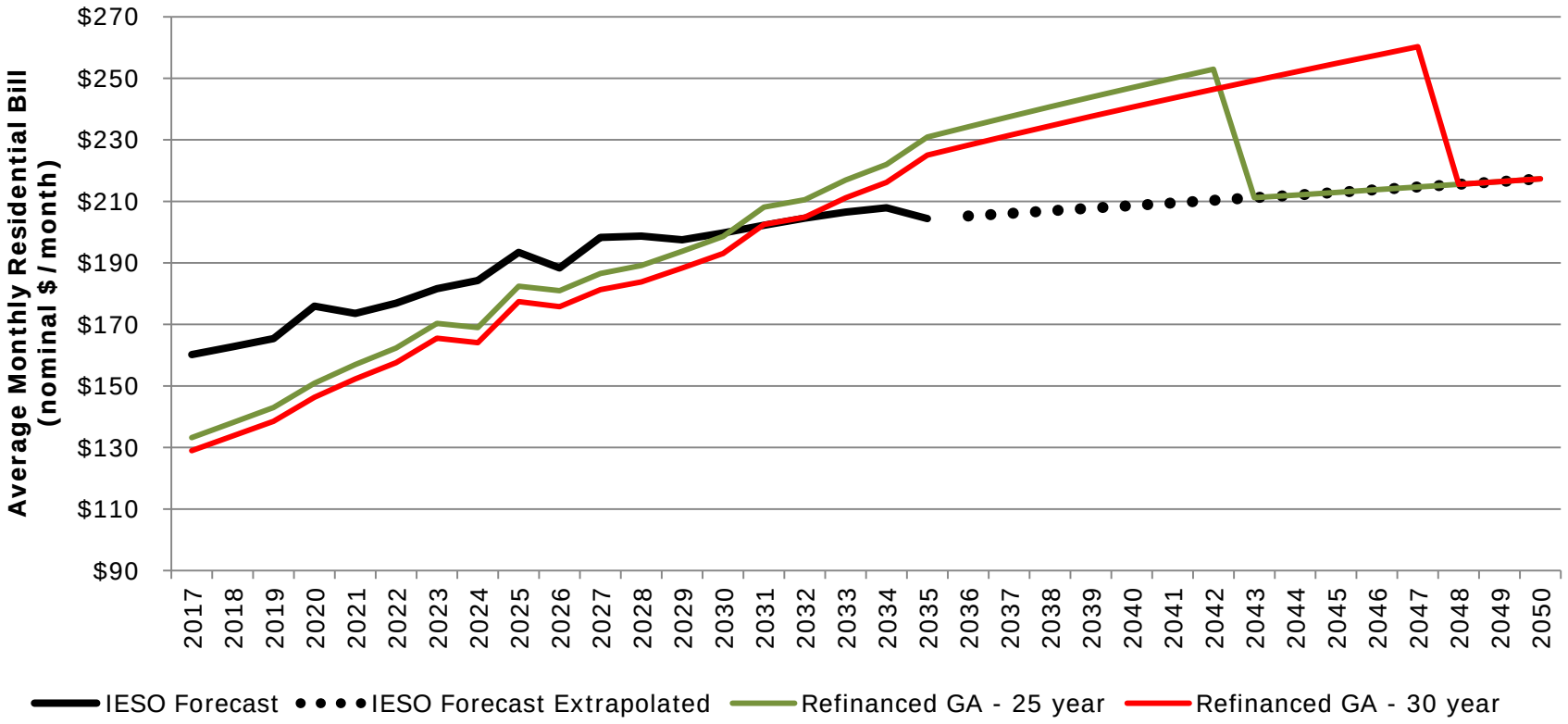
# 2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.




- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

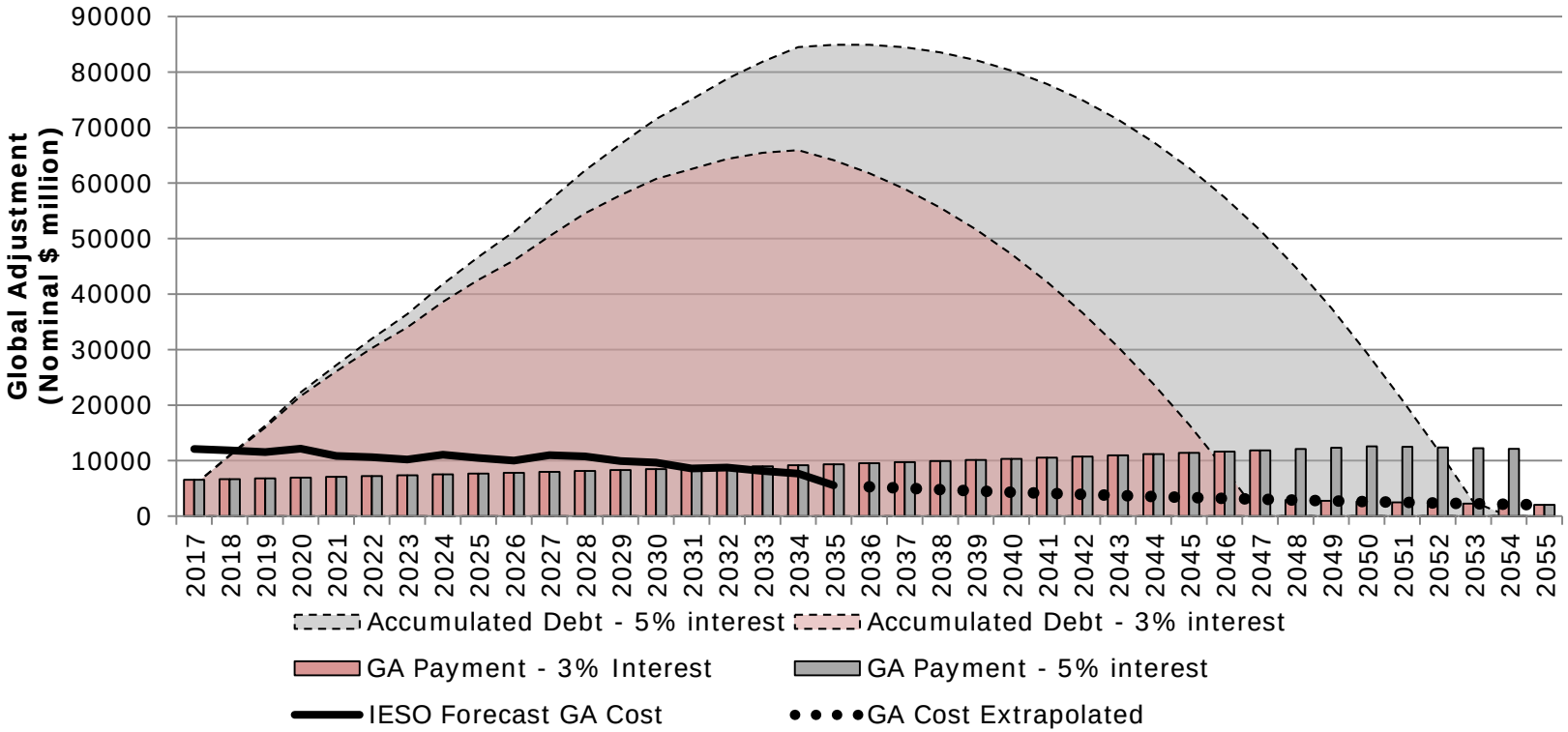
# 2. Maximize Short-term Cost Reduction – Residential Impacts




- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

# 3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).




- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

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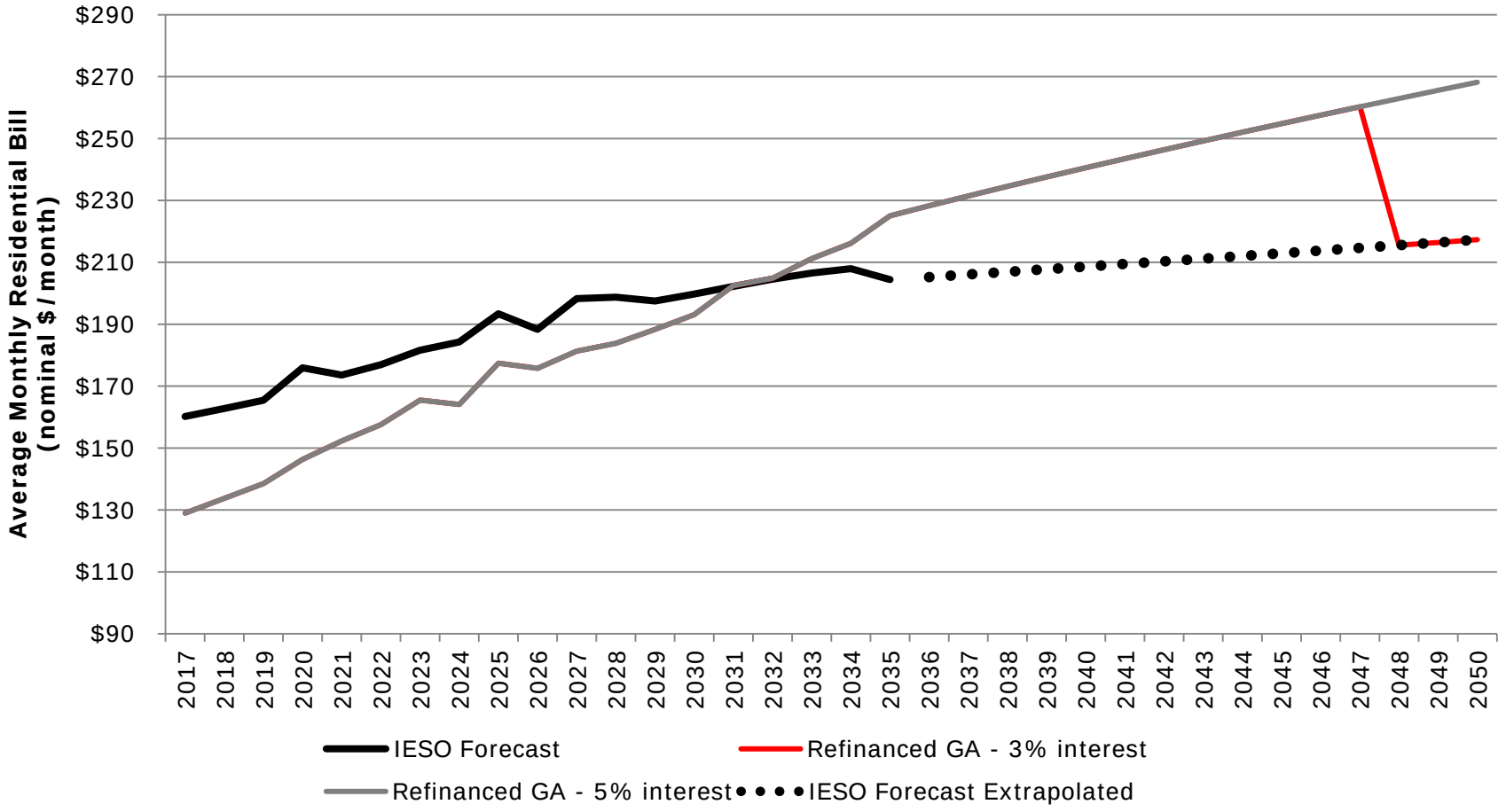
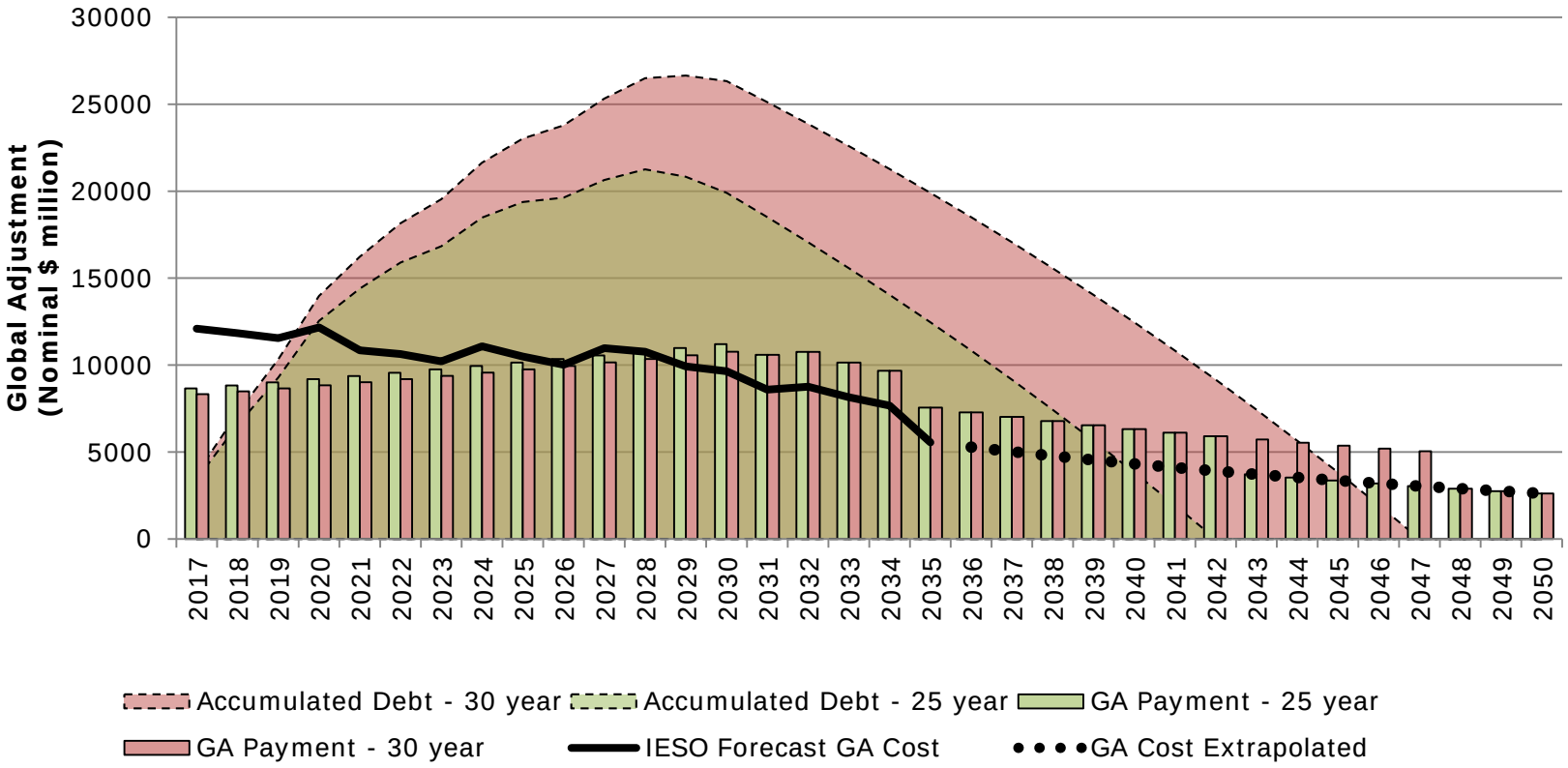



- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

# 4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.




- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

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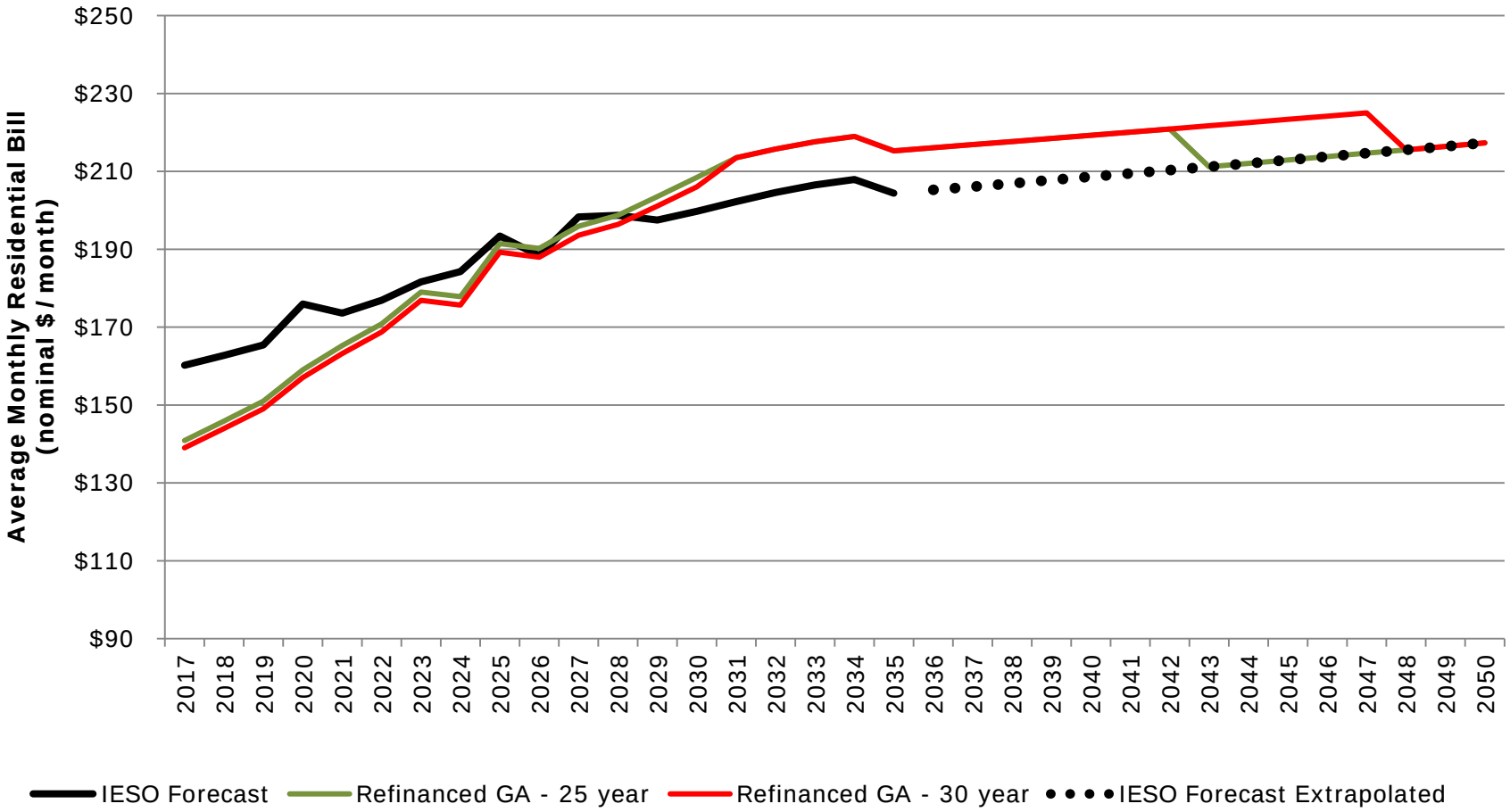


- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

**From:** John Kim
**To:** Gavin He; Salman Qadir; Adam Prokop
**Cc:** Shajee Kathirgamanathan
**Subject:** Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup v1.pptx
**Date:** Friday, January 13, 2017 1:23:01 PM
**Attachments:** Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup v1.pptx

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Could you take a very quick look and let me know if any comments? Maybe in the next 10 min?

Ontario

MINISTRY OF
ENERGY

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January 10, 2017

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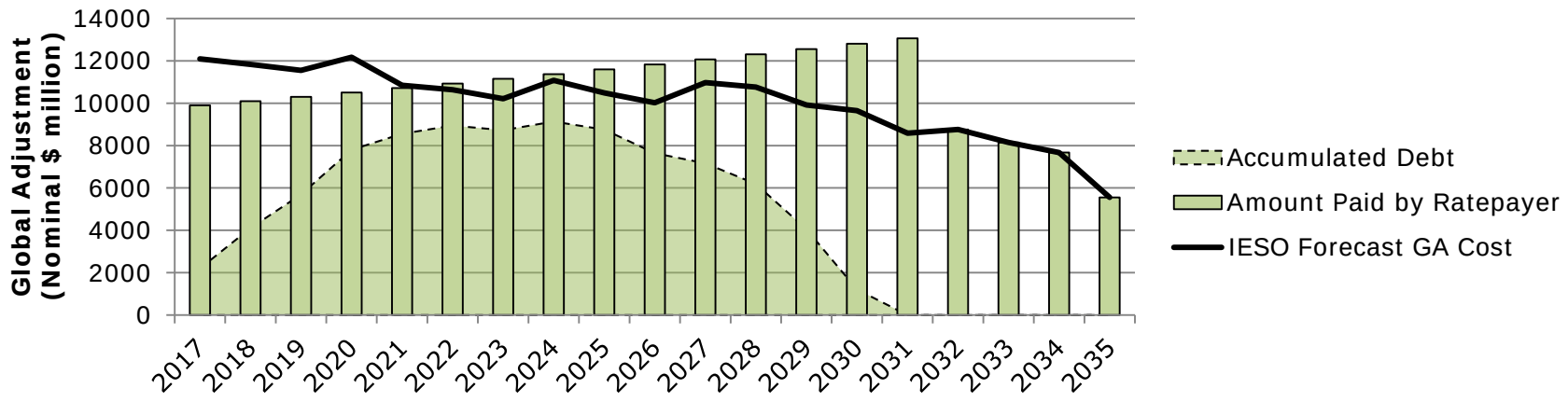


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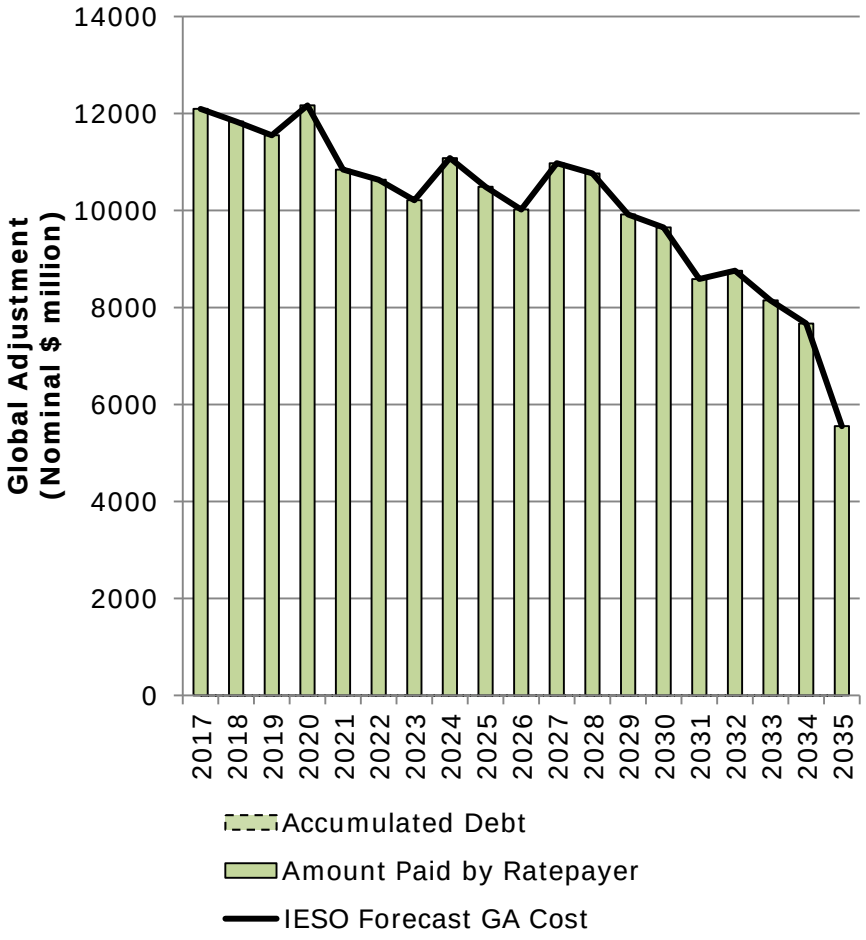


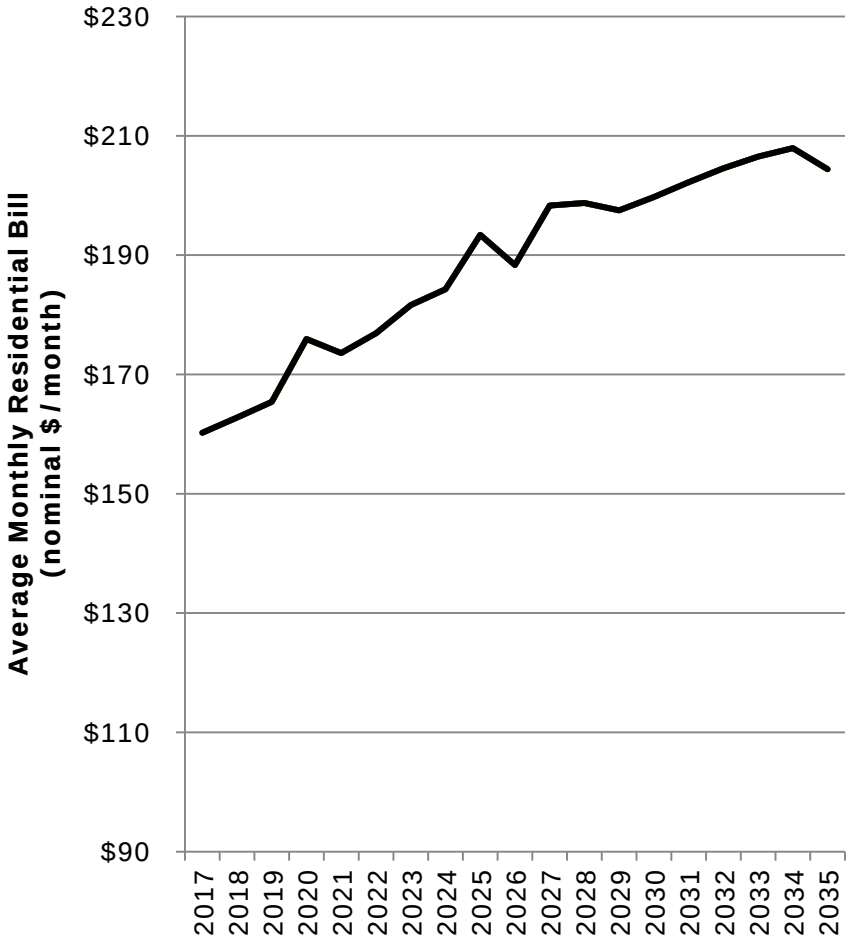

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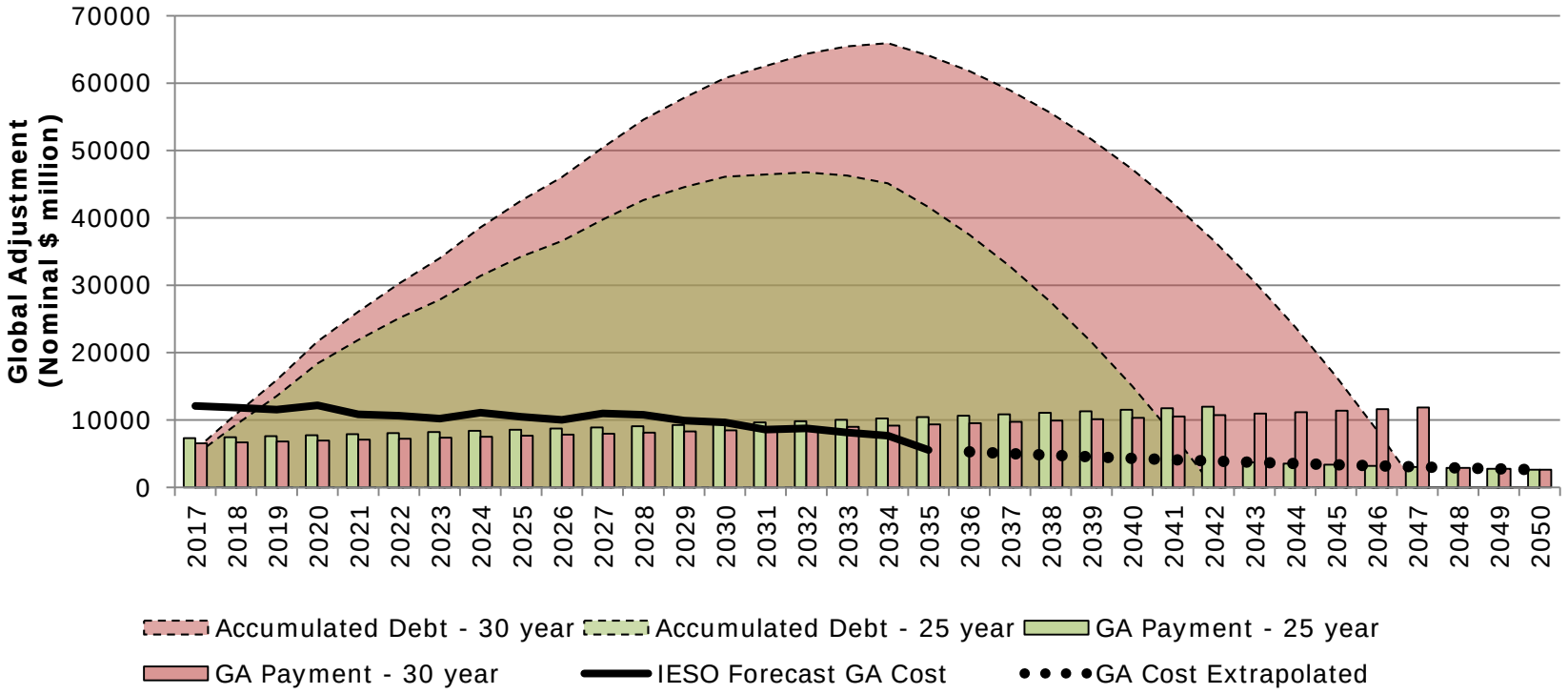


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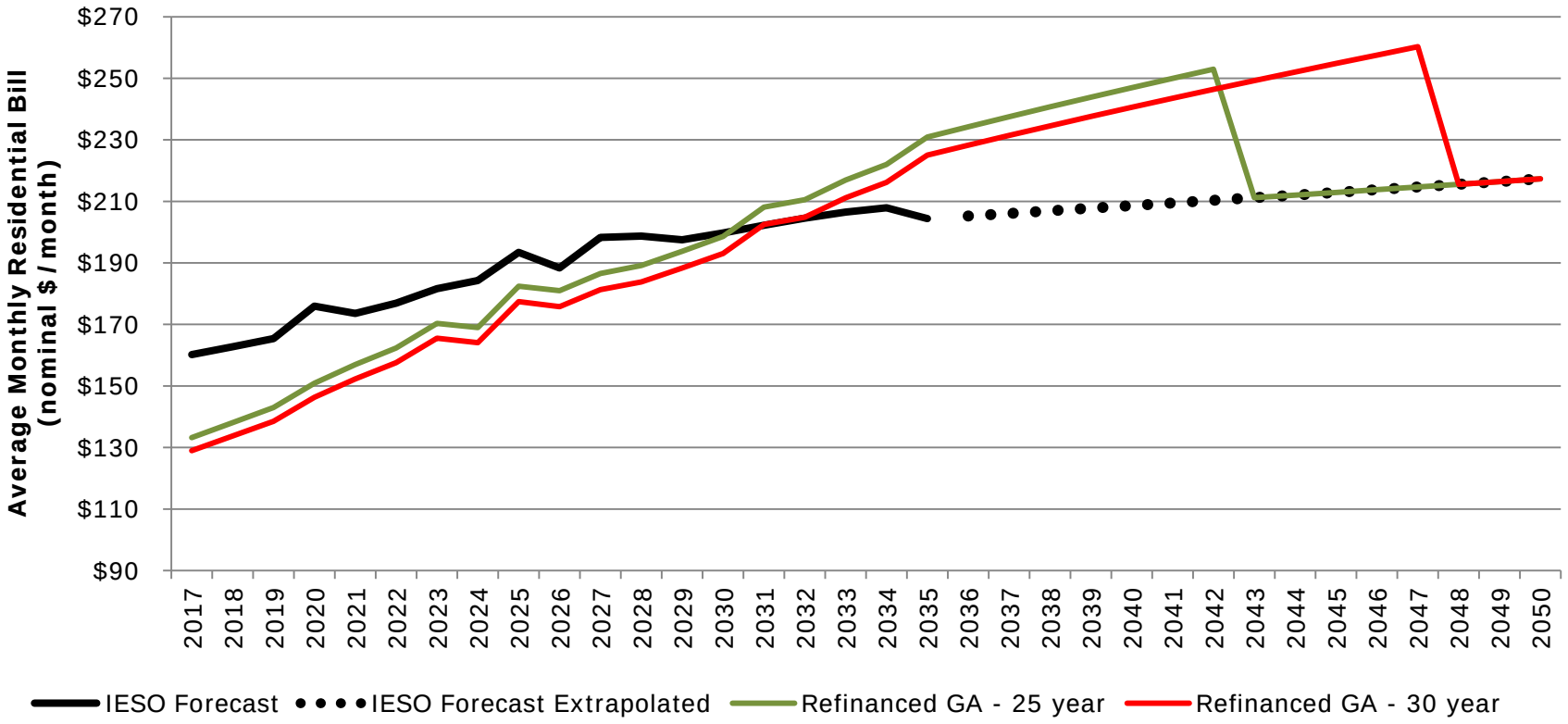
# 2. Maximize Short-term Cost Reduction – Residential Impacts




- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
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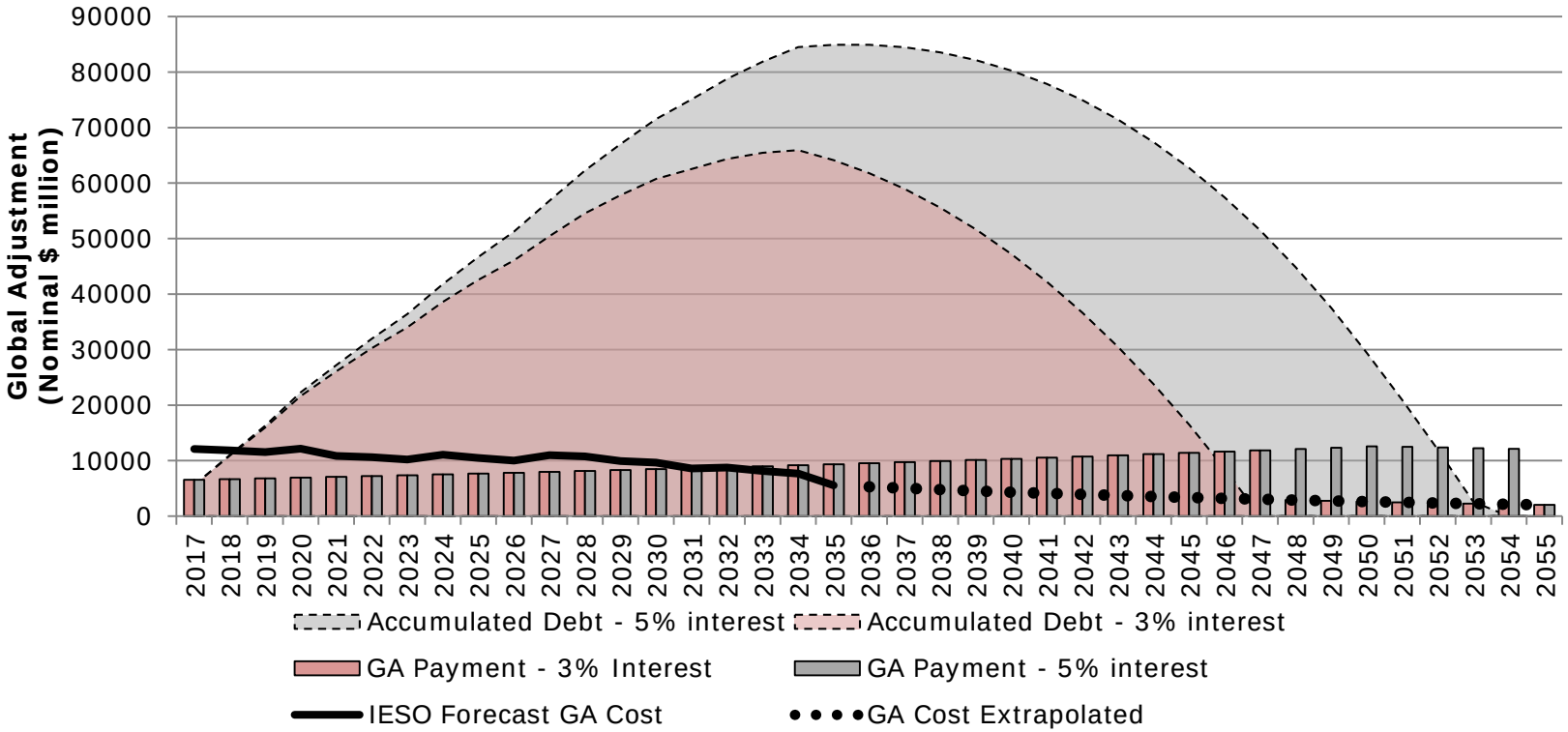
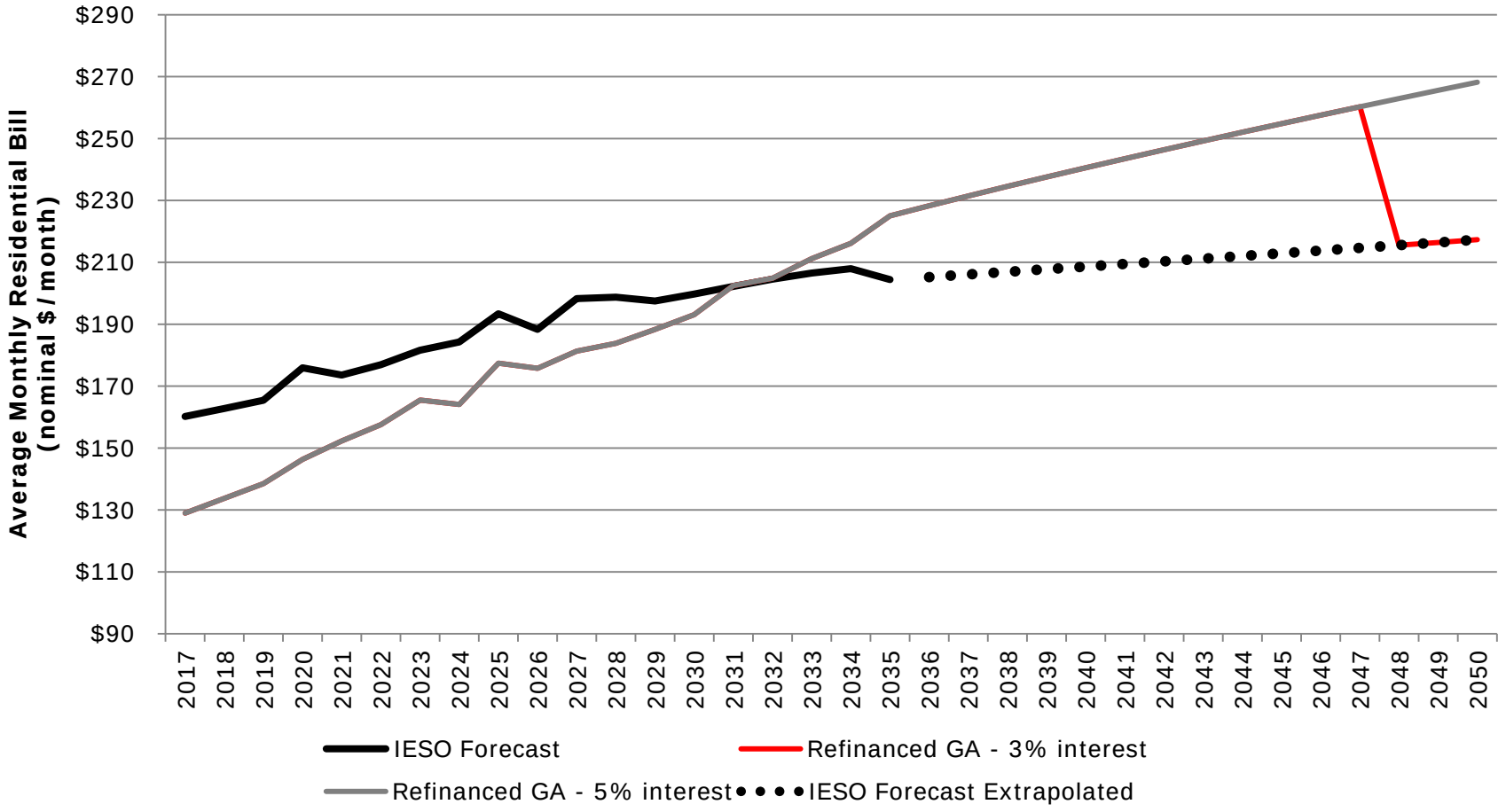
# 3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).




- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

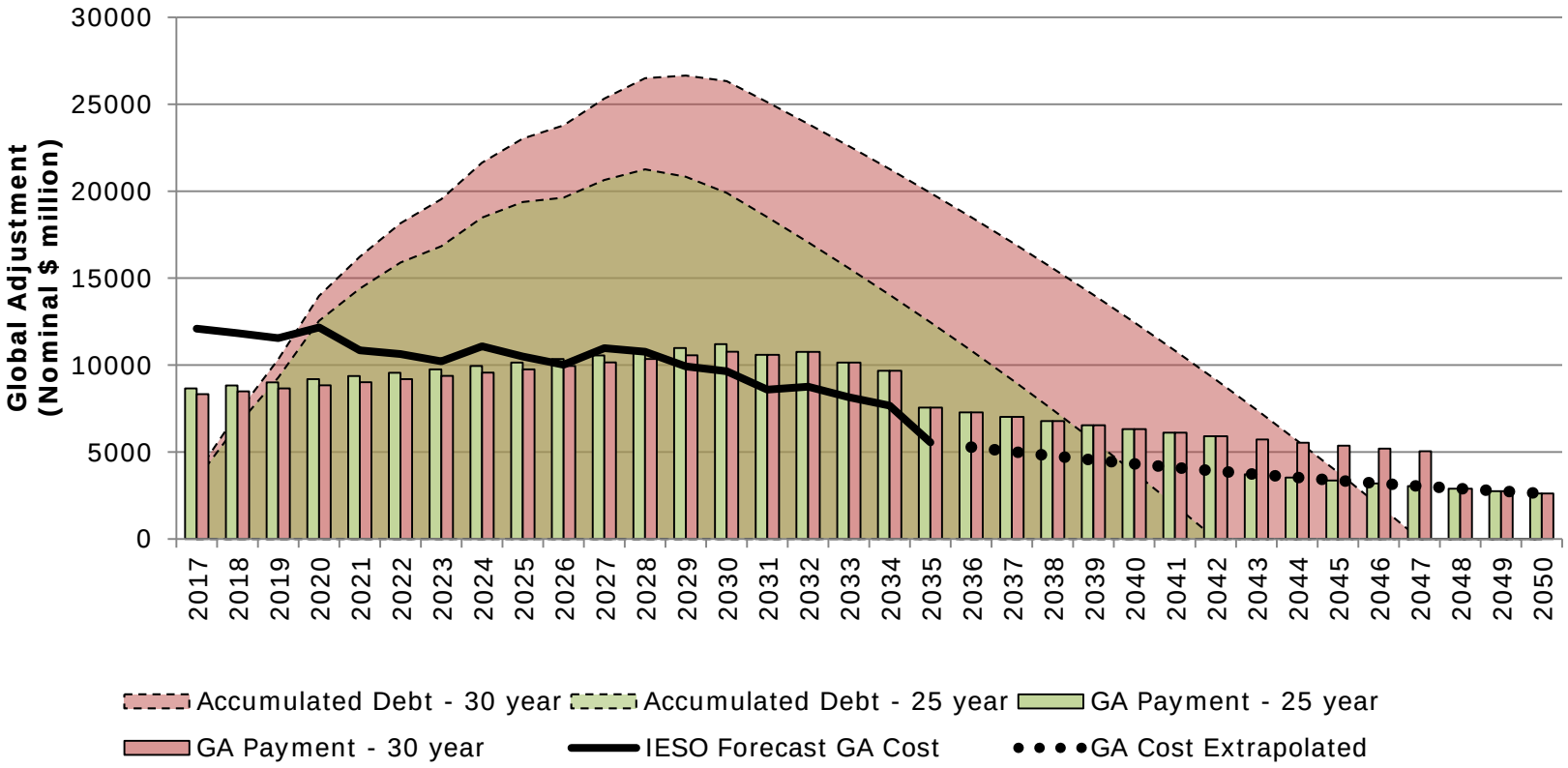
# 3. Interest Rate Risk – Residential Impacts




- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

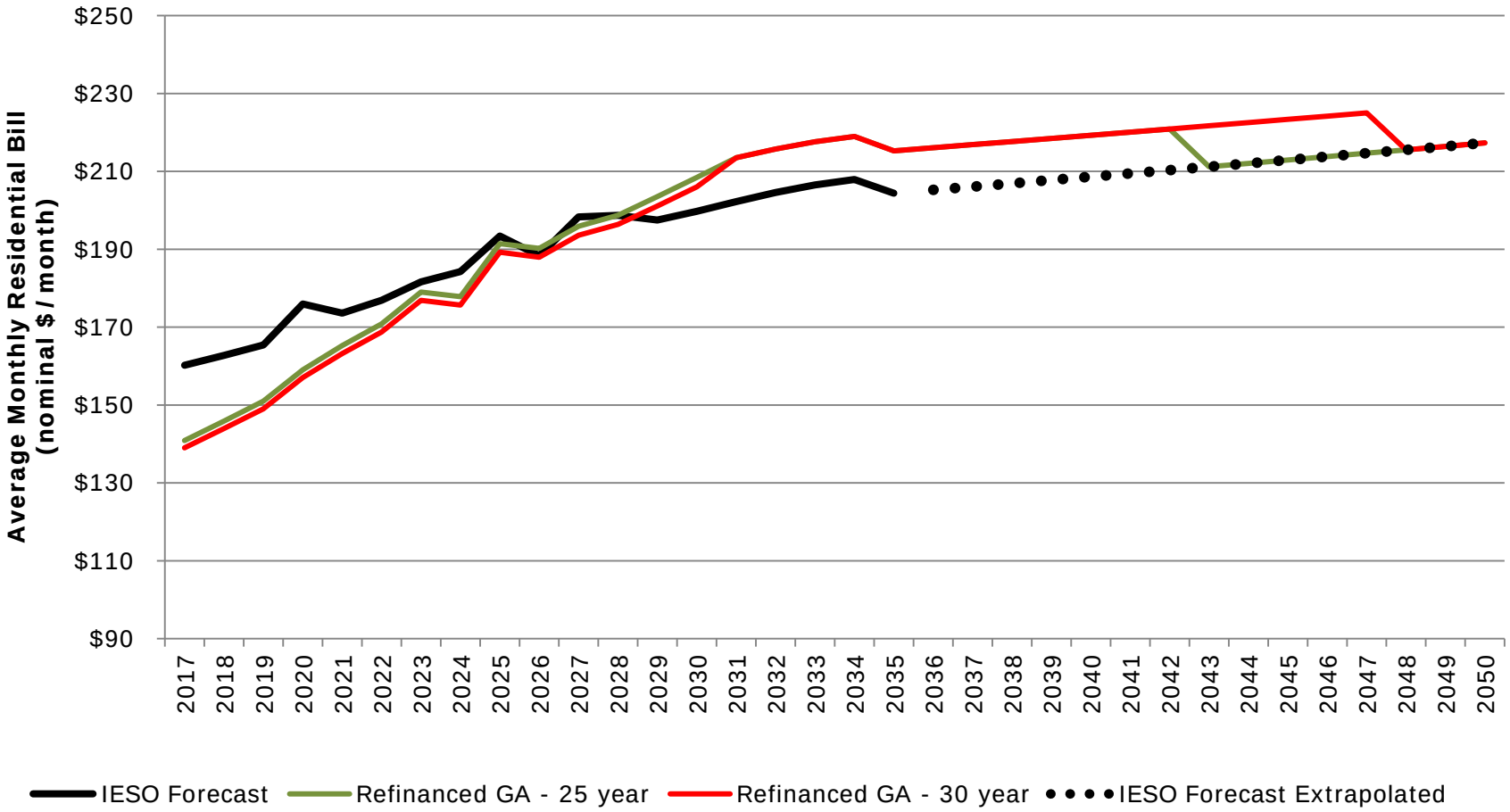
# 4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.




- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

# 4. Maximize Short-term Cost Reduction with Limits – Residential Impacts




- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

| | |
|---|---|
| **From:** | Strang, James (TBS) |
| **To:** | Keley Katona (ENERGY) |
| **Cc:** | Felix Fung (MOF); Madeleine Morgenstern (PPAGS); Sriram Subrahmanyan (MOF); Ann Langleben (MOF); Patrick Laughton (MOF); Nina Arbabzadeh (EDU); John Kim; Nick Smook (MOF); Paul Kaufman (MOHLTC); Len Hatzis (MGS); Shajee Kathirgamanathan; Moore, Karen (CAB); Helen Graham (MOF); Inglis, Liane (MOF); Jenarra DeSouza (MEDTE/MRI) |
| **Subject:** | Draft BN for Monday TB/MBC Meeting |
| **Date:** | Saturday, September 10, 2016 6:49:54 PM |
| **Attachments:** | RAN Electricity Price Mitigation v11 2016 09 10.doc |

Attached is the draft briefing note for TB/MBC on Monday. We followed the minute for OCEB then refined it for this item.

James

**TREASURY BOARD / MANAGEMENT BOARD OF CABINET**
**REQUEST ASSESSMENT NOTE**

| | | |
|---|---|---|
| **Ministry:** | Energy | |
| **Meeting Date:** | September 12, 2016 | |
| **Agenda Class:** | Major | |
| **Last reviewed by:** N/A | | **Tracking to:** Cabinet - September 12, 2016 |

| **SUBMISSION TITLE:** | Electricity Price Mitigation |
|---|---|

## I. DECISION BEFORE THE BOARD

The Ministry of Energy is requesting approval of a suite of initiatives providing relief to various electricity consumer classes.

## II. RECOMMENDATIONS:

| | |
|---|---|
| • Approve a suite of initiatives to provide relief to various electricity consumer classes (pending Cabinet policy approval):<br>– Providing an 8% rebate to Regulated Price Plan consumers;<br>– Expanding the Industrial Conservation Initiative;<br>– Updating the Rural or Remote Rate Protection program; and,<br>– Using $270M in cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade by providing a modest reduction in rates. Balance of proceeds intended for electricity relief through the Climate Change Action Plan ($60M), could provide some fiscal offsets.<br>• Approve $300M in Supplementary Estimates for electricity price mitigation.<br>• Direct the Ministry to report back to TB/MBC through the annual planning process with updated future year impacts, and obtain any required TB/MBC approvals to implement the initiatives<br>• Recommend proceeding to Cabinet with the proposed legislation amendments to existing regulations to implement the initiatives. | *Board Judgment* |

## III. FINANCIAL SUMMARY

| **$ Millions** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|
| Initiative cost requested | 300.0 | 1100.0 | 1100.0 |
| Initiative cost recommended | 300.0 | 1100.0 | 1100.0 |
| Recommended program base | 300.0 | 1100.0 | 1100.0 |
| Offset Recommended – Applies if cap and trade proceeds diverted to in-plan initiatives | 0.0 | (60.0) | (60.0) |
| Total Fiscal Impact | 300.0 | 1040.0 | 1040.0 |

## IV. KEY COMMENTS AND CONSIDERATIONS

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online. Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period. Appendix C provides supporting background information.

As part of the 2016 Budget, the government committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the Budget commitment and additional price mitigation, while delivering on the Province's climate change objectives, the Ministry of Energy has developed price mitigation initiatives that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

The Ministry is proposing the following to mitigate electricity prices for consumers (Appendix D provides more information on each item below):

- Provide an 8% rebate on the pre-tax cost of electricity to consumers eligible for the Regulated Price Plan (i.e., residential, small business and farms), equivalent to the provincial portion of HST.
- Expand Industrial Conservation Initiative (ICI) eligibility by lowering the threshold to 1 MW, to provide support to Class B eligible electricity consumers (i.e., commercial, institutional and small industrial).
- Update the Rural or Remote Rate Protection (RRRP) program, to provide relief to rural customers.
- Use cap and trade proceeds to provide a modest rate reduction for commercial and industrial electricity consumers.

Public high-profile communications would coincide with introduction of legislation (September 2016). Currently, the 8% rebate would be available starting January 1, 2017, along with updating the RRRP. Expanding ICI won't be added to bills until 2018 due to the time required to implement the expansion and for billing changes. The impact of cap and trade would not be added to electricity bills until 2017.

The following tables provide an overview of the four initiatives, recipients, projected financial impact, grouping them based on whether taxpayers or ratepayers cover the costs:

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Taxpayers cover the costs (Potential to impact the Province's Fiscal Plan)** | | | |
| **1.** | 8% Rebate to Regulated Price Plan | Fiscal $1100M | Residential, small business and small farms, and other small users |
| **2a.** | Use cap and trade proceeds to provide a modest reduction in rates for commercial and industrial electricity consumers. (Implementation details under development). | ($270M) in cap and trade proceeds to offset $270M in costs for reducing rates<br><br>No Fiscal Impact | The CCAP allocated up to $330M/year in cap and trade proceeds for electricity price mitigation.<br><br>See item 2b. regarding the residual amount of cap and trade proceeds ($330M - $270M = $60M) |
| **2b.** | While CCAP anticipated $330M/year was required to keep electricity affordable, the residential portion of this commitment is met by the 8% rebate. As such, some of the CCAP allocated proceeds can be redirected to other GHG reduction initiatives already in the fiscal plan. | Fiscal ($60M) | Provides fiscal plan flexibility of $60M/year if these proceeds are diverted to offset costs of other existing in-plan initiatives that reduce GHG emissions. |
| | **Total Fiscal Impact** | $1040M | Matches Financial Summary on page 1 for 2017-18 |

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Ratepayers cover the costs (No impact to the Province's Fiscal Plan)** | | | |
| **3** | Expanding ICI eligibility to customers above 1MW in all sectors | Rate base ($47M/$82M)** | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors |
| **4.** | Updating Rural or Remote Rate Protection | Rate base ($110M) | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. |

** Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.

Due to the nature of the ICI Global Adjustment mechanism and cost recovery of RRRP, the rate base proposals (#3 and #4) above benefit the targeted recipients, but come at a cost to all other electricity rate payers in Ontario.

The following table from the Ministry highlights the benefits by electricity consumer class.

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Benefit | | Class B (Commercial) Benefit | Class A (Industrial) Benefit | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br>(-8%) | -$45/ month<br>(-20%) | -$3/MWh<br>(-2%) | -$3/ MWh<br>(-3%) | Up to -$52/MWh<br>(-34%) |

**Notes:** * The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

See Appendix E for more illustrative bill impacts. See Appendix F for an electricity bill mock-up.

Fiscal Impact

The Ministry estimates proceeding with an 8% Regulated Price Plan (RPP) rebate without a cap would cost an estimated $1.1 billion per year. The Ministry's estimate of $300M needed for 2016-17 (to cover the first three months of 2017 when the 8% rebate applies) will be addressed through Supplementary Estimates. The Ministry will use the annual planning process to update future year impacts.

The Ministry also indicates the current proposal would use cap and trade proceeds to eliminate carbon price impacts/ grid emission reductions to ratepayers, as was established through the CCAP. This proposal does not require the full $330M/year notionally allocated through the CCAP, which could provide fiscal plan flexibility of about $60M per year to commit to other GHG reduction initiatives in the fiscal plan.

Cap and Trade Proceeds

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers (on average). While residential and other consumers would benefit from the 8% pre-tax rebate, this does not apply to non-Regulated Price Plan eligible consumers (larger industrial, commercial, and other consumers). As such, the Ministry is proposing to direct a portion of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to provide a modest rate reduction. This proposal fulfills the policy objective established in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to electricity ratepayers.

To be characterized as a regulatory charge under the cap and trade program, auction proceeds need to be spent on programs that are reasonably likely to reduce or support the reduction of greenhouse gases. The Ministry has indicated that their proposal would use proceeds to offset

the costs of committed investments that reduce greenhouse gases (e.g., non-emitting generation and conservation programs) and could incent fuel-switching away from fossil fuels.

Considerations – Implementation

At this point, the Ministry has presented a high level overview of major implementation pieces:

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010. If passed, the legislation would require a general regulation. Amendments would also be required to various regulations to expand ICI and RRRP.
- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. The Ministry indicates it will consult with LDCs (possibly through the Ontario Energy Board) to accurately assess these impacts once the program has been announced. In the past, LDCs have asked for at least six months' notice when implementing billing system changes. Timing concerns may be alleviated by allowing LDCs to provide retroactive payments rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- Detailed messaging on bills could be implemented. The rebate would not be directly linked to HST. With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.
- The Ministry will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

Legal Considerations

8% Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):

- Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):

- To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):

- Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on

both sides).

Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):

- To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

Other Considerations

- This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets for the 8% rebate.
- The 8% rebate would provide a typical residential consumer about an $11 per month benefit on average, exceeding the Budget 2016 $2 per month on average cap and trade commitment. The proposal to offer a modest rate reduction for industrial and commercial consumers also exceeds the Budget commitment to simply offset the impact of cap and trade on these consumers.
- Reduction in electricity prices that do not consider consumption amounts (e.g., without the cap in the previous OCEB program) does not promote electricity conservation and may be seen as unaligned with climate change objectives.
- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
  - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
  - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
  - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

| | | | |
|---|---|---|---|
| **Name of analyst:** | James Strang<br>With input from TPD and OFA | **Phone number:** | 416-327-2071 |
| **Date:** | September 9, 2016 | **Log number:** | |
| **Branch / Division:** | GGPR/ PEMD/ Treasury Board Secretariat<br>Tax Policy Division/ Ministry of Finance<br>Ontario Financing Authority/ Ministry of Finance | | |

## APPENDIX A: PROPOSED MINUTE

Approve electricity price mitigation for residential, commercial and industrial consumers.

In this regard:

i) Approve a suite of initiatives to provide relief to various electricity consumer classes:

   a) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor, starting January 1, 2017.

   b) Increase the total amount of rate protection available to R2 low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2003.

   c) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

   d) Expand eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

   e) Provide a modest rate reduction to commercial and industrial electricity consumers using cap and trade auction proceeds to offset the cost.

ii) Recommend to Cabinet the proposed Ontario Rebate for Electricity Consumers Act, 2016 and that the Ministry proceed to Legislation and Regulations Committee before the end of 2016 with supporting regulations under the proposed Ontario Rebate for Electricity Consumers Act, 2016.

iii) Approve the implementation details associated with the suite of initiatives:

   a) Approve:

      1. The creation of a new item entitled "Ontario Rebate for Electricity Consumers" in the Electricity Price Mitigation Program (Vote/Item 2905-3).

      2. The creation of a new Transfer Payment entitled "Ontario Rebate for Electricity Consumers" in Rebate for Electricity Consumers (Vote/Item 2905-3).

      3. An expenditure increase in the amount of $300,000,000 in 2016-17 in the Transfer Payment entitled "Rebate for Electricity Consumers[1]" in Rebate for Electricity Consumers (Vote/Item 2905-3). Direct the Ministry to return any under-spending to the Treasury Board Contingency Fund.

[1] Pending approval of the proposed Ontario Rebate for Electricity Consumers Act, 2016

b) Note:

1. Funding for 2016-17 will be implemented through Supplementary Estimates in the Fall of 2016.

2. Future year impacts of $1,100,000,000 in 2017-18 and $1,100,000,000 in 2018-19, and $1,200,000,000 in 2019-20 and ongoing.

c) Direct the Ministry to report back to Treasury Board/Management Board of Cabinet in the 2017-18 Program Review, Renewal, and Transformation process on updated future year impacts, and a potential offset strategy for resource requirements to support program implementation

iv) Note the reallocation of cap and trade auction proceeds from the up to $1,320,000,000 that was previously allocated through the Climate Change Action Plan for electricity price mitigation, as follows:

a) The Ministry of Energy to work with the Ministry of the Environment and Climate Change to invest an estimated amount of up to $1,080,000,000, from 2017-18 to 2020-21, of cap and trade auction proceeds for non- Regulated Price Plan commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

b) The remaining up to $240,000,000, from 2017-18 to 2020-21, which was previously allocated in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to ratepayers, to be used for other existing initiatives within the fiscal plan that reduce greenhouse gas emissions.

In this regard:

1) Direct the Ministry of the Environment and Climate Change to work with Treasury Board Secretariat and Ministry of Finance to identify other existing initiatives within the fiscal plan that reduce greenhouse gas emissions that can be funded with the remaining up to $240,000,000, from 2017-18 to 2020-21, which was allocated in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to ratepayers.

v) To support implementation of electricity price mitigation, the Ministry is proceeding with the following amendments to existing regulations:

a) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the Electricity Act, 1998 to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

b) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural or Remote Rate Protection Plan to R2 low density electricity customers and provide for a periodic adjustment mechanism.

vi) Direct the Ministry to work with the Premier's Office and Cabinet Office on the development and implementation of an integrated communications strategy.

# APPENDIX B: FINANCIAL TABLES

| FINANCIAL IMPACTS: CHANGES TO EXPENSE AND REVENUE | | | | | TABLE B1 |
|---|---|---|---|---|---|
| | | *Fiscal Plan Basis* | | | *Appropriations Basis* |
| **$ Millions** | | **2016-17** | **2017-18** | **2018-19** | **2016-17** |
| Initiative cost recommended | | 0.0000 | 0.0000 | 0.0000 | |
| *Expense changes:* | | | | | |
| Operating item (Supplementary Estimates inclusion for 2016-17 amount) | Oper | 300.0000 | 1100.0000 | 1100.0000 | 0.0000 |
| Operating Offset | Oper | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | | | | | |
| | | | | | |
| *Revenue changes:* | | | | | |
| Revenue Increase/ Offset - Applies if cap and trade proceeds diverted to in-plan initiatives | | 0.0000 | (60.0000) | (60.0000) | |
| Revenue decrease | | 0.0000 | 0.0000 | 0.0000 | |
| **Total Fiscal Impact (draw from c-funds)** | | **300.0000** | **1040.0000** | **1040.0000** | **0.0000** |

## APPENDIX C: ELECTRICITY SECTOR BACKGROUND

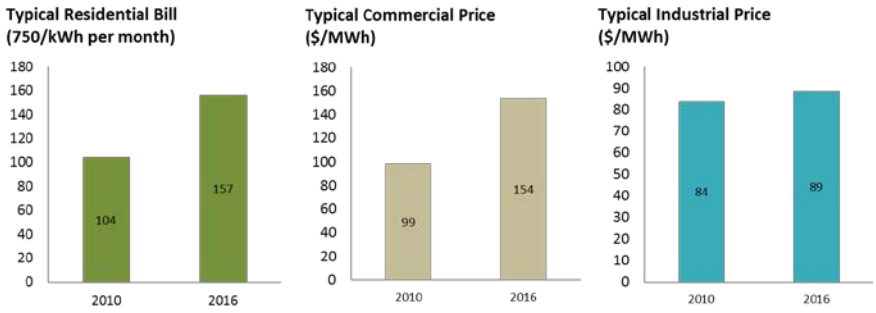
The Ministry has provided the following information to provide electricity sector context this item.

There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

*** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period.




**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

Existing Rate Mitigation efforts are on-going:

- Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs.
  - For example, Northern Ontario residential electricity consumers receive tax credits in recognition of higher electricity costs in the north and rural consumers receive a subsidy funded through the rate-base due to the higher cost of delivering power to rural areas.
  - As of 2016, the government removed the Debt Retirement Charge (DRC) from residential electricity bills. While this saves a typical residential electricity ratepayer about $60 per year, it is less than the benefit previously provided through the Ontario Clean Energy Benefit (OCEB).
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers.

  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- Because electricity costs must be fully recovered from electricity consumers, rate mitigation funded through the rate-base often represents a shifting of costs from one consumer group to another (i.e., industrial to residential and commercial consumers).
  - Rate-based initiatives are generally associated with incenting changes in behaviour that provide electricity system benefits (i.e., shifting electricity consumption from on-peak to off-peak periods).

The table below shows the estimated cost shifts in the province's electricity system that result from three existing government programs (i.e., ICI, RRRP and OESP):

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

Since 2013, a number of actions have and are being taken to reduce overall electricity system costs. Despite these actions to reduce system costs, electricity rates continue to increase for consumers:

- Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
- Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
- Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
- Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
- Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.

## APPENDIX D: FURTHER INFORMATION SUPPORTING PROPOSED INITIATIVES

The following information has been provided by the Ministry.

**1. Provide an 8% rebate to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms), equivalent to the provincial portion of HST**

The Ministry is proposing to introduce legislation/regulation to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit. This would be equivalent to the provincial portion of the HST.

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).
- An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

| **Eligible for the 8% rebate** (< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate** (> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Farms eligible for Regulated Price Plan (Including Class B farms that opted out of the Regulated Price Plan)<br>• Small businesses<br>  – Coffee / snack retailer<br>  – Convenience store<br>  – Apparel store<br>  – Hair salon<br>  – Small insurance office | • Class A consumers<br>  – Manufacturer<br>  – Large grocery store<br>  – Mines<br>  – Auto assembly plants<br>• Class B consumers<br>  – Commercial offices (low rise)<br>  – Hotel<br>  – General warehousing |

**2. Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial)**

Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers). Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would (the benefit would be seen by consumers starting in 2018):

- Reduce electricity peak demand and electricity system costs by incenting more consumers to lower their electricity demand during peak periods;
- Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
- Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| Short-term | Up to 21% | 80 | 47 | Increase of $0.42/month |
| Long-term | Up to 34% | 165 | 82 | Increase of $0.74/month |

The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility. The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating. Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.

## 3. Update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers

The Ministry is proposing to provide an additional $110M in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

RRRP is a rate-based funded program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.

- Today, RRRP is a $175M program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
- The majority of the program funding ($127M) provided to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a rebate of $31.50. The proposed update to the program would increase the benefit to $60/month
- RRRP funding supporting R2 customers has been capped at the current level since 2003. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

An additional $110M in program funding would see an increased benefit of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.

- This would increase the R2 portion of the RRRP to $237 million with a monthly impact on an average residential consumer of ~$0.60.
- The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the benefit remains constant.

## 4. Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.

- To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).
- However, providing an 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other GHG reduction initiatives in the fiscal plan.

The rate reduction proposal would provide additional benefit to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $240M over the first four year compliance period).

# APPENDIX F: ILLUSTRATIVE BILL IMPACTS

The Ministry has provided the following illustrative bill impacts:

| | Current Bill ( before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $139 /month | N/A | 8% pre-tax rebate: - $11 | $128 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $229 /month | RRRP: –$32 | 8% pre-tax rebate + Updated RRRP: - $45 | $184 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $101 /month | OESP: -$38 | 8% pre-tax rebate: - $8 | $93 /month |
| Small Business (Toronto – 403,200 kWh/month) | $149 /MWh | N/A | 8% pre-tax rebate: - $12/MWh | $137 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $203 /MWh | N/A | 8% pre-tax rebate: - $16/MWh | $187 /MWh |

**Notes:**

***** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as $1,332 per year for a family.

** Income of less than $28,000, family of 4.

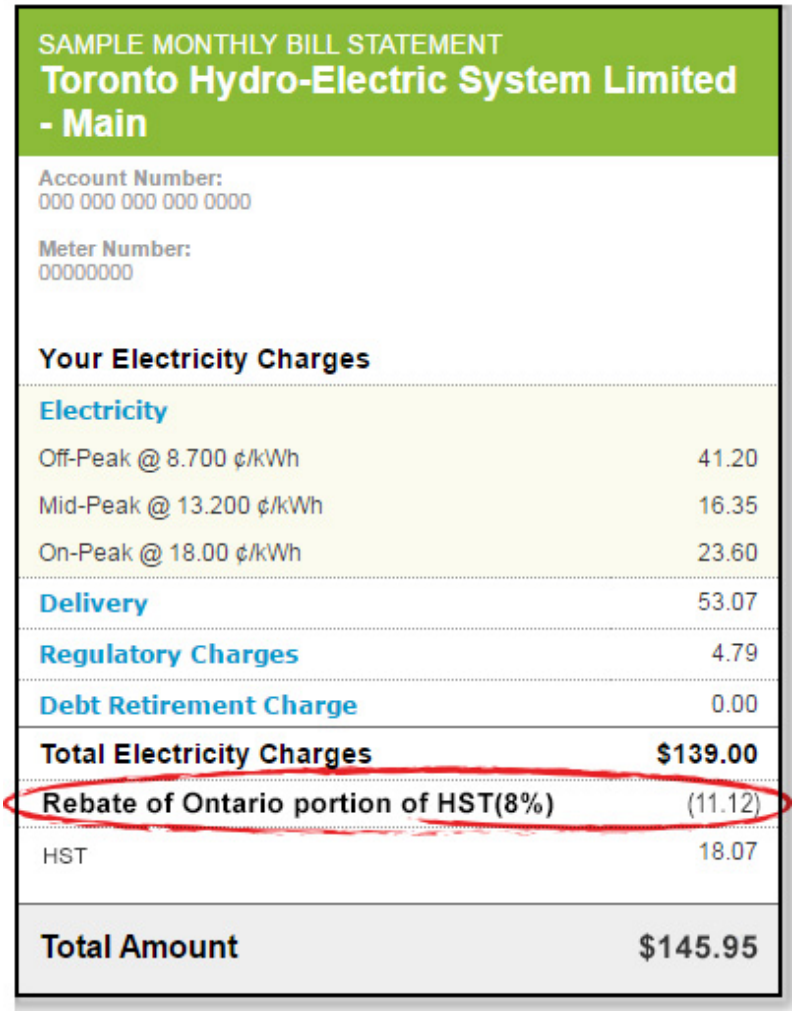
The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Totals may not add due to rounding.

| | Current Rate | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Rate |
|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | $105 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI + NIERP: -$69/MWh | Proceeds Recycling: -$2.60/MWh | $66 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling + ICI: Up to -$52/MWh | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $149 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $151 /MWh |

**Notes:**

The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

## APPENDIX E: ILLUSTRATIVE BILL MOCK-UP



SAMPLE MONTHLY BILL STATEMENT

**Toronto Hydro-Electric System Limited - Main**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| **Rebate of Ontario portion of HST(8%)** | (11.12) |
| HST | 18.07 |
| **Total Amount** | **$145.95** |

**Note:** Final bill presentment pending submission to LRC.

| | |
|---|---|
| **From:** | Petsche, Nadine (TBS) |
| **To:** | John Kim |
| **Subject:** | Electricity Price Mitigation teleconference MOE OFA IESO OPCD.docx |
| **Date:** | Monday, January 23, 2017 8:20:48 AM |
| **Attachments:** | Electricity Price Mitigation teleconference MOE OFA IESO OPCD.docx |
| **Importance:** | High |

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Hi John,
In advance of our meeting, just sharing a draft summary I prepared based on what I heard on the call. There are likely many errors as I joined the call late. Can you perhaps suggest edits based on your understanding (in track changes mode).
Thanks. N

**Electricity Price Mitigation**
**Teleconference call summary**
**January 20, 2017**
**Participants: IESO (Kim Marshall), KPMG (Michel Picard), Cindy Veinot & N. Petsche (OPCD), Steen Hume (MOE), Ronald Kwan (OEFC/OFA)**

| General: | CFS | IESO | |
|---|---|---|---|
| | Notes | Notes | Actions |
| Variance accounts are not all recognized on the CFS? In order to have an asset recognized on the books, need to have a receivable (amounts billed), unless an asset can be established another way (through legislation)<br><br>Current vs. future IESO role: if move from current settlement related role, and have to negotiate and manage the debt then it will seem more like the OFA. Option to use another party to provide this advice, and not have OFA hold the debt. | - Questionable whether any receivable reflected on the Province's f/s would be sufficiently supportable from the AG's perspective under PSAB.<br>- Consider if might be off-balance sheet financing based if debt acquired through 3rd party vs. OFA.<br>- Want to understand why the debt for the GA is not on the Province's books. (Q from MOE…why would it be assumed that cash flows related to the rate base would be consolidated on the Province's books and intermingled with cash flows related to tax base) | - Issue: 4 M Consumers wouldn't have a liability on their books that would correspond with a recoverable (one to many scenario with no amounts billed)<br>- Strategically difficult to pass along the recoverable to the LDCs as it would impact the d/e ratios; uncertain how many follow IFRS without rate regulated accounting; LDCs also don't have the credit capacity to absorb the debt<br>- Current IESO role: used as a settlement system to support the market (sets | - Considering creating a receivable through legislation (vs. direct contracts or billing)<br>- Need an 'authorized' expenditure in order to be recoverable. Assess on what basis we can create an asset which is recoverable. All extra costs need to be recognized as being recoverable (even interest)<br>- Since need legal authority to recover, presumably you would also need legal authority to defer and collect in the future but need to address the proposed change in role of the IESO<br>- Consider who would hold debt (OFA or third party) . Would be |

| | | | |
|---|---|---|---|
| | | HOEP every 5 mins, matches supply and demand, collects through GA for costs of reliable T,D, generation)<br>- As a successor company to previous Ontario Hydro, the IESO would borrow from the OEFC; OPA is a new construct so would borrow from the OFA if needed.<br>- IESO's original accounting was established as an agent for settlement purposes. Legacy contracts were for cash to suppliers which were recovered through the GA. John and Adrian were involved with est of the OPA and est of the RPP variance acct. Was never a GA var. OPA always reported the RPP act (1 set of books) – entered into 3500+ contracts with generating | higher rates? Would be provincial guarantee? OPA had AA credit rating and contracts entered into and debt borrowed based on that rating (one ranking lower than the province)<br>- James (legal) asked by Steen Hume to help to id what the new legislative responsibilities of the IESO might look like. |

| | | | |
|---|---|---|---|
| | | entities (40B) which NEVER appeared on the Province's books (no rev/exp or debt. These were considered executory contracts, or contractual obligations but NOT liabs of the OPA.<br>- On a monthly basis any GA amounts are settled through the GA; no liability reflected on the IESO's books – currently $10B of recoverable amounts not reflected on the IESO's books (no legal obligation, just an agent for settlement). Seen as a conduit to collect the monies paid to producers, even if does take possession.<br>- Proposal is that the RPP accounts which normally had a term of 6-12 months for recovery would be extended to 25 years | |

| | | | |
|---|---|---|---|
| | | - 2 sets of books (operating/market vs. financial)<br>- Amounts recoverable through GA NOT reflected on IESO's b/s as a flow through – no impact on the p&l<br>- Currently, the only debt that shows on the IESO's books is related to its operations, NOT MARKET DEBT | - IESO/KPMG to provide background supporting accounting for GA recoveries off book |
| ON vs. MB – legislates that all people of the province must be rate payers (cannot opt out of paying rates). ON doesn't have this requirement, but has a strong ratebase now so reasonable recoverability of costs through rates (the GA). Lenders rely upon this reasonable probability of recovery (AA rating) as basis to lend money to IESO to cover the time gap w.r.t. billings for GA. | | - The OEB has oversight and determines rates. If a regulator agreed that costs could be recovered, would meet requirements of rate regulated asset; but PSAB doesn't recognize rate regulated assets/liabs<br>- regulatory assets normally recovered over 5 years, so 25 years would have to be defended and proven as collectible<br>- would need certainty of recoverability to be an | |

| | | | |
|---|---|---|---|
| | | asset (OEB would consider intergenerational equity) in assessing recoverability | |
| Noted that 25 year period for rate mitigation is not the same as a longer term recovery period for capital refurbishment (intergenerational equity considerations)<br>Noted that other jurisdictions might have longer contract periods (wind and solar>20), and that operating period >20 in reality, so future costs likely lower to consumers. AB wind contracts>25 years. Justification for change → contract periods are too short | | | |
| | | | |
| Policy considerations:<br>1) Argument for rate mitigation deferral period (contracts to short; precedents)<br>2) IESO's changing role (James to consider)<br>3) Legislative requirements to allow for deferral (which costs would be authorized as recoverable)<br><br>Accounting considerations<br>4) How to create an asset (accounting vs. legislation) Would legislation create an asset on the IESO's books?<br>5) Off balance sheet financing (3rd party vs. OFA) and related accounting on IESO and CFS | | | |
| | | | |

| | |
|---|---|
| **From:** | Morgenstern, Madeleine (TBS) |
| **To:** | Sriram Subrahmanyan (MOF); John Kim; Shajee Kathirgamanathan |
| **Cc:** | Felix Fung (MOF); James Strang (MOF) |
| **Subject:** | Electricity item |
| **Date:** | Tuesday, September 06, 2016 11:50:44 AM |
| **Attachments:** | Cabinet Submission - Electricity Price Mitigation 20160902 330pm (3).pptx |

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Hi everyone,

Just received a draft Cab Sub from ENE, which they expect will change again based on comments from their MO. We are reviewing this now as we understand our MO may be interested in a briefing. We will forward invites and any additional materials as we receive. Password is the external Budget password.

Thanks,
Madeleine

# Electricity Price Mitigation

## Ministry of Energy

## WORKING DRAFT

## Date: September 14, 2016

Minister

Deputy Minister

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

- Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables.
  - This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%.

- Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online.

- The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers.

# Context – Electricity Consumer Classes

- There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

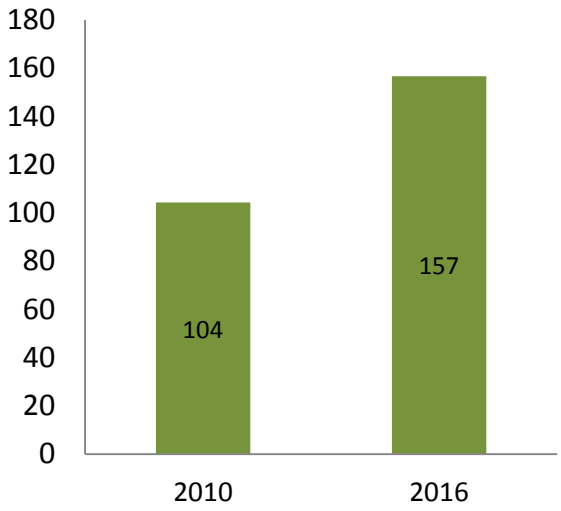
- The following slide provide further information on the prices paid by different classes of electricity consumers.

**** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

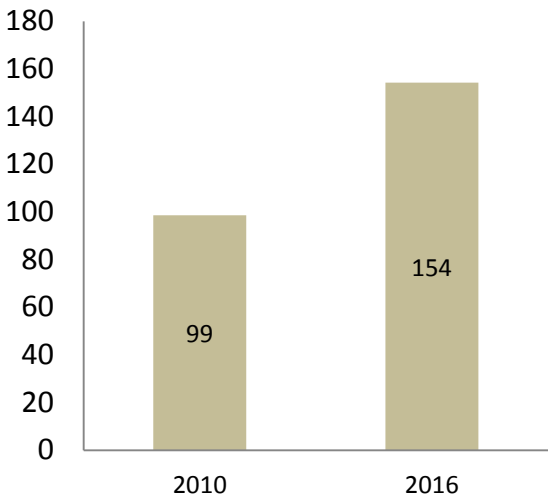
# Context – Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period.

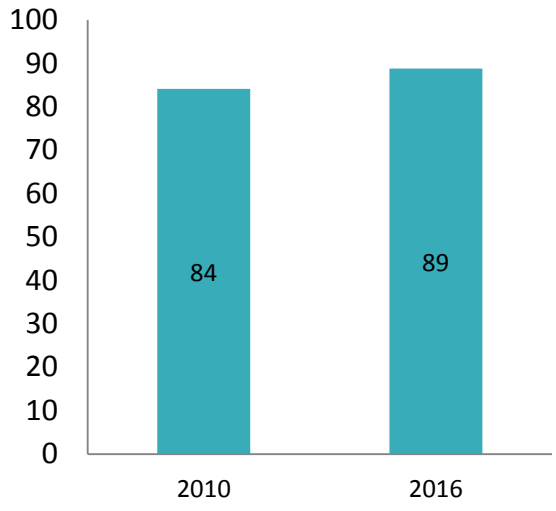
**Typical Residential Bill (750/kWh per month)**




**Typical Commercial Price ($/MWh)**




**Typical Industrial Price ($/MWh)**




**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

# Existing Rate Mitigation

- Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs.
  - For example, Northern Ontario residential electricity consumers receive tax credits in recognition of higher electricity costs in the north and rural consumers receive a subsidy funded through the rate-base due to the higher cost of delivering power to rural areas.

- As of 2016, the government removed the Debt Retirement Charge (DRC) from residential electricity bills. While this saves a typical residential electricity ratepayer about $60 per year, it is less than the benefit previously provided through the Ontario Clean Energy Benefit (OCEB).
  - OCEB provided a tax-base rebate of 10% rebate on the total cost of electricity charges related to electricity consumption on eligible bills between 2011 and 2015.

- Because electricity costs must be fully recovered from electricity consumers, rate mitigation funded through the rate-base often represents a shifting of costs from one consumer group to another (i.e., industrial to residential and commercial consumers).
  - Rate-based initiatives are generally associated with incenting changes in behaviour that provide electricity system benefits (i.e., shifting electricity consumption from on-peak to off-peak periods).

- The following slides provide an overview of the programs currently available to different electricity consumer classes along with the cost shift associated with several of the programs.

# Existing Rate Mitigation (cont'd)

| Program | Consumer Type | Rate/Tax-based | Description |
|---|---|---|---|
| Northern Ontario Energy Credit | **Residential** | Tax | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year. |
| Ontario Energy and Property Tax Credit | | Tax | Also delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families. |
| Ontario Electricity Support Program | | Rate | Provides ongoing assistance directly on the bills of eligible low-income electricity consumers. |
| Rural or Remote Rate Protection | | Rate | Provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas. |
| saveONenergy Conservation Programs (including Home Assistance Program for low income customers) | | Rate | Delivered by LDCs which provide financial incentives for electricity-saving measures like LEDs, ENERGYSTAR certified ceiling fans, baseboard programmable thermostats, clotheslines, and advanced powerbars. |
| saveONenergy Conservation Programs (including Retrofit Program for Buildings and other programs) | **Commercial** | Rate | saveONenergy suite of electricity conservation programs for commercial customers offered by local distribution companies (LDCs) help businesses save energy to better manage their electricity consumption and reduce their annual electricity costs. See Appendix for more information. |
| Industrial Conservation Initiative | **Industrial** | Rate | Encourages Ontario's largest consumers to reduce consumption during peak periods to save on average 25% on their electricity bills. |
| Industrial Accelerator Program | | Rate | Provides financial incentives of up to $10 million to transmission-connected electricity consumers, to invest in energy-efficiency or self-generation which would reduce the amount of electricity withdrawn from the provincial grid. |
| Industrial Electricity Incentive | | Rate | Provides reduced electricity rates for companies starting or expanding operations in Ontario. |
| Northern Industrial Electricity Rate Program | | Tax | Provides $20 megawatt per hour (MWh) rebate for qualifying large northern industrial consumers. |
| Demand Response | | Rate | Provides payments to businesses and industry to shift consumption at times when the electricity system is stressed. DR currently provides ~500 MW of capacity to the system. |

# Current Cost Shifts in Ontario's Electricity System

- Ontario has implemented several programs that have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial).

- The table below shows the estimated cost shifts in the province's electricity system that result from three existing government programs (i.e., ICI, RRRP and OESP):

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

# 2016 Budget Commitment – Overview

- The 2016 Budget committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers.

- To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP) committed $1.3 billion from the Greenhouse Gas Reduction Account (GGRA) over the first compliance period (2017-2020).

- The $1.3 billion was estimated to go to different electricity consumer classes as follows:
  - $120 million for residential consumers;
  - $170 million for commercial consumers; and
  - $40 for industrial consumers.

# Electricity System Cost Reduction Initiatives

- A number of actions have and are being taken to reduce overall electricity system costs:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

# Context – Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:

  - **Tax-based Lever:**
    - Provide an on-bill rebate funded from the tax-base to all consumers or specific classes of consumers (i.e., the Ontario Clean Energy Benefit (OCEB) provided a rebate for eligible electricity consumers).

  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.

  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds to offset the cost of existing initiatives that help reduce greenhouse gas (GHG) emissions (i.e., the CCAP committed to offset the impact of cap and trade and to keep electricity rates affordable).

# Rate Mitigation Proposal – Overview

- The Ministry of Energy is proposing to implement the following electricity price mitigation initiatives. The approach identified below would provide relief across all electricity consumer classes:

  1) Provide an 8% rebate to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms), equivalent to the provincial portion of HST;

  2) Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial);

  3) Update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers; and

  4) Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

- The following slides provide additional information on the above initiatives.

***Note:** Eligibility for the 8% rebate would be similar to OCEB and include some customers not on the Regulated Price Plan (RPP), such as Independent Power Authority consumers and consumers that have opted-out of RPP.

# Rate Mitigation Proposal – Illustrative* Impacts

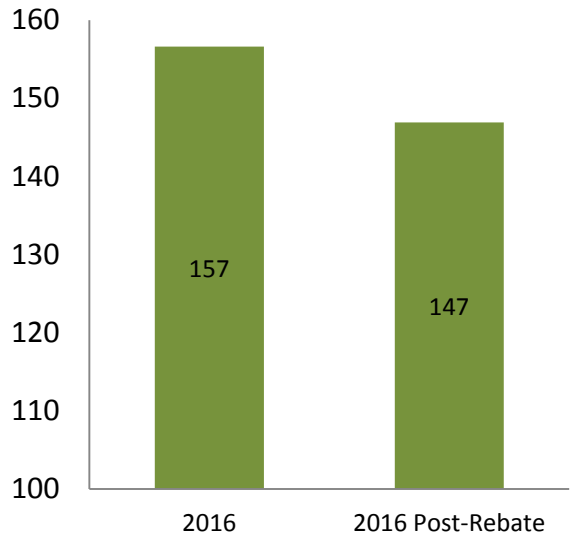
| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Impact | | Class B (Commercial) Impact | Class A (Industrial) Impact | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural** (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion | $270 million annually | -$10/ month<br><br>(-6%) | -$45/ month<br><br>(-20%) | -$1/MWh<br><br>(-1%) | -$1/ MWh<br><br>(-1%) | Up to -$52/MWh<br><br>(-34%) |

***Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

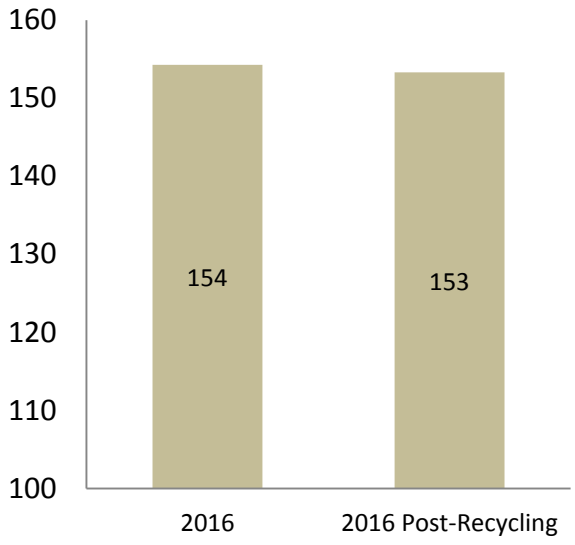
****Note**: Rural customers refers to customers of Hydro One eligible to receive RRRP (R2 rate class customers)

# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class

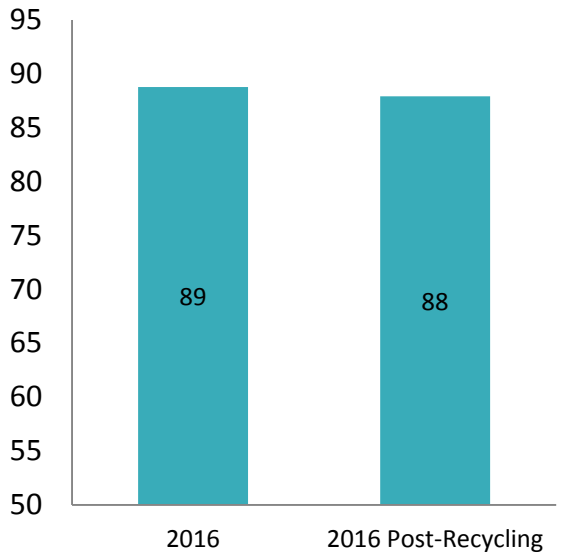
**Typical Residential Bill**
**750/kWh per month**




**Typical Commercial Price ($/MWh)**




**Typical Industrial Price ($/MWh)**




**Residential:** The net impact of the 8% rebate is a 6% reduction.

**Commercial:** The net impact of proceeds recycling is a 1% reduction.

**Industrial:** The net impact of proceeds recycling is a 1% reduction.

**Note:** Residential bills reflect electricity rates as per the Regulated Rate Plan (RRP) which came into effect on May 1, 2016. Commercial and industrial electricity prices reflect YTD June 2016. The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

# 1) 8% Rebate to Regulated Price Plan Eligible Consumers

- ENERGY is proposing to introduce legislation/regulation by X [placeholder for date] to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit.
  - This would be equivalent to the provincial portion of the HST*.

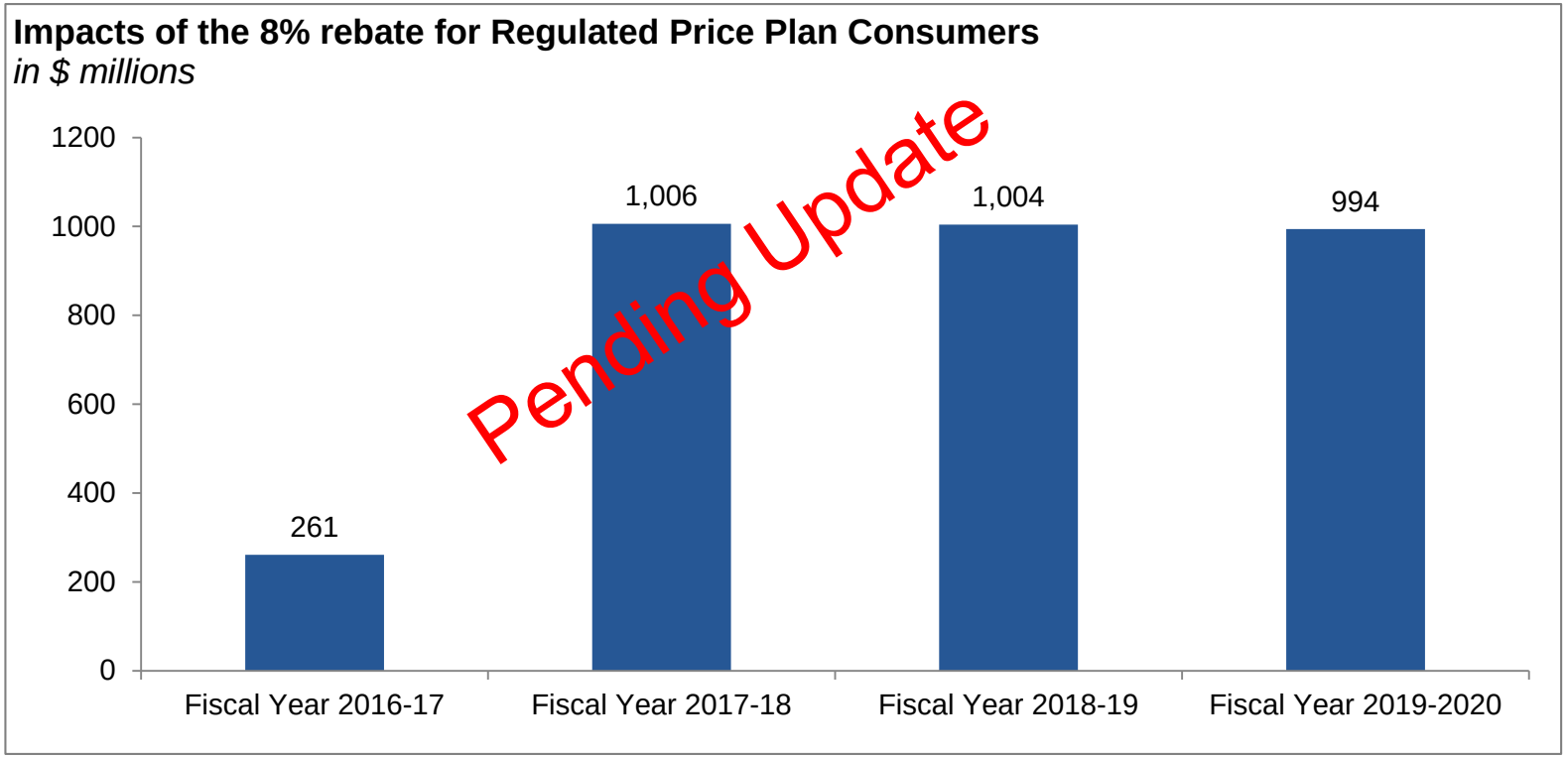
| **Eligible for the 8% rebate**<br>(< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate**<br>(> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>  − Coffee / snack retailer<br>  − Convenience store<br>  − Apparel store<br>  − Hair salon<br>  − Small insurance office | • Class A consumers<br>  − Manufacturer<br>  − Large grocery store<br>  − Mines<br>  − Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>  − Commercial offices (low rise)<br>  − Hotel<br>  − General warehousing |

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).

***Note:** An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

# 1) 8% Rebate to Regulated Price Plan Eligible Consumers – Projected Impact

- ENERGY estimates that the average annual cost of an 8% rebate to consumers eligible for Regulated Price Plan consumers would be approximately $1.0 billion between 2017 and 2020.



# 2) Industrial Conservation Initiative (ICI) Expansion

- ENERGY is proposing to amend O. Reg. 429/04 to expand ICI eligibility effective [X placeholder date].

- Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers).
  - Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

- ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:
  - Reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods;
  - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
  - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

# 2) ICI Expansion – Projected Impact

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

- The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility
  - Short-term refers to the expected impact once ICI billing begins for new Class A consumers (one year after expanded eligibility takes place).
  - Long-term is the expected impact once new Class A consumers have had time to significantly change their behaviour and investment decisions in response to the ICI.

- The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating.

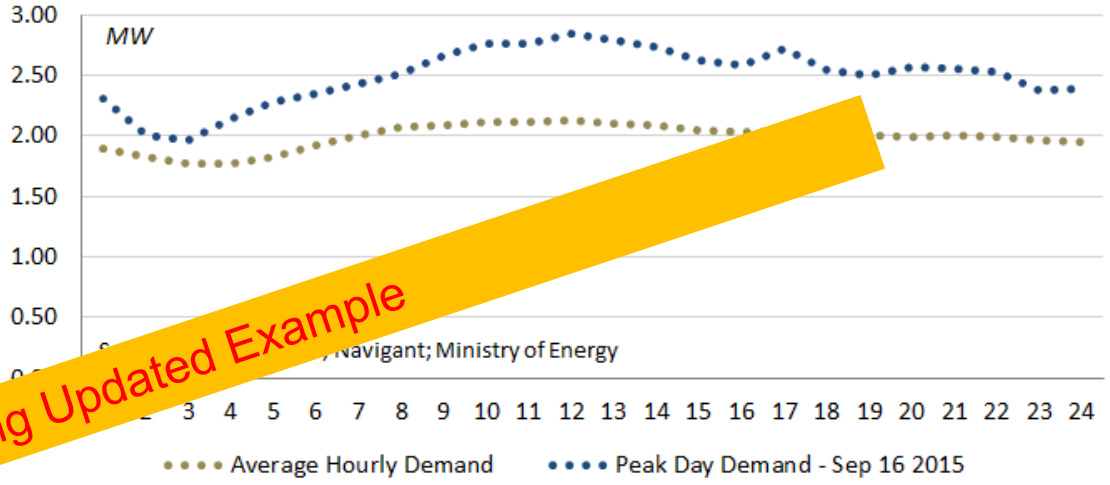
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.

# 2) ICI Expansion – Illustrative Example of Newly Eligible Consumer

- Plastics manufacturers, such as Poly Five Plastics in Toronto, are among the consumers that would become eligible if the threshold was lowered.
- Such manufacturers fall under NAICS* code 32 and have relatively flat load profiles, reflecting around the clock production. This means they would be beneficiaries of ICI even with no change in consumption behaviour.
- Companies like Poly Fi… could expect to … vings if they a… …ble to respond to …ces during high demand …

**Typical Demand Profile, 2-3 MW Consumer**

*Manufacturer, NAICS Code 32 - Nov 2014 to Oct 2015*




Pending Updated Example

**Illustrative Bill Savings, 2-3 MW Consumer**

*Manufacturer, NAICS code 32*

| | *Status Quo* | *No Price Response* | *Short Term Response* | *Long Term Response* |
|---|---|---|---|---|
| | **Class B** | **Class A** | **Class A** | **Class A** |
| GA | 75.26 | 58.06 | 43.55 | 29.03 |
| Total bill | **126.28** | **109.09** | **94.58** | **80.06** |
| *Savings* | | *-14%* | *-25%* | *-37%* |

*Source*: Navigant; Ministry of Energy

*** Note:** North American Industry Classification System (NAICS) is the standard used by statistical agencies in classifying business establishments.

# 3) Rural or Remote Rate Protection (RRRP) Update

- ENERGY is proposing to amend O.Reg 442/01 to provide an additional $110 million in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

- RRRP is a rate-based funded subsidy program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.
  - Today, RRRP is a $175-million program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
  - The majority of the program funding ($125.5 million) provides a subsidy to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a monthly subsidy for R2 customers of $31.50.
  - RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

- An additional $110 million in program funding would see an increased subsidy of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.
  - This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
  - The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the subsidy remains constant.

# 3) Rural or Remote Rate Protection (RRRP) Update

| Bill Comparisons @ 1000kWh/month (Pre-HST) | | |
|---|---|---|
| | **Total Current Delivery**** Charge** | **Total Current Bill** |
| **Hydro One R2** (Current RRRP Subsidy Levels) | ~$111 | ~$229 |
| **Hydro One R2** (With Proposed RRRP Expansion) | ~$83 | ~$201 |
| **Hydro One R1** | ~$82.50 | ~$201 |
| **Algoma Power** (Receives RRRP) | ~$79.50 | ~$197 |
| **Provincial Average*** | ~$51 | ~$169 |
| **Lowest Cost Total Bill LDC**** | ~$48 | ~$149* |
| **Lowest Cost Delivery Charge LDC***** | ~$36 | ~$154 |

**Average Bill of Ontario municipal LDCs and non-municipal Algoma Power, CNPI, and Hydro One Urban. Excludes Hydro One Remote, Hydro One R1 and Cornwall Electric.*

***The LDC with the lowest total bill is Fort Frances Power Corporation (FFPC). However, FFPC does not have the lowest delivery costs in the province. FFPC customers who are not enrolled with a retailer receive a $0.0125/kwh discount on power due to a historic (1905) mill agreement. In order to maintain the discount, FFPC maintains its ROE at 0%.*

****Hydro Hawkesbury has the lowest delivery rates at ~$36 per month*

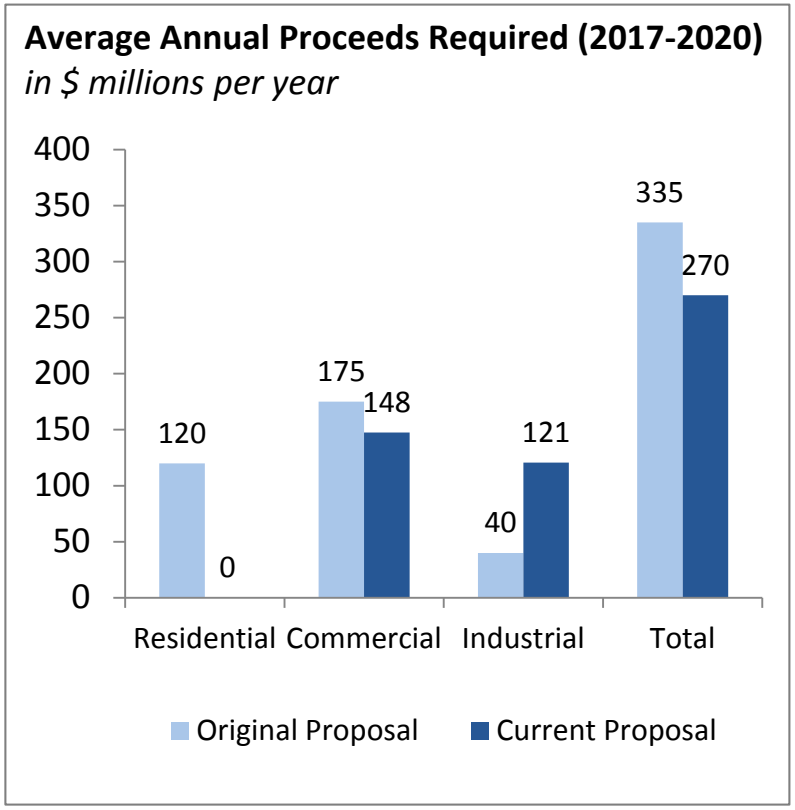
*****Delivery charges include distribution rates (fixed and variable), transmission, and line loss.*

# 4) Redirect Cap and Trade Proceeds Recycling

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.
  - To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).

- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

- The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $0.24 billion over the first compliance period).




**Note:** The original proposal was to offset the impact of cap and trade via GA to the average industrial, and would provide a benefit to commercial and residential consumers. Current proposal would recycle proceeds volumetrically to industrial and commercial consumers.

# Considerations – Implementation

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010.
  - If passed, the legislation would require a general regulation.
  - Amendments would also be required to various regulations to expand ICI and RRRP.

- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. ENERGY (possibly through Ontario Energy Board) will consult with LDCs to accurately assess these impacts once the program has been announced.
  - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - Timing concerns may be alleviated by allowing LDCs to provide retroactive ~~payments~~ rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.

- Detailed messaging on bills (for "low-volume" consumer bills ) could be implemented by amending O. Reg. 275/04 (made under the Ontario Energy Board Act, 1998). See appendix for bill mock-up.
  - The rebate would not be directly linked to HST.
  - With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.

- ENERGY will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

# Considerations – Fiscal

- The Climate Change Action Plan (CCAP) committed about $1.3 billion over four years for electricity mitigation for industrial, commercial and residential consumers from GGRA proceeds.
  - The current rate mitigation proposal requires approximately 20% less in proceeds, saving approximately $240 million relative to the CCAP commitment over the first compliance period (2017-2020).

- The 8% rebate is expected to cost about $1 billion per year (i.e., $4 billion from 2017-2020), representing an additional pressure on the fiscal plan.
  - Consideration could be given to allocating the $240 million in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset.

# Considerations – Legal

- In order to avoid characterization as an unconstitutional tax, a non-tax levy must have a sufficient nexus between those who pay and the regulatory scheme in the sense that those who pay have caused the need for or benefit from the regulatory scheme. Although the case law is not developed on the extent to which some regulated actors can be required to subsidize others, risk is reduced to the extent that any cross-subsidization serves true regulatory goals rather than revenue re-distribution goals.

- HST Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):
  - Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

- ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):
  - Shifting costs to some consumers to lower rates for others without more carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

- RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):
  - Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

- Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):
  - To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

# Communications

- Public high-profile communications would coincide with introduction of legislation (September 2016).
  - Stakeholder outreach/technical briefings with LDCs, Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.
  - Echo public announcements in southwest and north; proactive provincial/local media.

- **Positioning:**
  - A fiscally prudent plan to benefit all ratepayers in a lasting, meaningful way.
  - Rural customers will receive the largest single rate relief ever.
  - Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.

- **Issues Considerations:**
  - Significant benefit for rural and remote residential customers; net gain for all residential customers.
  - More complex to communicate, but can be presented as a full plan that includes reforms and improvements to the system.
  - Consistent with cap-and-trade commitment that no business sector will be left worse off, though small businesses outside ICI will benefit the least.

# Communications – Key Messages

- [Placeholder]

# Proposed Cabinet Minute

CABINET AGREED THAT:

1. THE MINISTRY OF ENERGY (ENERGY), WITH SUPPORT FROM THE MINISTRY OF FINANCE (MOF), SHALL PREPARE LEGISLATION THAT WOULD PROVIDE AN EIGHT PERCENT (8%) REBATE ON THE PRE-TAX COST OF ELECTRICITY FOR THE FOLLOWING CLASSES OF CONSUMERS:
   A. ALL CONSUMERS ELIGIBLE TO BE BILLED UNDER THE ONTARIO ENERGY BOARD'S REGULATED PRICE PLAN; AND
   B. ANY OTHER CONSUMERS WHO WERE ELIGIBLE FOR FINANCIAL ASSISTANCE UNDER THE *ONTARIO CLEAN ENERGY BENEFIT ACT, 2010* (OCEBA) DURING THE PERIOD THAT PROGRAM WAS IN PLACE.

2. THE LEGISLATION SHALL BE GENERALLY MODELLED UPON THE OCEBA, AND WOULD INCLUDE THE FOLLOWING ELEMENTS:
   A. THE REBATE WOULD BE AVAILABLE STARTING JANUARY 1, 2017 AND BEFORE SUCH DATE AS MAY BE PRESCRIBED;
   B. THE REBATE WOULD NOT BE SUBJECT TO A CAP UNLESS A CAP IS PRESCRIBED;
   C. THE LEGISLATION WOULD SPECIFY THE TYPES OF COSTS TO WHICH THE REBATE WOULD OR WOULD NOT BE APPLIED, WITH AUTHORITY TO MAKE CHANGES BY REGULATION;
   D. THE LEGISLATION WOULD ADDRESS INVOICING REQUIREMENTS, INCLUDING AUTHORITY TO PRESCRIBE HOW THE REBATE IS TO APPEAR ON CONSUMER ELECTRICITY BILLS;
   E. THE LEGISLATION WOULD INCLUDE AUTHORITY TO PRESCRIBE THE WAY IN WHICH THE REBATE IS TO BE FLOWED THROUGH TO CONSUMERS, AND THE WAY IN WHICH ELECTRICITY VENDORS PROVIDING THE REBATE ARE TO BE REIMBURSED;
   F. THE LEGISLATION WOULD INCLUDE RECORD-KEEPING REQUIREMENTS FOR ELECTRICITY VENDORS AND ANY OTHER PRESCRIBED PERSONS; AND
   G. THE LEGISLATION WOULD INCLUDE INSPECTION POWERS FOR INSPECTORS APPOINTED BY THE MINISTER OF FINANCE, INCLUDING POWERS RELATED TO RECOVERY OF OVERPAYMENTS.

Pending Update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# Proposed Cabinet Minute (cont'd)

3. ENERGY AMEND O. REG. 429/04 (ADJUSTMENTS UNDER SECTION 25.33 OF THE ACT) MADE UNDER THE *ELECTRICITY ACT, 1998* TO EXPAND ELIGIBILITY FOR CLASS A CONSUMERS AND CLASS A MARKET PARTICIPANTS UNDER THE INDUSTRIAL CONSERVATION INITIATIVE (ICI) TO ALL ELECTRICITY CONSUMERS AND MARKET PARTICIPANTS WITH A PEAK DEMAND ABOVE AN AVERAGE OF ONE MEGAWATT (1MW) WITH NO SECTORAL RESTRICTIONS ON PARTICIPATION.

4. ENERGY AMEND O. REG 442/01 (RURAL OR REMOTE ELECTRICITY RATE PROTECTION) MADE UNDER THE *ONTARIO ENERGY BOARD ACT, 1998* TO INCREASE THE TOTAL AMOUNT OF RATE PROTECTION AVAILABLE TO LOW DENSITY HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE RATE PROTECTION PROGRAM BY $110 MILLION, EFFECTIVE JANUARY 1, 2017.

5. ENERGY CONSIDER AND, IF APPROPRIATE, UTILIZE A MECHANISM TO PERIODICALLY ADJUST THE TOTAL ANNUAL AMOUNT OF RATE PROTECTION AVAILABLE TO HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE ELECTRICITY RATE PROTECTION REGULATION / PROGRAM, EFFECTIVE JANUARY 1, 2018.

Pending Update

6. ENERGY TO RECYCLE UP TO AN AVERAGE OF $270 MILLION OF CAP AND TRADE AUCTION PROCEEDS FROM THE *GREENHOUSE GAS REDUCTION ACCOUNT* PER YEAR OVER THE FIRST COMPLIANCE PERIOD (2017-2020) TO COMMERCIAL AND INDUSTRIAL ELECTRICITY CONSUMERS.

7. ENERGY AND MOF TO WORK WITH CABINET OFFICE (CO) AND PREMIER'S OFFICE (PO) ON COMMUNICATIONS PLAN.

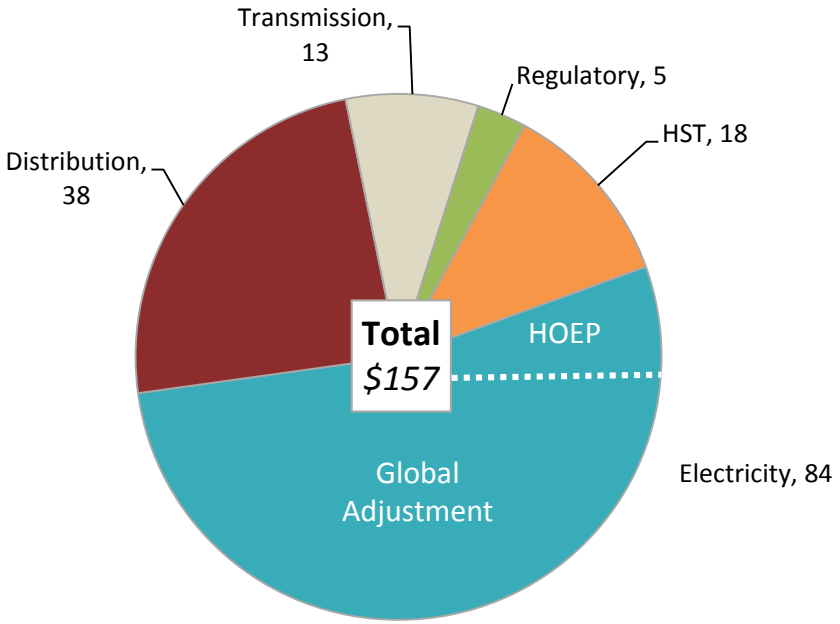
# Appendix

# Residential Electricity Prices

- There are approximately 5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of May 1, 2016 (750 kWh/month)*




*Source*: OEB, Toronto Hydro

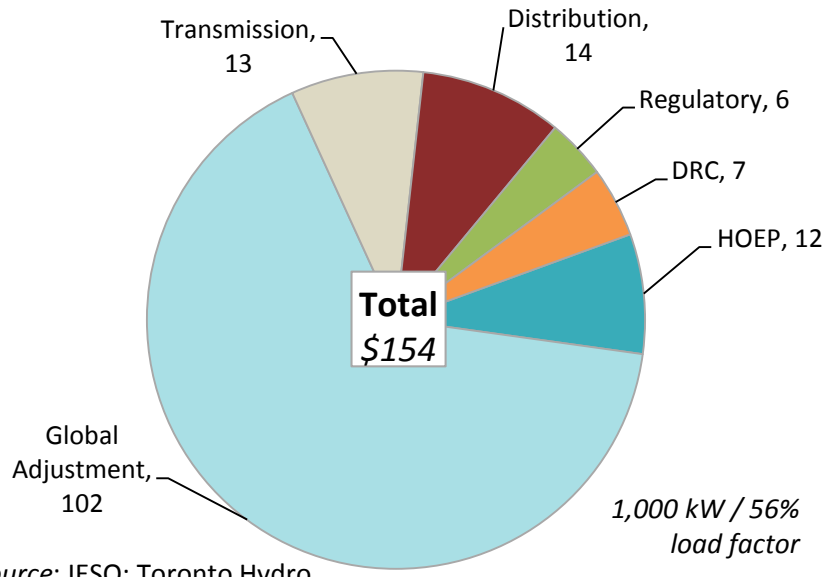
# Commercial Electricity Prices

- There are approximately 400,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.

- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




*Source*: IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.

- Targeted pricing programs are currently not available for Class B consumers.

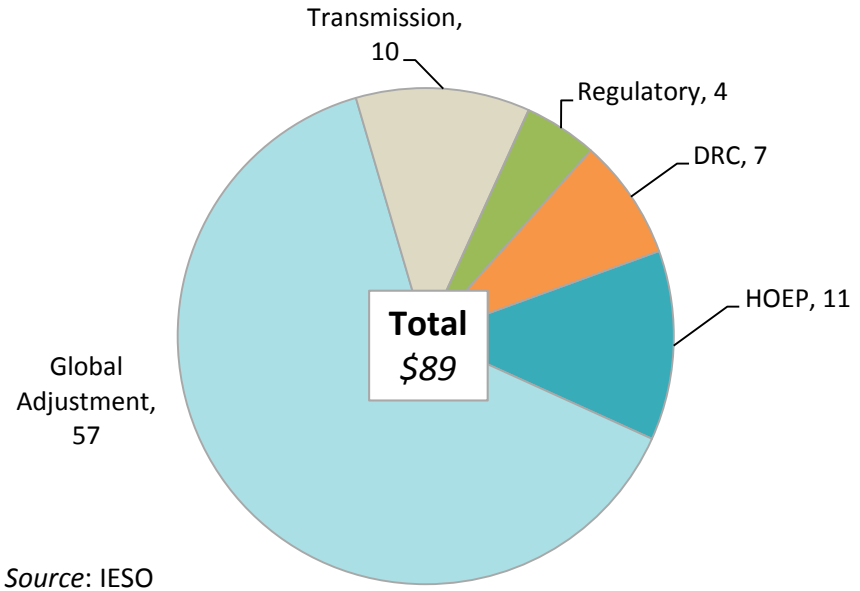
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*




*Source*: IESO

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $64/MWh for these consumers. The program is funded through the tax base.

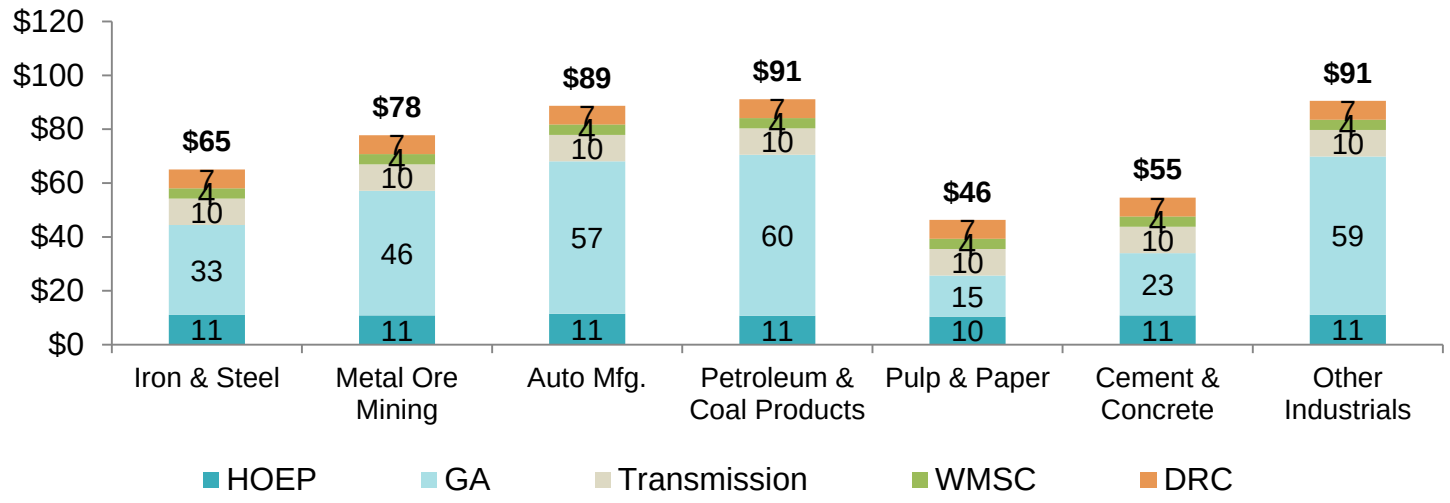
*** Note:** Industrial consumers receive input tax credits for their HST.

# Industrial Electricity Prices by Sector

- While industrial consumers (Class A) benefit from participation in the ICI program, there is a significant amount of variability in the ability to shift away from peak periods across customer classes, impacting the savings achieved.

- The below chart shows the prices paid in 2015 across a number of industrial sectors. Consumers in the north that receive rebates under the Northern Industrial Electricity Rate Program (NIERP) achieve rates that are $20/MWh lower than the below.

**Average all-in Class A, Transmission-connected Electricity Prices by Industrial Sector (estimated $/MWh), Year-to-Date June 2016**




**Note:** HOEP = Hourly Ontario Energy Price, GA = Global Adjustment, WMSC = Wholesale Market Service Charges, DRC = Debt Retirement Charge

# saveONenergy Conservation Programs

| Program | Consumer Type | Description |
|---|---|---|
| **Heating and Cooling Initiative** | **Residential** | Provides rebates to help offset the cost of purchasing and installing new heating and cooling equipment in the home. |
| **Coupons** | | Available in-store for one month in the spring and fall and can be downloaded year-round to use at participating retailers to help Ontarians save on a wide range of energy-efficient products including LED bulbs, power bars with integrated timers and more. |
| **Audit Funding** | **Business** | Up to 50% of the cost of an energy audit to identify opportunities for energy efficiency upgrades and eligible incentives. |
| **Retrofit Program** | | Provides various incentives for as much as 50 per cent of project costs, and advanced funding for assisted and social housing buildings, for updating old or inefficient equipment, including lighting, motors, unitary AC or packaged rooftop units. |
| **Small Business Lighting** | | Provides incentives for new energy efficient lighting. |
| **New Home Construction** | | Designed to encourage home builders and renovators to construct energy-efficient homes, and includes incentives for installation of energy-efficient measures. |
| **Training and Support** | | Helps provide access to the most up-to-date training, such as in building commissioning, certified measurement and verification, and how to be an energy manager. |
| **Process and Systems** | | Provides up to $50,000 for engineering studies and up to 70% of capital costs for energy efficiency upgrades. |
| **Industrial Accelerator Program** | | Assists eligible transmission-connected companies to fast track capital investment in major energy conservation projects. |

# HST – Overview

- The HST is a value-added tax. Unlike a sales tax, under a value-added tax most businesses effectively do not pay tax on their inputs because they are able to claim input tax credits (ITCs).
  - Through ITCs, the HST removes embedded sales taxes paid by businesses.
  - Only HST registrants that have taxable sales can claim ITCs. Businesses selling HST-exempt goods or services (such as financial services) are not eligible to claim input tax credits.

- Unlike businesses engaged in commercial activities, Public Service Bodies (PSBs) are generally not eligible to claim input tax credits. Instead, they can recover a portion of the HST paid by applying for PSB rebates from the Canada Revenue Agency.
  - PSBs consist of municipalities, universities, public colleges, school authorities, hospital authorities and charities and qualifying non-profit organizations.
  - See Appendix for additional information.

- To help low- to moderate-income individuals and families with the sales tax they pay on home energy costs (including electricity), Ontario provides tax relief through the energy component of the Ontario Energy and Property Tax Credit (OEPTC).
  - For the 2016 benefit year, eligible families and single people could get up to $224 to help with these costs, totalling about $445 million in tax relief.

- Ontario also provides tax relief through the Ontario Sales Tax Credit (OSTC), which was enhanced in 2010 to help low- to moderate- income individuals and families with the overall sales taxes they pay.
  - For the 2016 benefit year, eligible individuals can get up to $291 plus additional amounts of up to $291 for their spouse and each of their dependant children under age 19.
  - The 2016 OSTC is estimated to provide about $1.3 billion in tax relief.

# Placeholder – HST Exemptions in Other Jurisdictions

| Jurisdiction | Tax | Business | Residential | Comment |
|---|---|---|---|---|
| **British Columbia** | PST | Yes – 7% | No | • PST does not apply to residential energy, including electricity, acquired solely for residential use in a residential dwelling<br>• BC's carbon tax does not apply to electricity bills. |
| **Alberta** | None | N/A | N/A | • Alberta does not have a provincial sales tax. |
| **Saskatchewan** | PST | Yes – 5%<br>Except for electricity purchased to heat a building. | No | • PST does not apply to electricity purchased for use in a residential dwelling.<br>• PST does not apply to electricity purchased for use in heating a building that is heated solely by the electricity. |
| **Manitoba** | PST | Yes – 8%<br>Reduced rate of 1.6% applies to electricity used by a qualifying business to operate machinery | Yes – 8%<br>Electricity purchased for mixed use, 80% of which is home heating, has a reduced rate of 1.4%. Electricity solely to heat the purchaser's home is exempt. | • Winnipeg also applies a tax of 2.5% on residential and 5% on commercial. |
| **Ontario** | HST | Yes (less ITC (input tax credits)) | Yes – 8% | |
| **Quebec** | QST | Yes (less ITCs) | Yes – 9.975% | |
| **Nova Scotia** | HST | Yes (less ITCs) | Yes – 10% less provincially administered rebate. | • Rebate is equal to the provincial portion of the HST, and is administered similar to OCEB, but applies to many energy sources. |
| **New Brunswick** | HST | Yes (less ITCs) | Yes – 10% | |
| **Prince Edward Island** | HST | Yes (less ITCs) | Yes – 9% (10% beginning Oct 1, 2016) | |
| **Newfoundland and Labrador** | HST | Yes (less ITCs) | Yes – 10% | • Had a provincially administered Home Heating Rebate program until July 2015. |
| **Federal** | GST | Yes (less ITCs) | Yes – 5% | |

# HST – Considerations

- An across-the-board 8% rebate could be criticized as providing HST relief to those who effectively do not pay HST (businesses) as well as to those who receive HST relief through Public Service Body rebates or income tax relief.

- Providing a rebate equivalent to the 8% provincial portion of the HST on electricity, could lead to pressure to provide similar relief for other fuels and energy sources.
  - Ontarians who heat their homes with electricity will benefit from the provincial rebate, while Ontarians who heat their homes with natural gas, heating oil, propane, etc. would continue to pay the full 13% HST on those other energy sources.
  - The costs of natural gas, heating oil, propane, etc. are expected to increase as a result of Ontario's forthcoming cap and trade program.

- The provincial rebate would be an amount equal to the 8% provincial portion of the HST on electricity. OCEB, in contrast, was 10% of the bill including HST.

- The Province may also need to change the reporting for the cost of the energy component of the Ontario Energy and Property Tax Credit, which provides relief for HST on home energy. The energy component is reported as an offset of HST revenue.
  - Ministry program expenses could increase by as much as $445 million (TBC).

- The greater degree of complexity in the design of the program, the more difficult it will be to draft, implement and administer.

- To improve the province's ability to track impacts and program outcomes, subsequent legislative amendments to enable exchanges of data with LDCs could be considered.

# Additional Information – Public Service Bodies

- Unlike businesses engaged in commercial activities, Public Service Bodies (PSBs) are generally not eligible to claim input tax credits. Instead, they can recover a portion of the HST paid by applying for PSB rebates from the Canada Revenue Agency.

- Ontario's rebate rates are intended to keep these sectors fiscally neutral relative to the Retail Sales Tax they paid on their inputs under the former RST system.

| REBATE RATES FOR PSBs | | |
|---|---|---|
| **PSB Type** | **Ontario (8%)** | **Federal (5%)** |
| Municipalities | 78% | 100% |
| Universities & Public Colleges | 78% | 67% |
| School Authorities | 93% | 68% |
| Hospital Authorities | 87% | 83% |
| Charities and Qualifying Non-Profit Organizations* | 82% | 50% |

**A qualifying non-profit organization receives at least 40% of its funding from government.*

# Placeholder – Electricity Bill Mock-Up

# Industrial Conservation Initiative (ICI) – Overview

- In January 2011, Ontario amended O.Reg. 429/04 to implement the Industrial Conservation Initiative (ICI). This initiative established two classes of consumers:
  - "Class A" consumers are those with monthly peak demand exceeding 5 MW. They are charged global adjustment (GA) on the basis of their contribution to system peak demand during the highest 5 system demand hours of the year.
  - "Class B" consumers are all other consumers. They continue to be charged GA as a flat rate applied to their consumption.
- In May 2014, O.Reg. 429/04 was further amended to admit all consumers with monthly peak demand between 3 and 5 MW within certain energy-intensive industrial sectors into the ICI.
- This change has been successful in:
  - Incenting large consumers to significantly reduce their peak demand during the highest demand hours of the year, and
  - Providing large industrials with the ability to manage their electricity costs and remain competitive with competing jurisdictions.

# Expected Numbers of Newly Eligible ICI Consumers

- As part of its ICI survey, Navigant collected data on the number of consumers in the 1-2 MW, 2-3 MW and 3-5 MW categories. Navigant's response rate for the survey was approximately 76%. Approximately 300 consumers are currently participating in ICI.

- The table below sets out the number of consumers in each tranche from the survey along with an "adjusted number" which estimates the actual total number of customers in each tranche in the province (i.e., it accounts for the response rate).

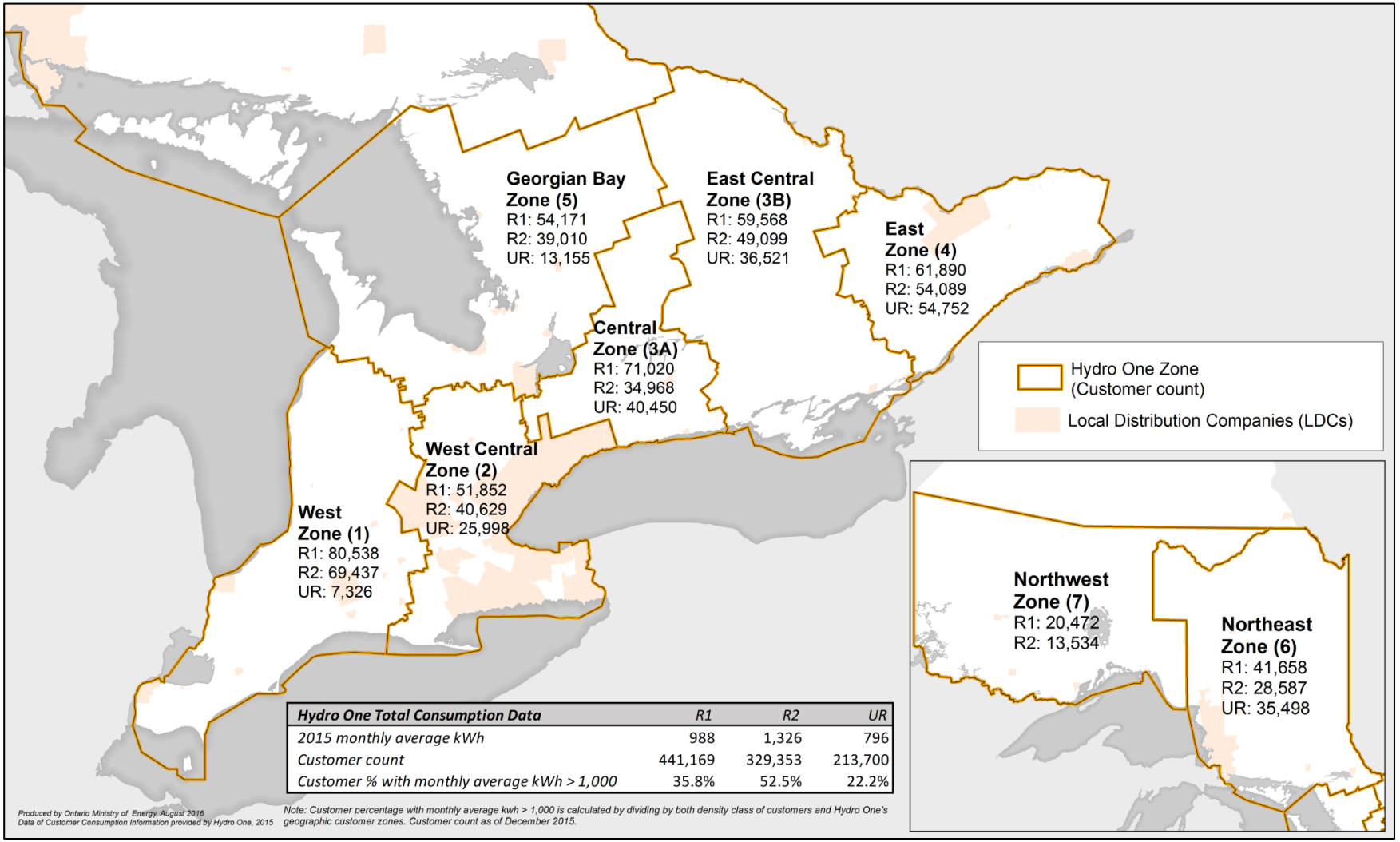
- As expected, there are a greater number of consumers in the 1 -2 MW category than in the 2 – 3 MW category.

| | **1-2 MW** | **2-3 MW** | **3-5 MW*** |
|---|---|---|---|
| # of customers – ICI survey | 649 | 197 | 171 |
| # of customers – Adjusted for response rate | 854 | 259 | 225 |

*Source:* Navigant; Ministry of Energy

* Includes consumers that are already eligible for and participating in ICI. ENERGY estimates that approximately 75 of 225 estimated consumers in the 3-5 MW category are participating in ICI.

# Hydro One Consumers by Customers Class

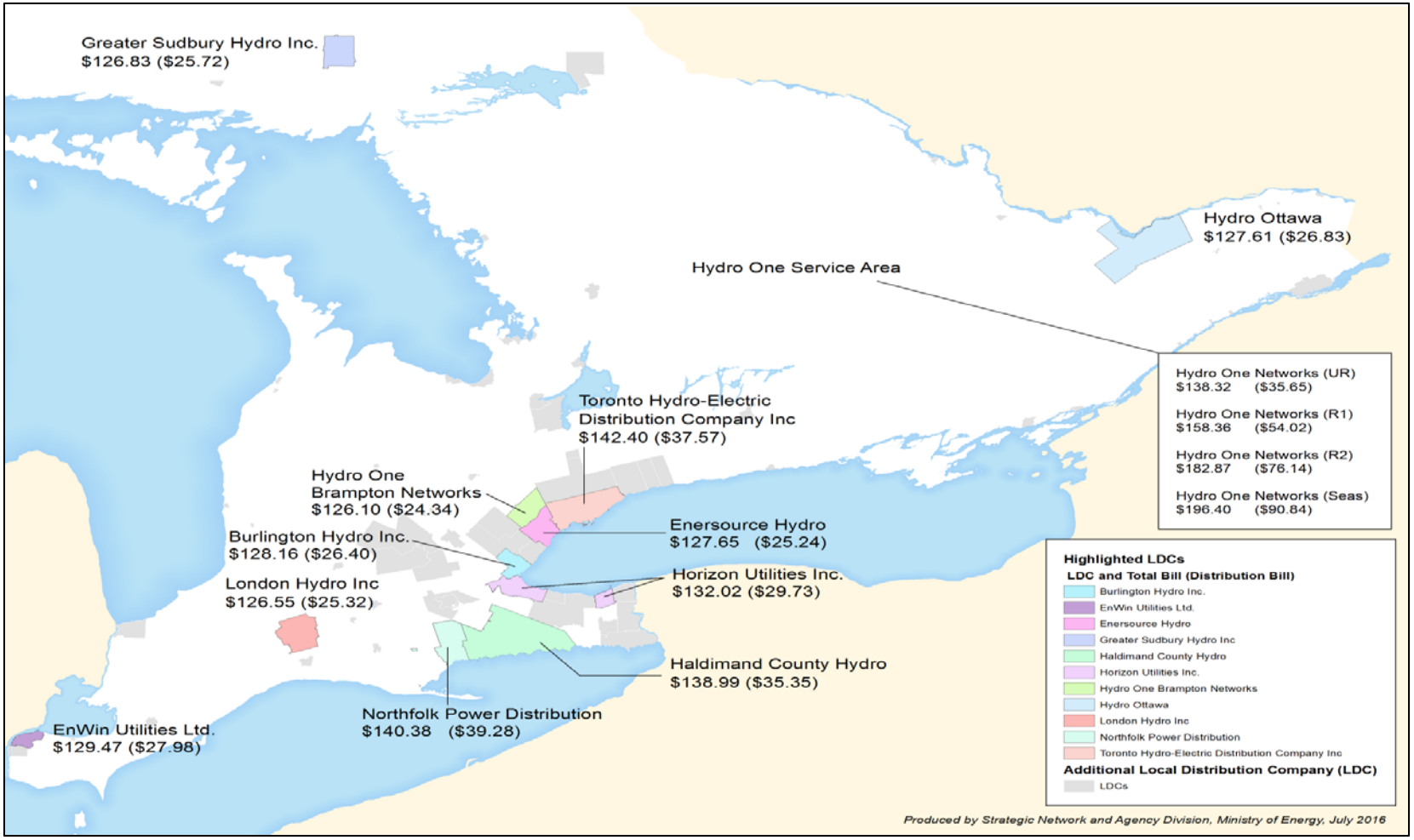



| *Hydro One Total Consumption Data* | *R1* | *R2* | *UR* |
|---|---|---|---|
| *2015 monthly average kWh* | 988 | 1,326 | 796 |
| *Customer count* | 441,169 | 329,353 | 213,700 |
| *Customer % with monthly average kWh > 1,000* | 35.8% | 52.5% | 22.2% |

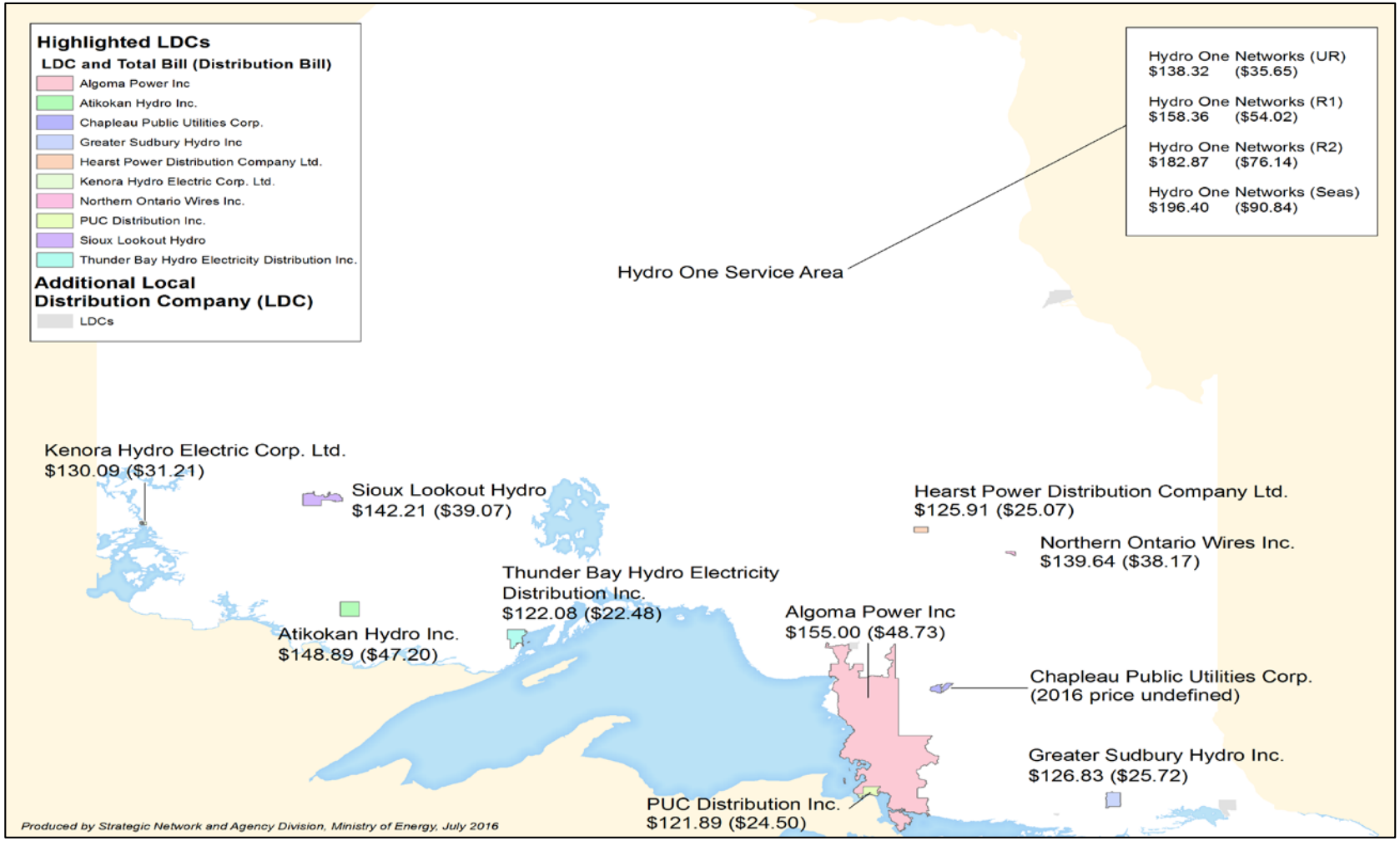
*Produced by Ontario Ministry of Energy, August 2016*
*Data of Customer Consumption Information provided by Hydro One, 2015*

*Note: Customer percentage with monthly average kwh > 1,000 is calculated by dividing by both density class of customers and Hydro One's geographic customer zones. Customer count as of December 2015.*

# Selected Rate Comparison – Total Bill and Distribution Rate



# Selected Rate Comparison – Total Bill and Distribution Rate



# Alignment With Climate Change Action Plan

- Ontario's Climate Change Action Plan (CCAP) commits $6.0 – 8.3 billion over 4 years to greenhouse gas (GHG) reduction initiatives, funded by Cap and Trade auction proceeds.

- The CCAP includes up to $1.32 billion over 4 years to help keep electricity rates affordable for residential and industrial consumers. This initiative is estimated to reduce up to 3,000,000 tonnes of greenhouse gas (GHG) emmissions by 2020.

| ***$ Billions*** | **2017-18** | **2018-19** | **2019-20** | **2020-21** | **Total** |
|---|---|---|---|---|---|
| Total Committed in CCAP | **$1.5 – 2.1** | **$1.5 – 2.1** | **$1.5 – 2.1** | **$1.5 – 2.1** | **$6.0 – 8.3** |
| *Electricity Price Mitigation* | *Up to 0.3* | *Up to 0.3* | *Up to 0.3* | *Up to 0.3* | *Up to 1.3* |

- Ontario's *Climate Change Mitigation and Low-carbon Economy Act, 2016* requires that all proceeds generated from Cap and Trade be used to help reduce greenhouse gas emissions.

- Should a portion of CCAP funding currently allocated to Electricity Price Mitigation be used to offset rate increases for certain industrial consumers, the remaining CCAP funding could provide a fiscal plan offset to the overall initiative by funding other existing initiatives that help reduce greenhouse gas emissions – for example:
  - Regional Express Rail;
  - Hamilton LRT;
  - Hurontario LRT; and
  - Energy efficiency in schools.

**From:** Emily Kerr
**To:** Felix Fung (MOF); James Strang (MOF)
**Cc:** John Kim
**Subject:** Energy Cabinet Submissions
**Date:** Thursday, November 24, 2016 9:58:51 AM

---

Hi Felix and James,

I understand that Energy is involved in two submission to a Minister's Table on Climate Change on December 8. The submissions are:

- Long-Term Energy Plan update
- Rate mitigation

Would you have copies of these submissions?

Thanks,
Emily

**From:** Ronald Kwan
**To:** John Kim; Emily Kerr
**Cc:** Francisco Chinchon
**Subject:** Energy and Price Mitigation
**Date:** Monday, December 12, 2016 1:25:52 PM
**Attachments:** Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx

---

Hi,

Apparently a draft “bootleg” copy.

Please review and do a markup. A short note with staff comments would be helpful too.

Is a draft for EOD doable?

The “Trillium Trust” would notionally be either all incremental electricity projects vs Moving Ontario Forward, and hitting the bottom line once in-service and amortised. Or crowds out Moving Ontario Forward projects. However, could hurt the fiscal bottom line if it is perceived as detracting from Hydro One potential rate base growth, hurting market value upfront, and net income (and corporate taxes) over time. Does that make sense?

And little or no near-term rate impact, as new projects would affect the rate base years out, unless the Trillium Trust is used for existing Tx projects already about to come on line.

I might want to argue that if they do the DRC one, it is in effect giving up a chunk of the Departure Tax benefit to OEFC. And on the departure tax, aside from all the regulatory principles arguments, I might think about saying that the elimination of the deferred tax liability portion was just truing up the PILs amounts owing.

Thanks,
Ron

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8%  per cent rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured,  the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP),  which provides an opportunity to consider a range of policy changes to  how the Ontario energy sector operates.

# Broad Policy Themes / Rationale

- No longer use rate-base to pay for social programs by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.
- Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.
- Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new “green bank entity” over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the “Trillium Trust” to make investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded  interties and expansion of natural gas to rural areas, etc.
- Empower energy  agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario’s electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to “opt into” a single rate plan as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time.
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.16 | 2.31 | 2.41 | 2.49 | 2.54 | 2.58 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.13 | 0.13 | 0.14 | 0.14 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.88 | 3.08 | 3.21 | 3.33 | 3.39 | 3.44 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 2.82 | 3.05 | 2.47 | 2.56 | 2.13 | 2.14 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.10 | 0.10 | 0.11 | 0.11 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Taxpayer Funded Electricity Price Mitigation

| *($M)* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | | 398 | 419 | 433 | 447 |
| 2. Expand the OESP (i.e., 50% increase) | TBD | TBD | TBD | TBD | TBD |
| 3. Fund Conservation Programs Through The Tax-Base | 110 | 450 | 450 | 450 | 450 |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC efficiencies | - | - | - | - | - |
| c. OPG – Borrowing | - | - | - | - | - |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | 110 | 450 | - | - | - |
| 8. Cancel / Adjust FIT | - | - | - | - | - |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| 2. Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy

# Considerations / Outcomes

- The proposed initiatives provide the following opportunities to:
  - Lower the cost of electricity for all consumers;
  - Re-set how electricity programs and energy infrastructure is funded (i.e., shifting costs to the tax-base from rate-base);
  - Provide electricity consumers with greater choices (i.e., signal rate plan);
  - Provide system benefits (e.g., market renewal); and
  - Increase cost effectiveness and improve efficiency.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | Francisco Chinchon; Darren Scanlan |
| **Cc:** | John Kim |
| **Subject:** | Energy"s Deck with CEFD additions |
| **Date:** | Tuesday, December 06, 2016 3:28:31 PM |
| **Attachments:** | Price Mitigation Proposals_Dec5-16_v11_CEFDmarkup_withSPFBSIFB_v2_markup4.pptx |

Hi Francisco,

We used a different chart format to represent the information in Slide 12. Please see files attache.d

Thanks,
Shajee

**Shajee Kathirgamanathan**
Senior Advisor
Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement ~~GEIA~~ renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

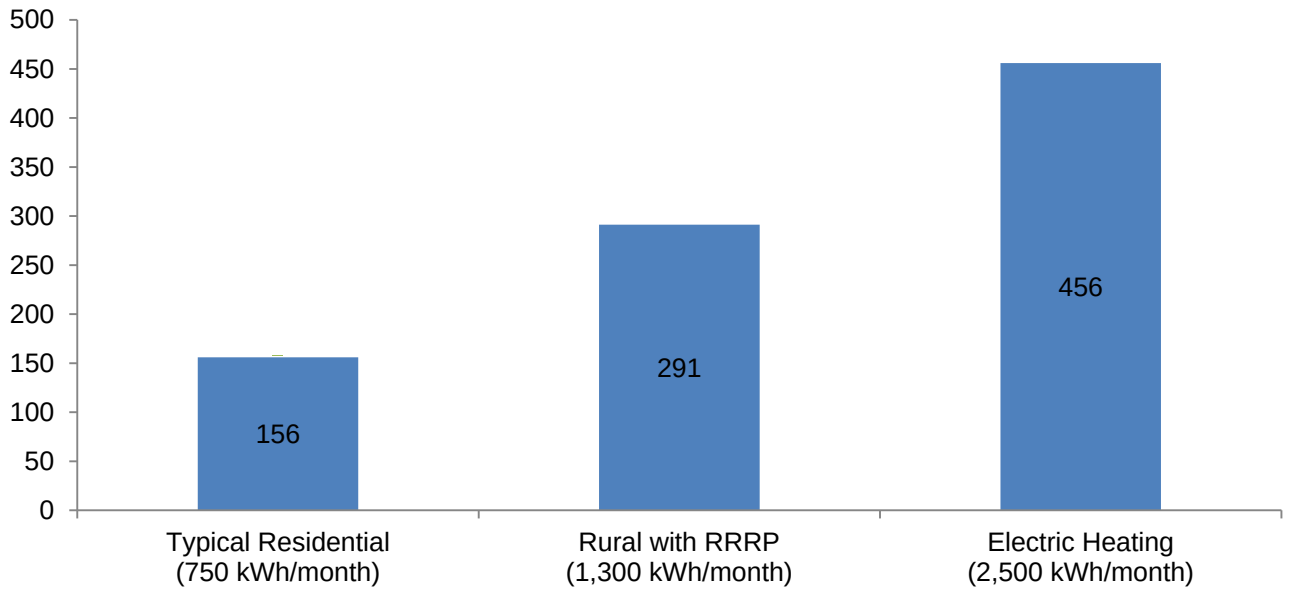
- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate before tax, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II) and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in costs; and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 ~~Long-Term Energy Plan (2013~~ LTEP~~)~~ forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

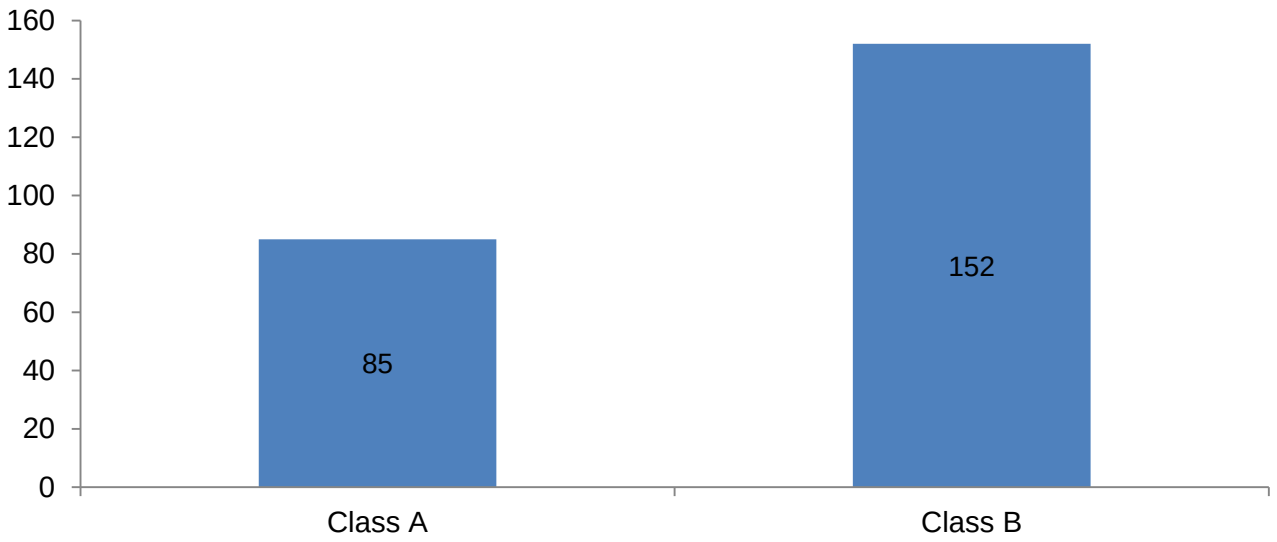



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Current Status on Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,200* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,105** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from November LRC Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion and before considering any additional funding from the tax base.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total decrease on typical monthly bill** | **8.38** | **8.23** | **7.75** | **9.26** | **8.52** | **8.17** | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total increase on industrial bill** | **19.96** | **18.97** | **18.34** | **17.14** | **14.45** | **13.7** | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of about $450 ~~[placeholder for OFA]~~ on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $30 ~~20 to $35~~ million annual fiscal pressure in 2017 to the province ~~[TBC by OPG / OFA]~~ based on new borrowing and increasing based on cumulative borrowing.

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.
- A summary of the annual fiscal impacts of the proposed initiatives is presented in the next slide

DRAFT

# Effect of Additional Proposed Taxpayer funded Electricity Price Mitigation

| Proposal | Fiscal Costs ($M) | Residential Ratepayer Savings |
|---|---|---|
| **EXISTING MEASURES** | | |
| OREC | 1,100 | $11/month |
| NIERP | 120 | n/a* |
| NOEC | 25 | n/a* |
| OEPTC[3] | 460 | n/a* |
| **TOTAL Costs from Existing Measures** | **1,705** | **11** |
| | | |
| **PROPOSED MEASURES** | | |
| **Proposal 2:** Fund Electricity Support Programs Through the Tax-Base (OESP, RRRP, First Nations Delivery Rate) | 420 (yr 2017-18)** | $2.45/month |
| **Proposal 3:** Eliminate the Industrial Conservation Initiative funding from ratebase, and shift to tax base | 900 | $4/month |
| **Proposal 7:** Reduced cost of OPG Borrowing | 30-35 | $0.18/month |
| **Proposal 8:** Reduce DRC to $3.50/MWh or end DRC early for Commercial/Small Industrial Class B Electricity Users | 190-380 (yr 2017-18)*** | n/a* |
| **TOTAL Costs/Savings from Proposed Measures** | **1,584 – 1,778** | **$6.63/month** |
| **TOTAL Costs/Savings from All Taxpayer funded Measures** | **3,289 – 3,483** | **$17.63/month** |

* Costs were not borne by the ratebase.
** Assumes 75%/25% split between 2017 and 2018 costs
*** DRC is removed from all electricity bill by April 1, 2018

SLIDE ADDED BY CEFD

# Proposed Taxpayer Funded Electricity Price Mitigation

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ~~OCEB~~ | – | – | | | |
| OREC | 300 | 1,200* | 1,200* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | ~~330~~ | ~~330~~ | ~~330~~ |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| TOTAL | 1,195 | 2,105 | 2145 | 2156 | 2156 |
| 1. Electric [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] |
| 2. OESP | | [illegible] | [illegible] | [illegible] | [illegible] |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 2. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 3. Fur[illegible]CI thr[illegible]gh [illegible] | | 90 | 900 | 900 | 900 |
| TOTAL | 1195 | 3,421 | 3,482 | 3,507 | 3,521 |

Suggest using slide From previous page instead

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy [illegible] the [illegible]

- As shown above if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.5 billion by 2020-21. That is a 67% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESBP) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.

- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.

- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.

- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

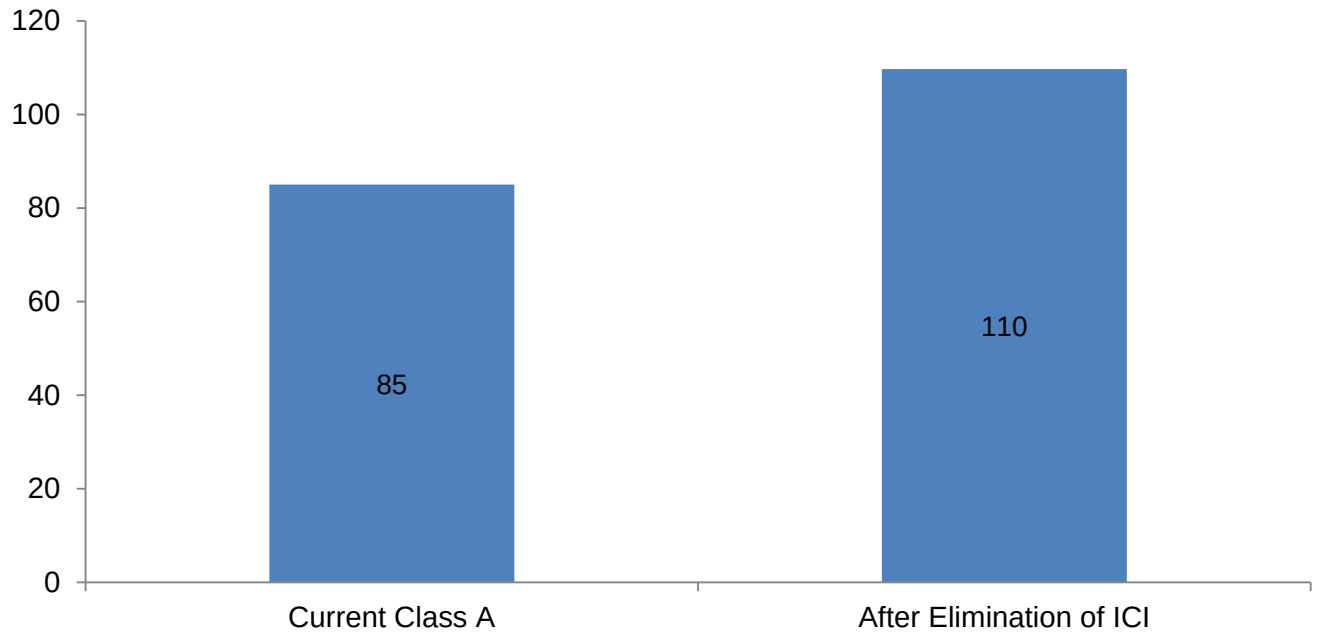
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

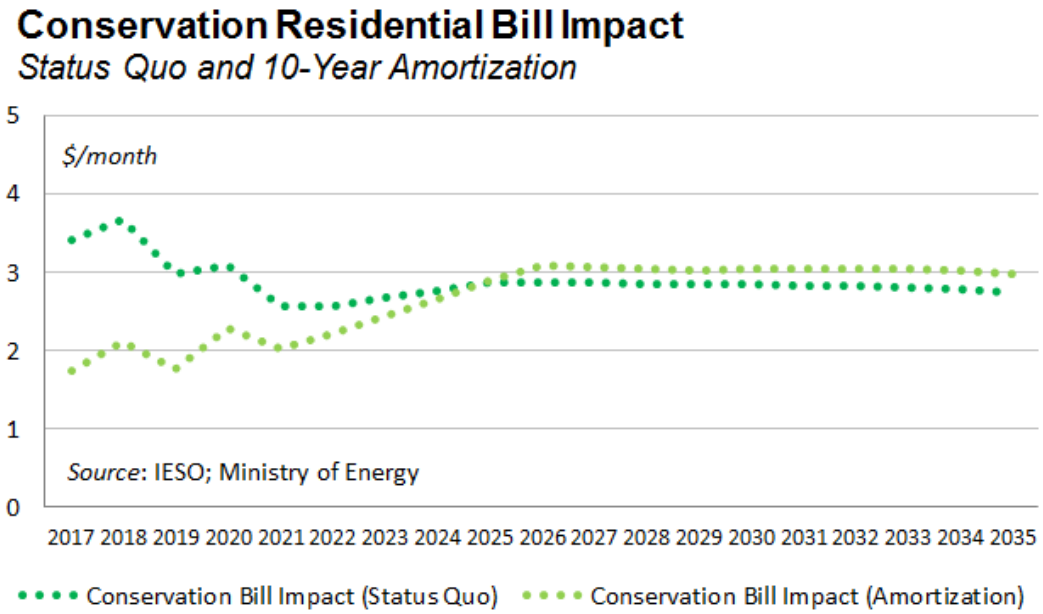
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro- November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

- As shown before the positive impact to residential ratepayers is very limited (between $8 and $9 per month) while the impact to the Province's fiscal position would be material (about $1.5 billion a year).

# Appendix

# Electricity Consumer Classes

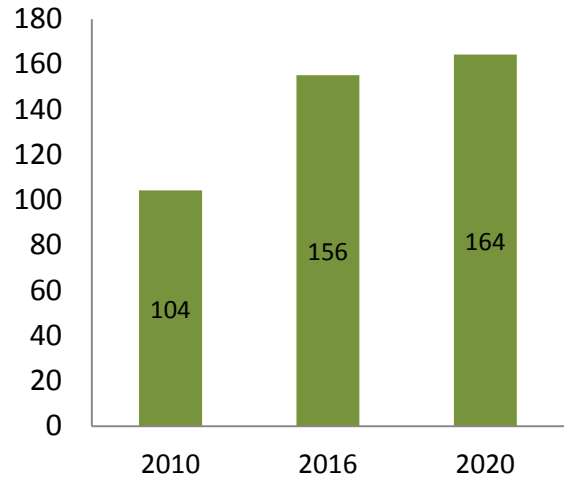
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

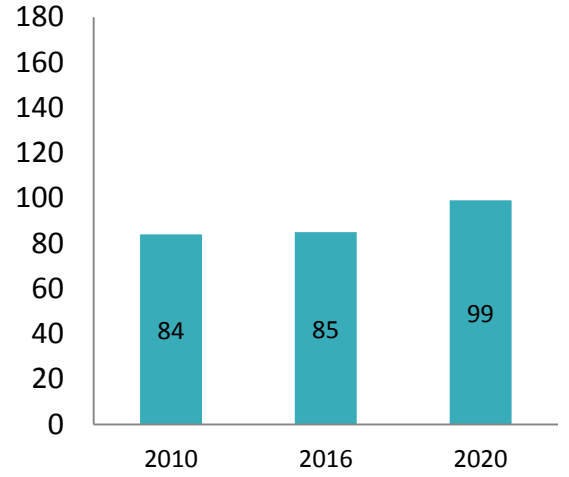
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

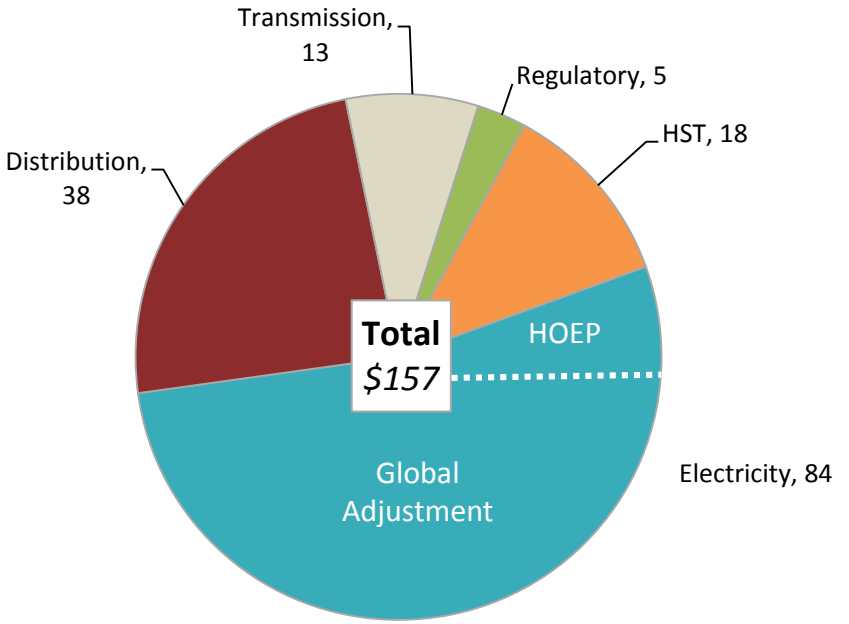
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



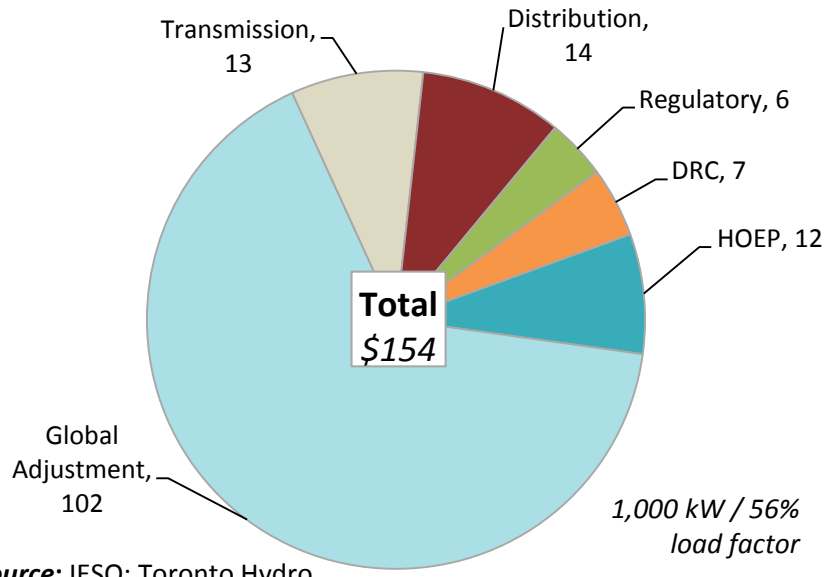

***Source*:** OEB, Toronto Hydro

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

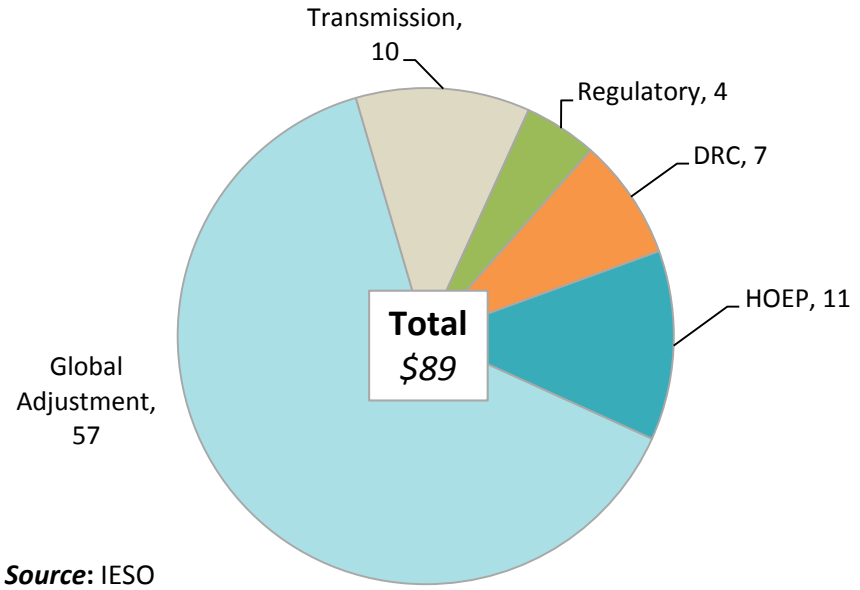
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



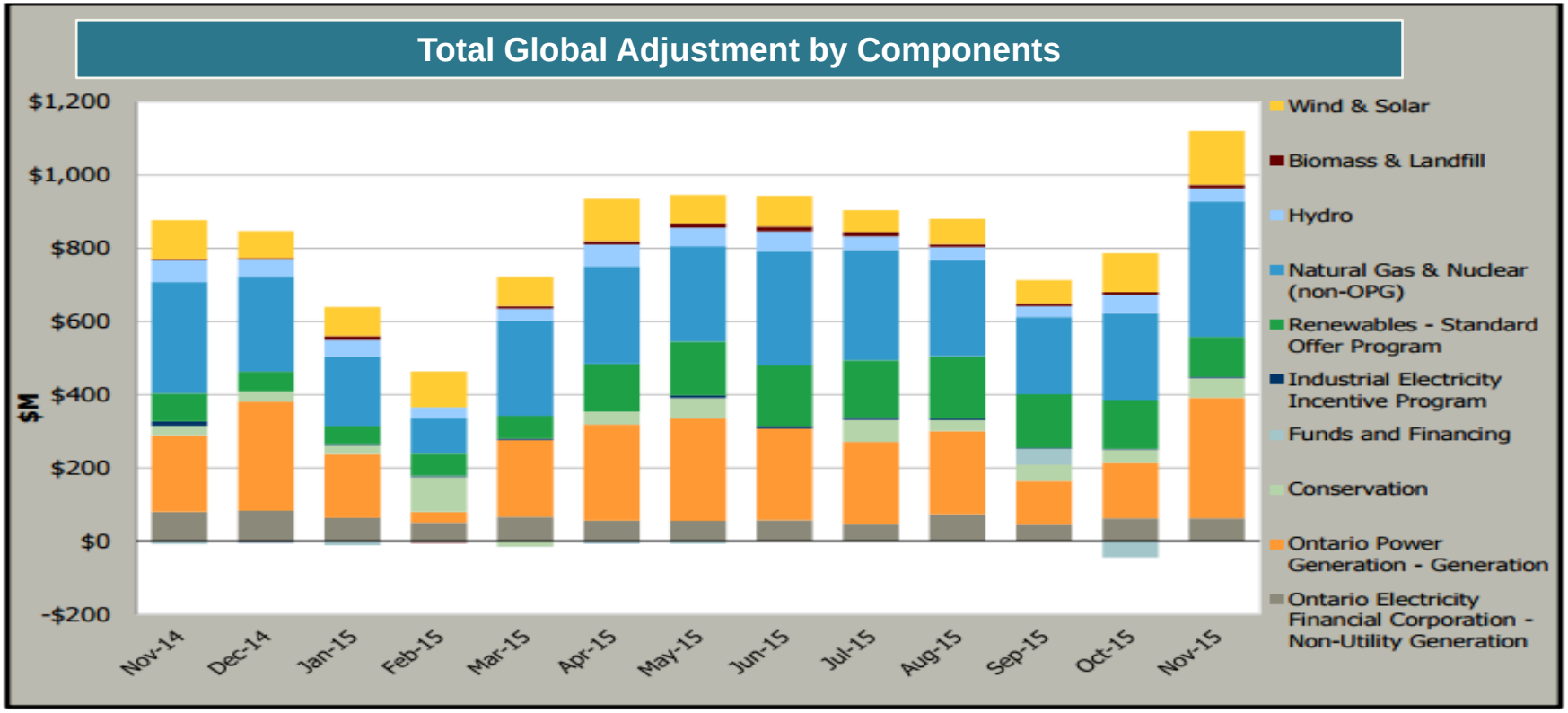

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan; William Lin; Gavin He; Salman Qadir |
| **Subject:** | FW: 3 2016-09-16 RAN OPG Business Plan v4.doc |
| **Date:** | Thursday, September 22, 2016 3:27:27 PM |
| **Attachments:** | 3 2016-09-16 RAN OPG Business Plan v4.doc |

Fyi.

**From:** Strang, James (TBS) [mailto:James.Strang@ontario.ca]
**Sent:** Thursday, September 22, 2016 2:38 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** 3 2016-09-16 RAN OPG Business Plan v4.doc

I've taken the edits shared this morning and added to the two opening paragraphs. I'm still waiting to hear back from Energy.

**TREASURY BOARD / MANAGEMENT BOARD OF CABINET**
**REQUEST ASSESSMENT NOTE**

| | |
|---|---|
| **Ministry:** | Energy |
| **Meeting Date:** | September 27, 2016 |
| **Agenda Class:** | Discussion (In Camera) |
| **Last reviewed by:** TB/MBC March 24, 2015 | **Tracking to:** Cabinet (October 5, 2016) |

| **SUBMISSION TITLE:** | 2016-2018 Business Plan for Ontario Power Generation |
|---|---|

## I. DECISION BEFORE THE BOARD

- Receive Ontario Power Generation's (OPG) 2016-2018 Business Plan framework with requirement to align with Treasury Board Secretariat's Executive Compensation Framework Regulation

## II. RECOMMENDATIONS:

| | |
|---|---|
| • Receive the 2016-2018 business plan for Ontario Power Generation | *Receive* |
| • Note Minister of Energy will provide concurrence with OPG's Business Plan, which will include a caveat that OPG align its compensation strategy with requirements of Treasury Board Secretariat's Executive Compensation Framework Regulation. | *Note* |

## III. FINANCIAL SUMMARY

| **$ Millions** | **2014-15** | **2015-16** | **2016-17** |
|---|---|---|---|
| Initiative cost requested | 0.0 | 0.0 | 0.0 |
| Initiative cost recommended | 0.0 | 0.0 | 0.0 |
| Recommended program base | 0.0 | 0.0 | 0.0 |
| Offset Recommended (Specify Ministry/Program) | 0.0 | 0.0 | 0.0 |
| Total Fiscal Impact | 0.0 | 0.0 | 0.0 |

## IV. KEY COMMENTS AND CONSIDERATIONS

As stipulated as part of the 2013-14 Results-based Planning process, the Ministry of Energy is submitting OPG's annual business plans for review by Treasury Board to facilitate incorporating implications into the Province's fiscal plan.~~.~~

~~Note that~~ ~~I~~it is under the responsibility of the Minister of Energy on whether or not to provide the Minister's concurrence of OPG's annual multi-year business plan. The Treasury Board submission provides the Minister of Energy with an opportunity to highlight why concurrence is being given and any conditions placed on it. Appendix C provides more information on the concurrence process and the 2013-14 minute.

Under the memorandum of agreement (MOA, July 2015) between the Province (as sole shareholder and the Ministry of Energy as representative of the shareholder) and OPG, the company is required to annually submit its board-approved multi-year business plan to the Minister of Energy for concurrence.

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The concurrence letter from the Minister to the company will note key elements of the business plan, how these elements relate to the policy direction and priorities of the Province, and the government's expectation for the performance of the company including indicating any elements of the business plan the government does not concur.
~~Appendix C provides more information on the concurrence process.~~

In March 2016, due to the timing of government decisions on Darlington nuclear refurbishment, OPG submitted a preliminary non-Board-approved draft of its business plan to the Ministry. Financial figures from the preliminary draft business plan were not incorporated into the already finalized Province's fiscal plan for the 2016 Budget. The Ministry of Energy indicates it is generally supportive of the fiscal, financial and operational strategies laid out in the business plan.

The earnings before tax (net income and income tax payments in lieu – PILs) of OPG are consolidated on the Province's financial statements and have one-for-one impact on the Province's surplus/deficit position. OPG is expected to submit its next multi-year business plan later this year for the period starting January 1, 2017.

***Overview of Current Business Plan***

OPG's 2016-18 Business Plan details key company undertakings such as business transformation and nuclear refurbishment that will have a substantial electricity system benefit, ratepayer and shareholder impacts. These items were flagged in the previous year's multi-year business plan as well.

- Key Income Statement Forecasts:
  - The figures in the OPG Board approved 2016-2018 Business Plan show a decrease in earnings before tax of $289 million in 2016-17 and an improvement of $194 million in 2017-18 over the estimates in the 2016 Budget, which was largely based on the estimates from the 2015 Budget. OPG is projecting generally growing net income contributions to the Province's fiscal plan over the planning period. These estimates are highly dependent on electricity and financial market conditions, regulatory decisions by the Ontario Energy Board (OEB), potential changes to accounting standards or the basis of consolidation in Public Accounts, operational performance, and/or government policy, which can change materially. The first table in Appendix G shows the changes to Province's fiscal plan.
  - Annual Operations, Maintenance & Administration (OM&A) expenses from ongoing operations decline by ~$120 million in 2018 and by ~$230 million in 2021, primarily due to lower pension and other post-employment benefit (OPEB) costs. The plan also incorporates continued efficiency improvements expected to be achieved through business unit and support group initiatives, including attrition-based staff reductions in certain areas.
  - The cost of OPG generated electricity to customers is projected to remain ~40% below the average non-OPG cost of electricity to 2018, and over ~30% by 2021. Note: OPG provides predominantly, lower-cost baseload generating capability, rather than more expensive peaking generating capability.
  - Headcount Efficiencies – During the planned period, headcount from ongoing operations is forecasted to fall from 9,302 in 2016 to 8,811 in 2021.
    - Last year's concurrence letter included a caveat that OPG reduce its non-nuclear headcount by an additional 5% of 2015 levels by 2020. Using the 2015 business plan headcount level for 2015 (3716, which is consistent with the 2014 actual headcount of 3724), the 2020 projected headcount (3390) is an 8.8% reduction from 2015 Plan.

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- Key Projects: The plan assumes ongoing operations at Pickering for about four years beyond 2020, and that the execution of the Darlington refurbishment is consistent with approved budgets and as scheduled.

- Rate Application to the OEB
  - Rate Application – In May 2016, OPG filed a 5-year nuclear and hydroelectric rate application with the OEB covering the 2017-2021 period. The rate application includes a nuclear rate smoothing proposal to avoid price spikes that would arise during the Darlington refurbishment, by deferring the recovery of a portion of nuclear revenues to the post-refurbishment period.
  - Ratepayer Costs –OPG has estimated that the combined monthly bill impacts of new nuclear and hydroelectric rates to the typical residential customer to average an annual increase of about $1.05 per month over the 2017-2021 period. The expected average annual impact on a typical residential customer's monthly bill over the period to 2021 is estimated to be ~0.7%.
- OPG's Executive Compensation Framework (Appendix F provides more information)
  - OPG's Business plan contains the company's proposed executive compensation framework. OPG has expressed an urgent need to adjust its compensation framework to ensure that effective leadership is in place for successful delivery on its key priorities and projects.
  - OPG's proposed compensation framework would target the 50th percentile relative to benchmarked peers for most roles. Treasury Board Secretariat (TBS) issued an Executive Compensation Framework Regulation that caps salary and performance-related payments for executives at no more than the 50th percentile of appropriate comparators.
  - Concurrence of OPG's Business Plan under the Memorandum of Agreement (MOA) signals government support of OPG and its rate application.
    - The Ministry of Energy indicates conditional concurrence with OPG's Business plan would be explicit in that concurrence does not extend to OPG's proposed compensation framework, as embedded in its Business Plan. OPG would need to develop a new framework that demonstrates progress to meet the requirements outlined in TBS' regulation, working with the Minsitry of Energy and TBS. A new framework would require concurrence to implement.
- Capital Structure & Independent Borrowing Platform.
  - OPG is evaluating options to improve its actual capital structure to be more aligned with OEB's deemed capital structure used to set OPG's regulated rates.
  - OPG is also looking at the option to pursue a public capital market financing strategy. OPG indicates its 2016-2018 Business Plan does not reflect the impacts of any public financing strategy. OPG currently borrows for general corporate purposes from the Ontario Electricity Financial Corporation (an agency of the Ministry of Finance).
  - Once OPG has completed its evaluation, it will present options for Shareholder concurrence.

*Other Key Fiscal Risks:*

Regulatory risks: Potential disallowance of recovery of OPG's current or future deferral and variance account balances (including for the proposed nuclear rate smoothing), future treatment of pension costs.

Accounting risks: Any change in the basis of accounting used for consolidation of OPG on the

Province's financial statements could result in potentially significant fiscal impacts.

Financing Costs: Higher cost public capital market borrowing would have a negative fiscal impact.

| | | | |
|---|---|---|---|
| **Name of analyst:** | James Strang | **Phone number:** | 7-2071 |
| **Date:** | September 22, 2016 | **Log number:** | |
| **Branch / Division:** | General Government, Planning and Resources Branch, PEM, TBS | | |

## APPENDIX A: PROPOSED MINUTE

Note receipt of a Business Plan for Ontario Power Generation.

In this regard,

i.) Note the Minister of Energy will provide Ontario Power Generation (OPG) with a concurrence letter for its Business Plan, with the caveat that acceptance of OPG's compensation strategies will be subject to OPG's future alignment with requirements of Treasury Board Secretariat's Executive Compensation Framework Regulation.

ii.) Direct the Ministry, in consultation with the Ministry of Finance / Ontario Financing Authority, to report back to the Board in early January each year with the approved or latest draft business plans for Ontario Power Generation for fiscal planning purposes.

| **FINANCIAL IMPACTS: CHANGES TO EXPENSE AND REVENUE** | | | | | **TABLE B1** |
|---|---|---|---|---|---|
| | | ***Fiscal Plan Basis*** | | | ***Appropriations Basis*** |
| **$ Millions** | | **2014-15** | **2015-16** | **2016-17** | **2014-15** |
| Initiative cost recommended | | 0.0000 | 0.0000 | 0.0000 | |
| *Expense changes:* | | | | | |
| Operating item | Oper | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Capital item | Cap | 0.0000 | 0.0000 | 0.0000 | 00000 |
| | | | | | |
| | | | | | |
| *Revenue changes:* | | | | | |
| Revenue increase/offset | | 0.0000 | 0.0000 | 0.0000 | |
| Revenue decrease | | 0.0000 | 0.0000 | 0.0000 | |
| **Total Fiscal Impact (draw from c-funds)** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## APPENDIX C: CONCURRENCE OVERVIEW

Under agreements between the Province (as sole shareholder) and OPG, the company is required to annually submit its multi-year business plan to the Minister of Energy for concurrence. Review of the business plan by Treasury Board prior to concurrence was stipulated as part of the 2013-14 Results-based Planning process (see below).

Concurrence is typically provided to OPG via a letter from the Minister of Energy. The letter will note key elements of the business plan, how these elements relate to the policy direction and priorities of the Province, and the government's expectation for the performance of the company. The letter may also indicate any elements of the business plan of which the government does not concur and/or provide additional guidance on expectations going forward.

The current submission looks at the multi-year business plan for OPG covering 2016-2018. Concurrence with the plan is still pending.

Below is the 2013-14 Results-based Plan Minute:

Directed the Ministry of Energy and its agencies, Ontario Power Generation Inc. and Hydro One Inc., in consultation with the Ontario Financing Authority, to report back:

- Annually each autumn with the respective multi-year business plans of the agencies as approved by the Boards of the companies, for review by Treasury Board/Management Board of Cabinet.
  - In this regard, the report should include the following, on a calendar and government fiscal year basis:
  - Multi-year financial and operational targets, including net income and earnings-before-tax.
  - Projected revenues and cash flows to the Province, including the Ontario Electricity Financial Corporation.
  - Planned financings from the Ontario Electricity Financial Corporation.
- Quarterly with financial projection updates and progress reports on the agencies' respective business plan targets and any other new developments, initiatives or risks that may have a material fiscal impact on the Province including variance analysis of last quarter and year-to-date against the annual business plan reviewed by Treasury Board/Management Board of Cabinet.

## APPENDIX D: PREMIER'S ADVISORY COUNCIL ON GOVERNMENT ASSETS

In April 2014, the Premier established a Premier's Advisory Council on Government Assets (PAC) to review and identify opportunities to optimize the value and performance of Ontario government business enterprises including OPG and Hydro One. In April 2015, PAC presented the Premier with a report detailing the Council's final findings and recommendations.

- For OPG, PAC recommended a detailed focus on the Darlington refurbishment project, as well as specific efficiency enhancements.
- For Hydro One, PAC recommended selling, over time, a majority interest in Hydro One through share sales to the public.

The government has moved forward with these recommendations. Hydro One completed its first phase of share sales in November 2015 through an initial public offering (IPO), and a secondary offering in April 2016. In addition, the Province has approved the Darlington refurbishment project, announced in January 2016.

## APPENDIX E: SUMMARY OF KEY HIGHLIGHTS FROM BUSINESS PLANS

The Ministry indicates OPG financial and ratepayer forecasts show some changes from last year's business plan projections, as reviewed by Treasury Board in March 2015. This is in part because the rate application currently before the Ontario Energy Board include a number of significant changes, as discussed below.

*Rate Application:*

OPG is proceeding with a rate submission, currently under review by the Ontario Energy Board (OEB). The outcome of these proceedings will have a substantial impact on OPG's ability to achieve business plan targets.

In May 2016, OPG filed a 5-year nuclear and hydroelectric rate application with the OEB covering the 2017-2021 period. Consistent with the amendments to Ontario Regulation 53/05, the rate application includes a nuclear rate smoothing proposal to avoid price spikes that would arise during the Darlington refurbishment, by deferring the recovery of nuclear revenues to the post-refurbishment period. The business plan assumes a nuclear base rate increases of 11 per cent per year beginning in 2017, until the end of the Darlington refurbishment period with the nuclear rate smoothing and the hydroelectric base rate increases of about 1.5 per cent per year.

OPG has estimated that the combined bill impacts of new nuclear and hydroelectric rates to the typical residential customer is expected to average about $1.05 per month annually over the 2017-2021 period. The expected average annual impact on a typical residential customer's monthly bill over the period to 2021 is estimated to be ~0.7%. The cost of OPG generated electricity to customers is projected to remain ~40% below the average non-OPG cost of electricity to 2018, and ~35% by 2021.

It will be up to the OEB to approve OPG's rates through its rate application process, which includes public hearings and an extensive intervener process.

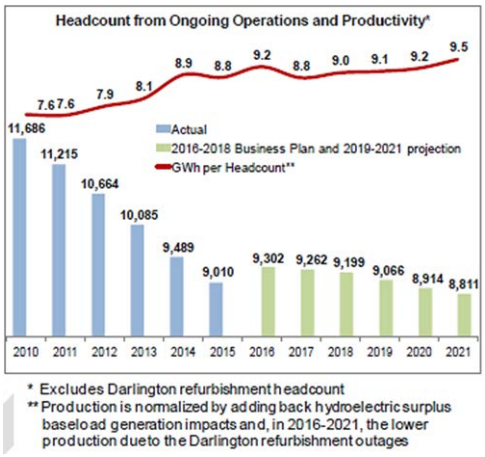
*Finding Efficiencies (Benefits Ratepayers):*

As part of a company-wide business transformation, OPG has saved over $1 billion in costs from January 2011 to December 2016 through headcount reductions of approximately 2,800 employees from on-going operations.

OPG has implemented increased pension contributions and other pension reforms for PWU, Society and Management staff to better align with the broader public sector. Through negotiations, OPG has achieved 1% compensation increases for PWU and Society for each of the next 3 years. As of the end of 2015 OPG had approximately 9,250 staff, with 90% represented by two unions. Of the 1,027 staff not represented by a union, 80 are Executives who would be covered by the proposed framework.

OPG has reduced management headcount by 19% per cent since 2010. OPG has also reduced total base salary costs for management by 18% since 2010.

OPG's headcount reductions forecasted for 2020 are consistent with the direction in the last concurrence letter to reduce non-nuclear headcounts by 5% based on 2015 levels by 2020. Non-nuclear headcount is projected to be approximately 3,400 in 2020, representing an approximate nine percent reduction from the 2015 staffing level included in OPG's 2015-2017 Business Plan, submitted last year. See graph on next page.




*Key OPG Risks:*

- All figures included in OPG's 2016-2018 Business Plan are based on USGAAP basis. Any decision to consolidate OPG's financials on the Province's books on an International Financial Reporting Standards (IFRS) may result in negative fiscal impacts. Ministry of Energy staff understand that staff from the Office of the Provincial Controller's Office are working with OPG to better understand impacts.

- Adverse OEB decisions that do not allow for the full recovery of costs as planned will reduce OPG's earnings and cash flows, and could stress credit metrics (e.g., disallowance of compensation costs). In line with US GAAP, OPG accounts for pension and OPEB on an accrual basis. If the outcome of the OEB's generic proceeding is to account for pension and OPEB on a cash basis, OPG would need to write-off the amounts in the accrual account (balance of ~$450M at the end of 2016 or over ~$900M by the end of 2021), with a one-for-one fiscal impact.

- An inability to achieve nuclear production targets would reduce OPG's earnings. Technical challenges associated with ongoing Pickering operations could result in difficulties reaching proposed forecasts. In addition, the OEB has increased OPG's Nuclear Generation forecasts in previous applications.

- There are important financial and reputation risks related to the Darlington Refurbishment Project that if the actual costs exceed the budgeted amounts or if OPG is not able to meet its schedule. Failure to meet the refurbishment objectives of the project will potentially have ongoing impact to the operational performance of the nuclear station, leading to long-term impacts to OPG.

- OPG was requested to work with the Office of the Provincial Controller and the Office of the Auditor General of Ontario to assess the impact of transitioning to the International Financial Reporting Standards (IFRS), in consolidating OPG to the Province's Accounts. Adoption of IFRS by the Province in consolidating OPG's financial results could have significant implications, including increased income volatility and material income impacts starting in 2015-16 fiscal year and up to $1 billion in 2016-17.

*Auditor and Ombudsman Reviews:*

On December 2, 2015, the Auditor General tabled her 2015 Annual Report which included a follow-up to the 2013 Value-for-money audit of OPG's Human Resources. The Auditor General found that OPG had fully implemented 8 of the 14 recommendations, with another 6 in the process of being implemented. The follow up found that OPG had made reasonable progress on all recommendations made in the original report. On January 13, 2016, the Minister of Energy wrote to OPG's requesting a status update in June 2016 on the progress of the remaining recommendations.

*Large Renewable Procurement:*

OPG was a successful applicant in the IESO's Large Renewable Procurement program as announced on March 10, 2016. OPG has been awarded a contract for a 44 MW Nanticoke Solar Photovoltaic project in Haldimand County.

## APPENDIX F: EXECUTIVE COMPENSATION

The Ministry has provided the following overview of OPG's proposed executive compensation framework:

OPG has indicated that an improved executive compensation framework is necessary to deliver on key projects, which is consistent with the commercial vision for the company.

Within its Business Plan, OPG proposed a compensation framework that would allow the company to begin to move its executives to the 50th percentile of the comparable benchmarks, established in a third-party review of compensation.

To align with requirements under TBS' compensation framework, OPG must revisit its current proposal and submit a compliant strategy to the Ministry of Energy in accordance with the regulation.

- OPG's current proposal sought to move ~80 executives up to the 50th percentile of comparable benchmarks and help OPG with its challenge of retaining and attracting the necessary skills to deliver on key government priorities (e.g., Darlington refurbishment).
- TBS' Compensation Framework Regulation caps salary and performance-related payments for designated executives in the public sector, including those at OPG, at no more than the 50th percentile of appropriate comparators. OPG would be required to seek public comment as part of developing its executive compensation program and post a compliant program to its public website on or before September 5, 2017.

OPG has indicated that for executive cohort, the following efficiencies have been realized:

- Reductions in the executive group headcount has resulted in cumulative savings of $10M, with an additional $5M/year going forward.
- Permanent elimination of 12 executive positions since 2012.
- Where executive vacancies have been filled, replacements are at or below predecessor cost.
- Increased employee pension contributions by 1% in 2016 and 2% in 2017 with reduced company contributions.
- New hires are at pension rule of 90 rather than rule of 84.

Other Considerations:

Further, financial advisors have made the following recent recommendations on OPG's executive compensation proposal:

- The 50th percentile target (of benchmarked peers) should measure total compensation including pension accumulation of the OPG employees, not just salaries.
- OPG should introduce a more affordable and less risky defined contribution plan to replace the existing defined benefit plans for new hires.
- OPG should substitute net income with some measure of operating productivity or cost structure in the Medium Term Incentive Plan (MTIP) performance targets.
- OPG should change the MTIP payout target from 70% to 80% and make the payout matrix less flat.
- Voluntarily expand the group of Named Executive Officers disclosed in Annual Information Forms.
- Introduce a policy that all newly externally hired management staff be given a defined contribution pension plan instead of a defined benefit plan.

## APPENDIX G: PROVINCIAL FISCAL PLAN IMPLICATIONS OF BUSINESS PLANS PROCEEDING –

Ontario Power Generation is a Government Business Enterprises (GBE), and consolidated to the Province's financials on a modified equity basis. The Province's Fiscal Plan reflects the entity as Income from Business Enterprises and Electricity Payments-in-Lieu of Taxes (PILs) (As Revenue only).

| **Revenue** ($millions) | **2015-16** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|---|
| **2016 Ontario Budget** | | | | |
| Ontario Power Generation | | | | |
| Net Income | 257 | 471 | 586 | 673 |
| Income Tax | 100 | 224 | 159 | 182 |
| **Consolidation Adj[1]** | 241 | | | |
| **2016- 2018 OPG Business Plan** | | | | |
| Ontario Power Generation | | | | |
| Net Income | 278 | 302 | 694 | 686 |
| Income Tax | 105 | 104 | 245 | 155 |
| **Consolidation Adj[1]** | 247 | | | |
| **Change in GBE Net Income & Consolidation Adjustment +/(-)** | | | | |
| Ontario Power Generation | 27[2] | (169) | 108 | 13 |
| **Change in GBE Income Tax PILs +/(-)** | | | | |
| Ontario Power Generation | 38 | (120) | 86 | (27) |
| **TOTAL OF OPG CHANGES** | **65** | **(289)** | **194** | **(14)** |

1. Includes Provincial consolidation adjustments totalling $241M for 2015-16 in Budget 2016 and $247M in Public Accounts for unrealized gains or losses on the nuclear funds net of Bruce variance account.
2. Change in OPG net income in 2015-16 of $21M plus change in ONFA-related consolidation adjustment, for comparison purpose only, of $6M in 2015-16.

OPG's fiscal results are also impacted by Other PILs to the Ontario Electricity Financial Corporation (OEFC) and the Province. The following table reflects these others impacts in addition to the latest net income and income tax PILs from OPG's August update.

| **Revenue** ($millions) | **2015-16** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|---|
| **2016 Ontario Budget** | | | | |
| Combined Other PILs & Other GRC | 341 | 342 | 351 | 359 |
| Other PILs (GRC to OEFC, Proxy Property Tax) | 214 | 213 | 223 | 232 |
| Other GRC (to MOF & Niagara Parks Commission)[1] | 127 | 129 | 128 | 137 |
| **2016-18 OPG Business Plan** | | | | |
| Combined Other PILs & Other GRC[2] | 335 | 353 | 358 | 366 |
| Other PILs (GRC to OEFC, Proxy Property Tax)[3] | 215 | 215 | 220 | 220 |
| Other PILs (GRC to MOF & Niagara Parks Commission)[3] | 120 | 135 | 140 | 140 |
| **OPG Monthly Update (August 2016)** | | | | |
| Net Income | - | 361 | - | - |
| Income Tax PILs to OEFC | - | 98 | - | - |

1. The GRC to MOF & Niagara Parks Commission (NPC) is provided to enable comparison to the 2016-18 Business Plan.
2. Include GRC to OEFC, GRC to MOF and NPC and Proxy Property Tax, provided to TBS by Energy on September 14, 2016.
3. Preliminary 2016-19 Business Plan forecast provided by Energy, January 29, 2016. (Do not add to the Combined Other PILs & Other GRC row, likely due to rounding.)

**From:** John Kim
**To:** Angie Georgakakos
**Subject:** FW: Benefit Implementation
**Date:** Thursday, December 08, 2016 9:23:26 AM

---

I am dealing with a Policy Analyst at Energy now.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Thursday, December 08, 2016 9:03 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hi John,

In regards to records that the OFA must maintain related to the OREC, we do not need to have direct database access to your records, but records should be available upon request of the Ministry. Most likely we would ask for documents to be shared electronically via email if necessary, unless directed otherwise.

Regards,

-Robert
(416) 325-6899

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 8:47 AM
**To:** Hunter, Robert A. (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Chander, Sunita (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Robert,

In the version you sent back, you mention the Ministry having full access to such records. What are your expectations of how such access to take place?

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Monday, December 05, 2016 10:21 AM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hello,

Following up on Sunita's earlier email; have you had a chance to review the attached MOU? If there are any changes please let us know as soon as possible. We are aiming to have this finalized by the end of this week.

Thank you,

-Robert
(416) 325-6899

---

**From:** Chander, Sunita (ENERGY)
**Sent:** November-27-16 2:15 PM
**To:** Kandeepan, Ken (OFA); Kim, John (OFA)
**Cc:** Hunter, Robert A. (ENERGY); Singh, Inayat (ENERGY); An, Tai (ENERGY/MEDEI/MRI)
**Subject:** RE: Benefit Implementation

Hi, attached is the ENERGY-OFA MOU, one or two adjustments in the attached.

If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.

Thanks,

<< File: MOU - MoE OFA- DAP Nov 25.doc >>

---

**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Michael,

Attached is a working draft of the MOU. OFA Legal had based it on the OCEB one, slightly updated for the proposed new rebate. I'm sure Energy will have some updates to suggest on it too.

Ron << File: MOU - MoE OFA re OREC(v3)_Clean.doc >>

-----Original Appointment-----
**From:** Reid, Michael (ENERGY) [mailto:Michael.Reid@ontario.ca]
**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

---

Location: 77 Grenville Street, 6th Floor, Boardroom 6B

Upon arriving on the 6th floor, please call Betty at 5-6559 on the lobby phone.

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

**From:** John Kim
**To:** Salman Qadir
**Subject:** FW: Benefit Implementation
**Date:** Monday, December 05, 2016 10:34:00 AM
**Attachments:** MOU - MoE OFA- DAP Nov 25.doc

---

Fyi, I need to get a sense of where this needs to go.

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Monday, December 05, 2016 10:21 AM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
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(416) 325-6899

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Thanks,

<< File: MOU - MoE OFA- DAP Nov 25.doc >>

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**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

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**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
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Update: Ken to call in.

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Location: 77 Grenville Street, 6th Floor, Boardroom 6B

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**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the *Ontario Rebate for Electricity Consumers Act, 2016* and the regulations thereunder (the "Act"), certain consumers will be entitled to receive financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers" or "OREC", in respect of the cost of electricity consumed by them commencing January 1, 2017;

2. Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f)of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

**1. Payment Authorization**

(i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

(ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

(iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

**2. Payment Process**

a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

b) The Ministry will take all necessary steps to provide the OFA with access to the IESO Portal so that the OFA will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

**3. Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ensure that the Ministry has full access to such records.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

e)

**4. OREC Cost Forecasting**

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process .

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.

~~d)~~ e) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement of the forecasts.

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**5. Limited Role of the OFA**

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

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c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

Formatted: Highlight

d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:
email:

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c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy

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880 Bay Street, 5th Floor
Attention:
email:

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Formatted: Highlight

**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

**From:** John Kim
**To:** Gavin He; Salman Qadir
**Subject:** FW: Benefit Implementation
**Date:** Friday, December 02, 2016 10:32:15 AM

---

Fyi. I didn't necessarily want to be intrusive and making them take steps in their own house.

-----Original Message-----
From: Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
Sent: Tuesday, November 29, 2016 12:53 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: Re: Benefit Implementation

No....but we can do that,

Sent from my BlackBerry
From: John Kim
Sent: Tuesday, November 29, 2016 12:51 PM
To: Chander, Sunita (ENERGY)
Subject: RE: Benefit Implementation

Hi Sunita,

Has Tim Christie's area looped in on the MOU?

Thanks,

John.

From: Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
Sent: Sunday, November 27, 2016 2:15 PM
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Cc: Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Tai An (ENERGY) <Tai.An@ontario.ca>
Subject: RE: Benefit Implementation

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If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.

Thanks,

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From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: September 30, 2016 10:21 AM
To: Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
Cc: Latto-Hall, Arla (ENERGY)
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Update:  Ken to call in.

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**From:** John Kim
**To:** Salman Qadir
**Cc:** Ronald Kwan; Gavin He
**Subject:** FW: Benefit Implementation
**Date:** Sunday, November 27, 2016 3:48:59 PM
**Attachments:** MOU - MoE OFA- DAP Nov 25.doc

---

Hi Salman,

Could you review when you return on Tuesday.

Thanks,

John.

---

**From:** Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
**Sent:** Sunday, November 27, 2016 2:15 PM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Tai An (ENERGY) <Tai.An@ontario.ca>
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**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Michael,

Attached is a working draft of the MOU. OFA Legal had based it on the OCEB one, slightly updated for the proposed new rebate. I'm sure Energy will have some updates to suggest on it too.

Ron << File: MOU - MoE OFA re OREC(v3)_Clean.doc >>

-----Original Appointment-----
**From:** Reid, Michael (ENERGY) [mailto:Michael.Reid@ontario.ca]
**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim

**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

---

Location: 77 Grenville Street, 6th Floor, Boardroom 6B

Upon arriving on the 6th floor, please call Betty at 5-6559 on the lobby phone.

---

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the *Ontario Rebate for Electricity Consumers Act, 2016* and the regulations thereunder (the "Act"), certain consumers will be entitled to receive financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers" or "OREC", in respect of the cost of electricity consumed by them commencing January 1, 2017;

2. Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f)of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

**1. Payment Authorization**

(i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

(ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

(iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

**2. Payment Process**

a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

b) The Ministry will take all necessary steps to provide the OFA with access to the IESO Portal so that the OFA will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

**3. Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ensure that the Ministry has full access to such records.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

e)

**4. OREC Cost Forecasting**

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process .

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.

~~d)~~ e) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement of the forecasts.

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**5. Limited Role of the OFA**

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

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c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

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d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:
email:

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c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy

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880 Bay Street, 5th Floor
Attention:
email:

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**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

**From:** John Kim
**To:** Ken Kandeepan
**Cc:** Gavin He
**Subject:** FW: Benefit Implementation
**Date:** Monday, December 12, 2016 12:29:38 PM
**Attachments:** MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v4.docx

---

Hi Ken,

Hi Ken,

We've checked with Ken R., etc.

And ready to send back. Just wanted to loop you in before doing so.

Thanks,

John.

---

**From:** Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
**Sent:** Sunday, November 27, 2016 2:15 PM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Tai An (ENERGY) <Tai.An@ontario.ca>
**Subject:** RE: Benefit Implementation

Hi, attached is the ENERGY-OFA MOU, one or two adjustments in the attached.

If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.

Thanks,

---

**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Michael,

Attached is a working draft of the MOU. OFA Legal had based it on the OCEB one, slightly updated for the proposed new rebate. I'm sure Energy will have some updates to suggest on it too.

Ron << File: MOU - MoE OFA re OREC(v3)_Clean.doc >>

-----Original Appointment-----

**From:** Reid, Michael (ENERGY) [mailto:Michael.Reid@ontario.ca]
**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

---

Location: 77 Grenville Street, 6th Floor, Boardroom 6B

Upon arriving on the 6th floor, please call Betty at 5-6559 on the lobby phone.

---

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**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the ~~[~~*Ontario Rebate for Electricity Consumers Act, 2016*~~] – NTD, pending the legislature considering the Bill], including~~ and the regulations thereunder (the "Act"), certain consumers will be entitled to receive ~~a credit, known as the~~ financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers ("" or "OREC"), against", in respect of the cost of electricity consumed by them ~~during the period~~ commencing January 1, 2017;

2. ~~Funds in respect of the~~ Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to ~~most~~specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act~~, its regulations and the Market Rules~~;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the OREC Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f) of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

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**1. Payment Authorization**

(i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

(ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

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i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

**2. Payment Process**

~~a) The Ministry is registered with the IESO as an IESO Program Participant.~~

a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

~~c)~~b) The Ministry will take all necessary steps to provide the OFA with access to the ~~Ministry's~~ IESO ~~account and will arrange for~~Portal so that the OFA ~~to~~will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

~~d)~~c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

~~e)~~d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

~~f)~~e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

**3. Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ~~ensure that~~provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of ~~has full access to~~ such of those records as the Ministry may request from time to time.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

~~e)~~

**4. OREC Cost Forecasting**

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies, retailers, and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to ~~complete and accurate~~ data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process~~.~~.

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

~~d)a) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.~~

d) ~~e)~~ The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement ~~of~~on the forecasts.

e) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for the appropriated amount or for a change in the appropriated amount for OREC.

**5. Limited Role of the OFA**

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**Commented [SQ22]:** The only change outlined in the latest version.

**Commented [KR3]:** Does the OFA agree that there should be a provision contemplating agreement on the forecasts? Would it be sufficient to simply reqire tht senior management be briefed?

**Commented [RK4R3]:** How about dealing with it by switching the order and slightly amending the new "e)"?

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

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The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

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a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:
email:

c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy
880 Bay Street, 5th Floor
Attention:
email:

**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

| | |
|---|---|
| **From:** | Tomasz Bugajski |
| **To:** | Ronald Kwan; John Kim |
| **Subject:** | FW: CabSub edits |
| **Date:** | Friday, September 09, 2016 7:18:05 PM |
| **Attachments:** | Cabinet Submission - Electricity Price Mitigation - CLEAN TPD comment.pptx |

FYI

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

**From:** DeSouza, Jenarra (MOF) [mailto:Jenarra.DeSouza@ontario.ca]
**Sent:** Friday, September 09, 2016 7:14 PM
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>; Ghufran Tarin (MOF) <Ghufran.Tarin@ontario.ca>; Shannon Lewis (MOF) <Shannon.Lewis@ontario.ca>
**Subject:** FW: CabSub edits

FYI

**From:** DeSouza, Jenarra (MOF)
**Sent:** September 9, 2016 7:12 PM
**To:** Katona, Keley (ENERGY)
**Cc:** Young, Gwendolynne (MOF); Subrahmanyan, Sriram (MOF); Langleben, Ann (MOF)
**Subject:** CabSub edits

Hi Keley

For your consideration - attached are comments for the Electricity Price Mitigation CabSub

Pls see slides 10, 13, 14, 24, 26, 29 and Appendix slide 34
The wording of the Cabinet Minute in this Cab Sub is preferred over the stand-alone wording in the excerpt

If you have any questions pls let us know

Cheers
Bernice Lau

- for Jenarra DeSouza

**From:** Lawson, Lynn (MOF)
**Sent:** September 9, 2016 3:23 PM
**To:** Subrahmanyan, Sriram (MOF); DeSouza, Jenarra (MOF)
**Cc:** Waterston, Michael (MOF); Langleben, Ann (MOF); Patel, Lesley (MOF); Lone, Dianne (MOF);

Kennedy, Marta (MOF); Lam, Linda (MOF); Boxen, Simone (MOF); Diomin, Svetlana (MOF); Lewis, Shannon (MOF)
**Subject:** RE: Major Projects this week

The Cab Sub would benefit from some edits. We have comments on slides 10, 13, 14, 24, 26, 29 and Appendix slide 34. Please see attached

The wording of the Cabinet Minute in this Cab Sub is preferred over the stand-alone wording in the excerpt they provided.

---

**From:** Subrahmanyan, Sriram (MOF)
**Sent:** September 8, 2016 10:59 PM
**To:** Waterston, Michael (MOF); Lone, Dianne (MOF); Patel, Lesley (MOF); Langleben, Ann (MOF); Lawson, Lynn (MOF)
**Cc:** DeSouza, Jenarra (MOF)
**Subject:** Fw: Major Projects this week

Sent from my BlackBerry 10 smartphone on the Rogers network.

---

**From:** Young, Gwendolynne (MOF) <Gwendolynne.Young@ontario.ca>
**Sent:** Thursday, September 8, 2016 10:07 PM
**To:** Subrahmanyan, Sriram (MOF); DeSouza, Jenarra (MOF); Baig, Saad (MOF); Nguyen, Marianne (MOF); Schuurman, Tim (MOF); Kwan, Ronald (OFA); Pearce, Christopher (MOF); Birks, Ryan (MOF)
**Cc:** McLean, David (MOF)
**Subject:** Fw: Major Projects this week

Hi All - attached are updated materials from ENERGY.

Sent from my BlackBerry 10 smartphone on the Rogers network.

---

**From:** McLean, David (MOF) <David.McLean@ontario.ca>
**Sent:** Thursday, September 8, 2016 8:32 PM
**To:** Young, Gwendolynne (MOF)
**Subject:** FW: Major Projects this week

FYI

---

**From:** Katona, Keley (ENERGY)
**Sent:** September 8, 2016 8:32 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB); Moore, Karen (CAB)
**Subject:** RE: Major Projects this week

Hi,
Attached is the latest iteration of the Cabinet submission, including an updated minute. This is with our MO for review but wanted to keep you updated so you can continue to revise your TB / CAB notes. Note that some of the numbers have changed to remain consistent with methodology throughout the submission.
Keley

---

**From:** Katona, Keley (ENERGY)
**Sent:** September-08-16 12:22 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

For your records, attached is what was circulated at Major Projects today.

---

**From:** Katona, Keley (ENERGY)
**Sent:** September-07-16 3:38 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

We're making edits based on comments from our MO. Could be this evening or tomorrow morning.

---

**From:** Kwamena, Boafoa (CAB)
**Sent:** September-07-16 3:33 PM
**To:** Katona, Keley (ENERGY); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

Hi

Will be likely receive material  later today or tomorrow?

Thanks

---

**From:** Katona, Keley (ENERGY)
**Sent:** September-07-16 10:12 AM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** Re: Major Projects this week

Sorry, disregard, we'll make it work on our end. Thanks.

---

**From:** Katona, Keley (ENERGY)
**Sent:** Wednesday, September 7, 2016 10:06 AM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

Hi Boafoa,

Wondering if it's possible for the electricity item to be last on the agenda tomorrow. We have a Minister's briefing which conflicts with Major Projects, involving the same staff and it would be very helpful if we could be on at 11am.

Thanks,
Keley

**From:** Kwamena, Boafoa (CAB)
**Sent:** September-06-16 5:29 PM
**To:** Katona, Keley (ENERGY); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** Major Projects this week

Hi Keley/David

We will be adding the Electricity Pricing Mitigation item to Major Projects this Thursday. This will be an opportunity to ensure everyone is on the same page in advance of the TB trip next week. Major Projects is scheduled from 10:30 to 11:30 on Thursday. This item will be the first–10:30 to 11:00. Please let me know if this time doesn't work or if there are any concerns.

Thanks
Boafoa

Boafoa Kwamena
Special Advisor
Office of the Secretary of the Cabinet
Cabinet Office
416-325-4400
Boafoa.kwamena2@ontario.ca

# Electricity Price Mitigation

## Ministry of Energy

## WORKING DRAFT

## Date: September 12, 2016

Minister

Deputy Minister

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

- Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables.
  - This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%.

- Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online.

- The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers.

# Electricity Consumer Classes

- There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

**** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

# Current Rate Base Mitigation Programs

- Ontario has implemented several programs to help electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers;
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs; and
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- These programs have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial) as shown in the table below:

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

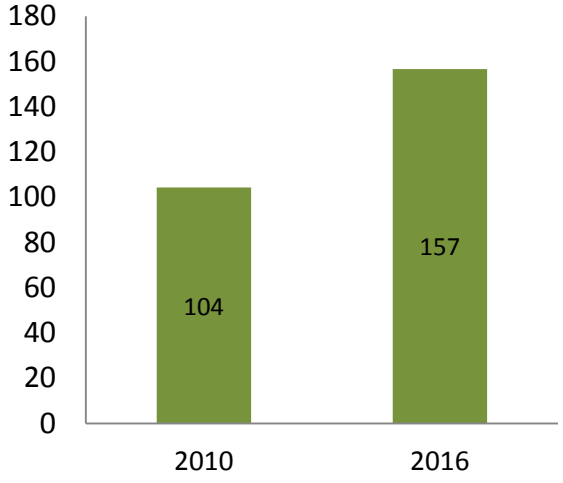
**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

# Prices by Electricity Consumer Class

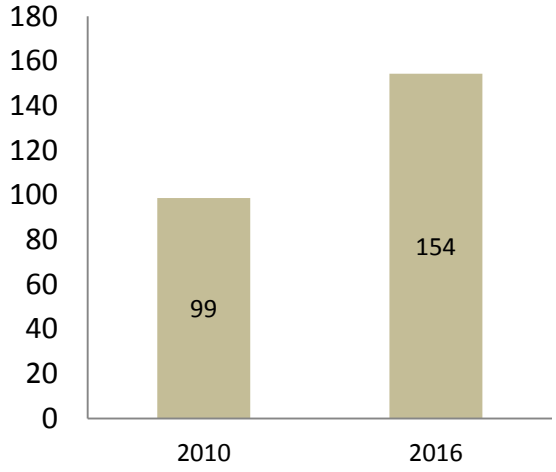
- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.

- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers.

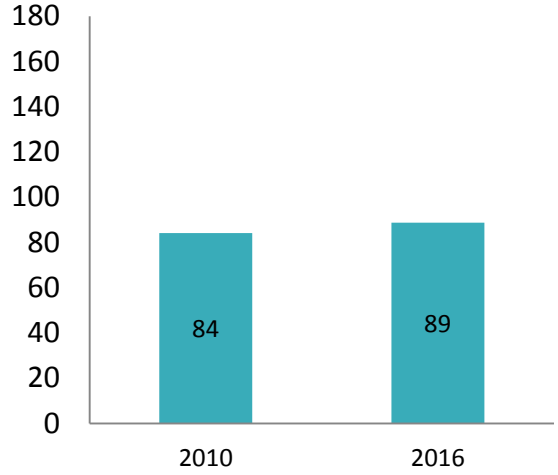
**Typical Residential Bill (750/kWh per month)**




**Typical Class B (Commercial) Price ($/MWh)**




**Typical Class A (Industrial) Price ($/MWh)**



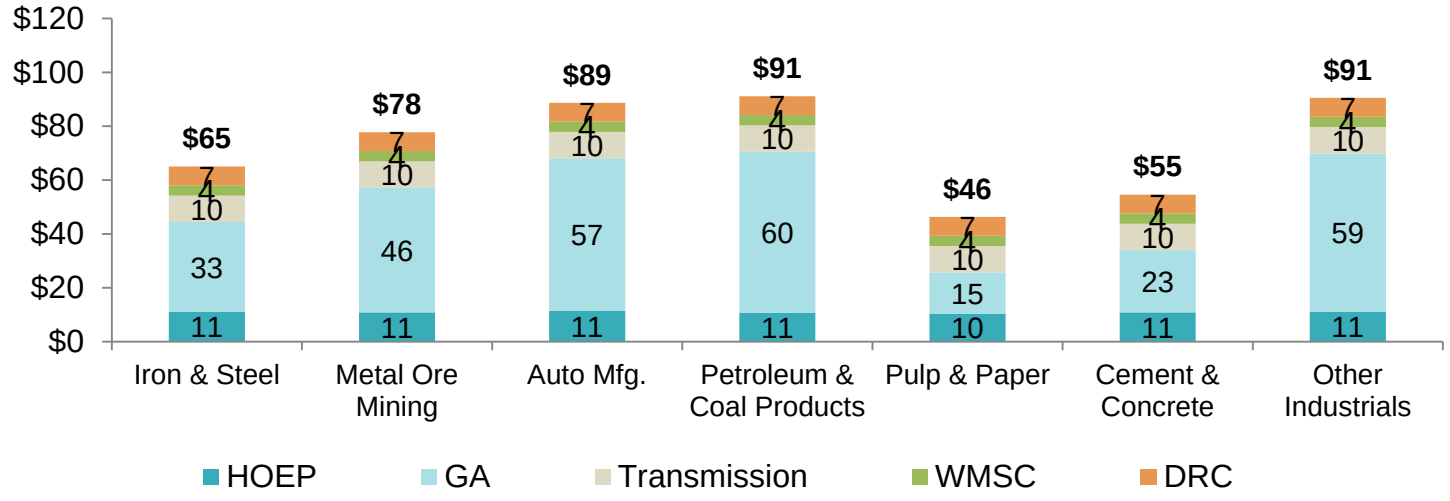

**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

# Industrial Electricity Prices Vary by Sector

- While Class A (industrial consumers) benefit from participation in the ICI program, there is a significant amount of variability in the ability to shift away from peak periods across customer classes, impacting the savings achieved.

- The below chart shows the prices paid in 2015 across a number of industrial sectors. Consumers in the north that receive rebates under the Northern Industrial Electricity Rate Program (NIERP) achieve rates that are $20/MWh lower than the below.

**Average all-in Class A, Transmission-connected Electricity Prices by Industrial Sector (estimated $/MWh), Year-to-Date June 2016**




**Note:** HOEP = Hourly Ontario Energy Price, GA = Global Adjustment, WMSC = Wholesale Market Service Charges, DRC = Debt Retirement Charge

# Recent Actions to Bend the Cost Curve

- Since 2013, a number of actions have been taken to reduce overall electricity system costs:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

# Rate Mitigation

- The 2016 Budget committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) committed $1.3 billion from the Greenhouse Gas Reduction Account (GGRA) over the first compliance period (2017-2020).

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:

  - **Tax-based Lever:**
    - Provide an on-bill rebate funded from the tax-base to all consumers or specific classes of consumers (i.e., the Ontario Clean Energy Benefit (OCEB) provided a rebate for eligible electricity consumers).

  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.

  - **Cap and Trade Proceeds Lever:**
    - Redirect cap and trade proceeds to offset the cost of existing initiatives that help reduce greenhouse gas (GHG) emissions (i.e., the CCAP committed to offset the impact of cap and trade and to keep electricity rates affordable).

# Rate Mitigation Proposal

- The Ministry of Energy is proposing to implement the following electricity price mitigation initiatives. The approach identified below would provide relief across all electricity consumer classes:

  1) Provide an 8% rebate equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms) and update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers; and

  2) Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial) and redirect cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

- The following slides provide additional information on the above initiatives.

***Note:** Eligibility for the 8% rebate would be similar to OCEB and include some customers not on the Regulated Price Plan (RPP), such as Independent Power Authority consumers and consumers that have opted-out of RPP.

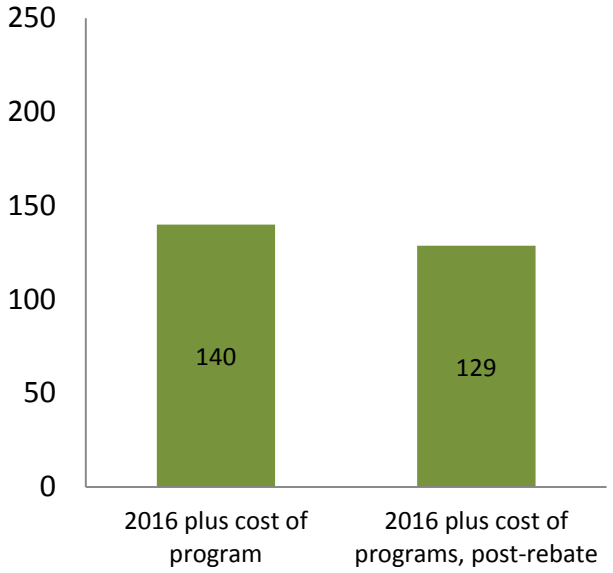
# Rate Mitigation Proposal – Illustrative Benefits*

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Benefit | | Class B (Commercial) Benefit | Class A (Industrial) Benefit | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural*** (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br><br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br><br>(-8%) | -$45/ month<br><br>(-20%) | -$3/MWh<br><br>(-2%) | -$3/ MWh<br><br>(-3%) | Up to -$52/MWh<br><br>(-34%) |

- **Notes:** The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh. The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. Proceeds recycling is an estimated average over the first compliance period (2017-2020).

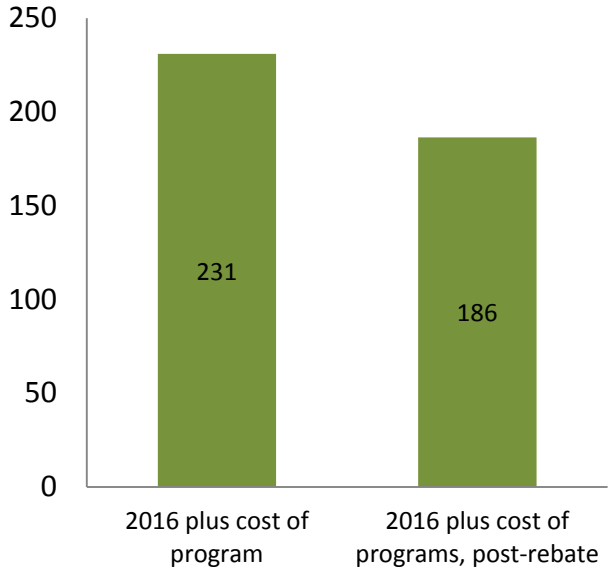
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class

**Typical Residential Bill**
**750 kWh per month, 8% only**




The pre-tax impact is a 8% reduction.

**Rural (R2) Residential Bill**
**1,000 kWh per month, 8% and RRRP Update**

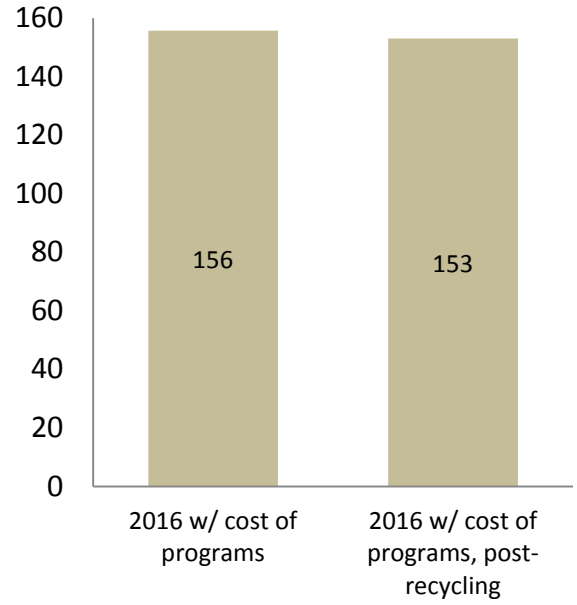



The pre-tax impact of the rate mitigation initiatives is a 20% reduction.

**Note:** Residential bills reflect electricity rates as per the Regulated Rate Plan (RRP) which came into effect on May 1, 2016.

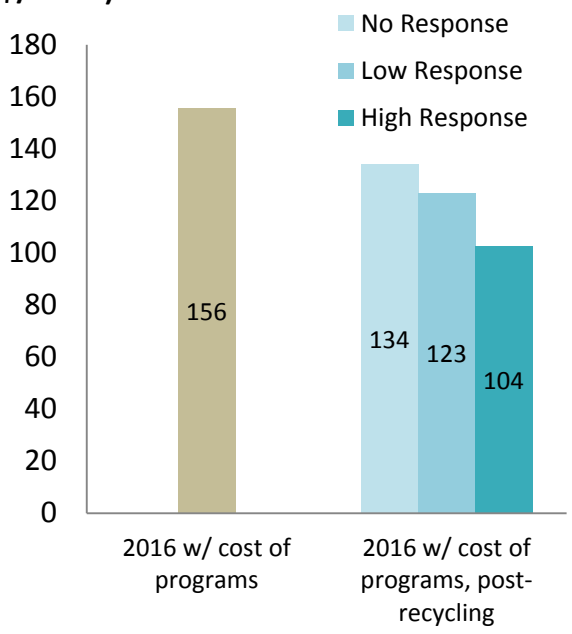
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class (cont'd)

**Typical Class B (Commercial) Price ($/MWh)**



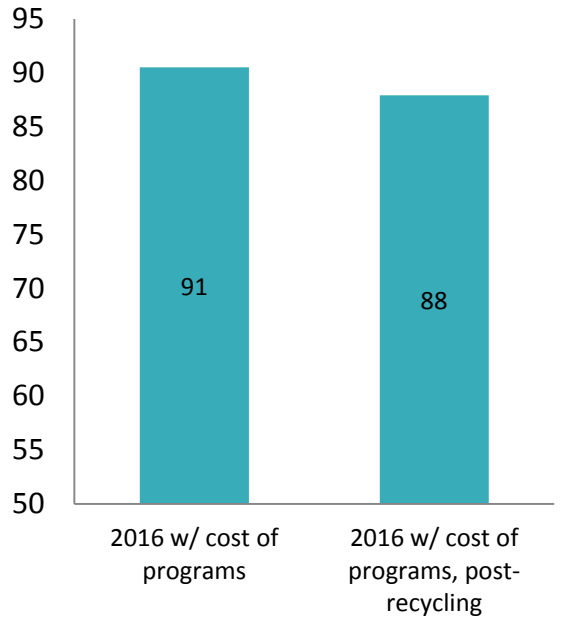

**Class B:** The benefit is a 2% reduction.

**Typical New Class A Price ($/MWh)**




**New Class A:** The benefit is a reduction of 14% to 34%.

**Typical Class A (Industrial) Price ($/MWh)**




**Existing Class A:** The benefit of the rate mitigation initiatives is a 3% reduction.

**Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

# 1) Regulated Price Plan Eligible Consumers and Rural or Remote Rate Protection Update

# 8% Rebate to Regulated Price Plan Eligible Consumers

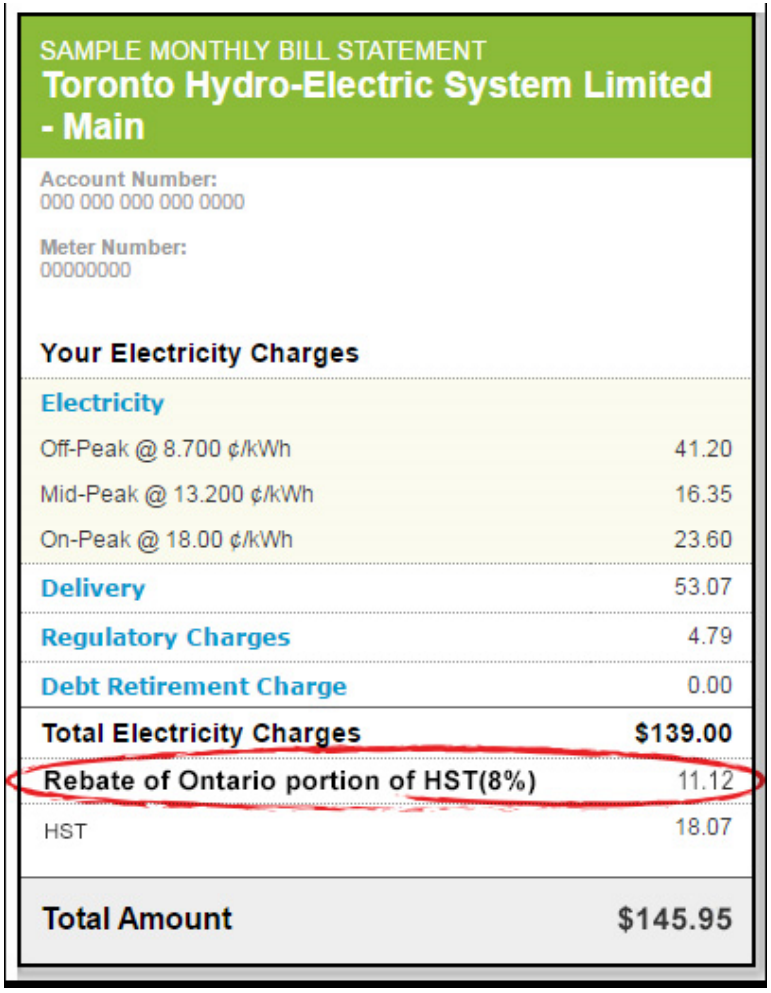
- Legislation/regulation will be introduced to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit.
  - This would be equivalent to the provincial portion of the HST*.

| **Eligible for the 8% rebate**<br>(< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate**<br>(> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>  − Coffee / snack retailer<br>  − Convenience store<br>  − Apparel store<br>  − Hair salon<br>  − Small insurance office | • Class A consumers<br>  − Manufacturer<br>  − Large grocery store<br>  − Mines<br>  − Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>  − Commercial offices (low rise)<br>  − Hotel<br>  − General warehousing |

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).

***Note:** An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

# Illustrative Electricity Bill Mock-Up



SAMPLE MONTHLY BILL STATEMENT

**Toronto Hydro-Electric System Limited - Main**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| **Rebate of Ontario portion of HST(8%)** | 11.12 |
| HST | 18.07 |
| **Total Amount** | **$145.95** |

**Note:** Final bill presentment pending submission to LRC.

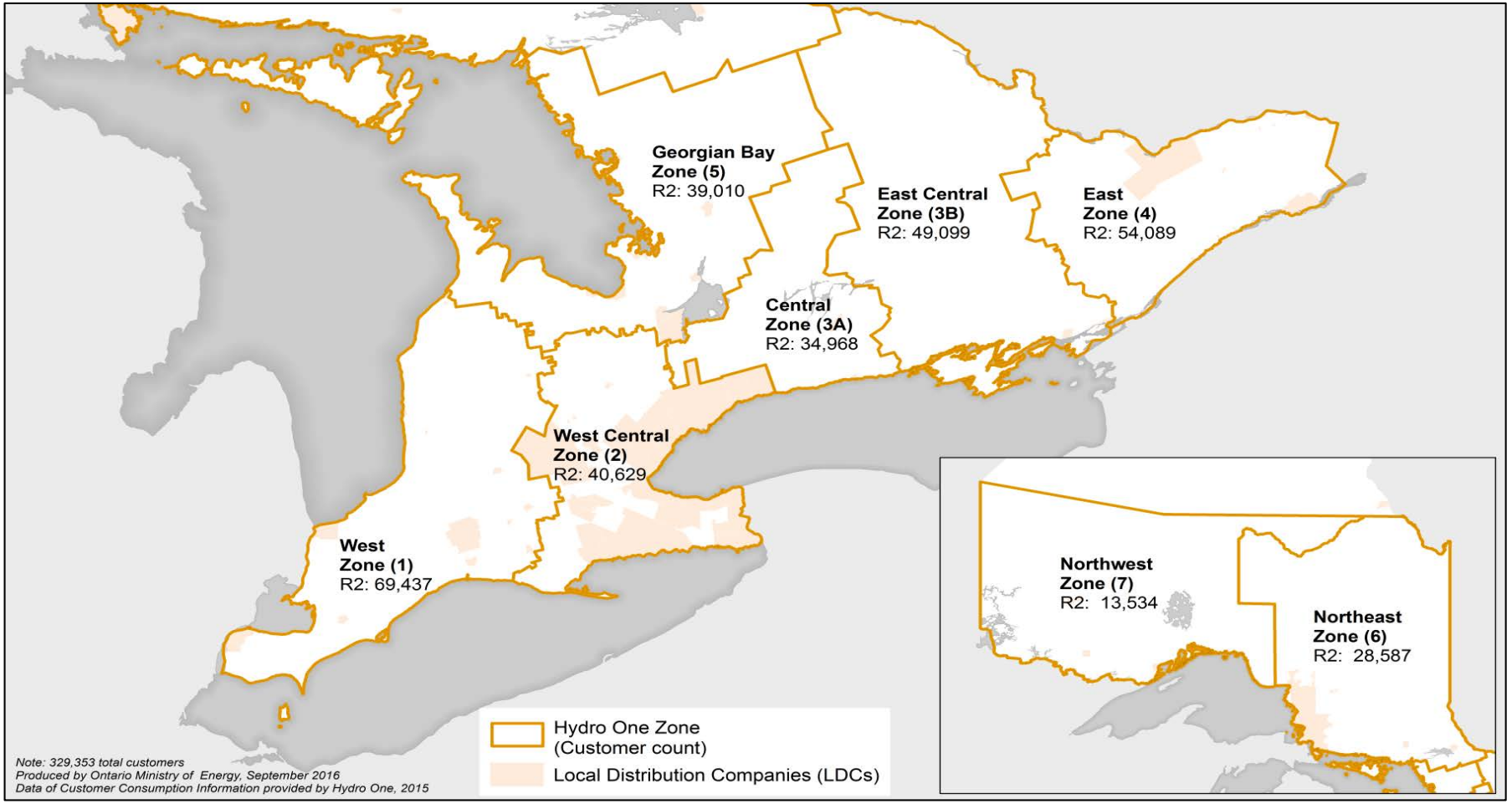
# Rural or Remote Rate Protection (RRRP) Update

- ENERGY is proposing to amend O.Reg 442/01 to provide an additional $110 million in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

- RRRP is a rate-based funded program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.
  - Today, RRRP is a $175-million program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
  - The majority of the program funding ($125.5 million) is provided to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a rebate of $31.50. The proposed update to the program would increase the benefit to $60/month.
  - RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

- An additional $110 million in program funding would see an increased benefit of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.
  - This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
  - The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the benefit remains constant.

# Rural or Remote Rate Protection (RRRP) Update – R2 Customers by Region



## 2) Expand Industrial Conservation Initiative and Redirect Cap and Trade Proceeds

# Industrial Conservation Initiative (ICI) Expansion

- ENERGY is proposing to amend O. Reg. 429/04 to expand ICI eligibility. The base setting period for the expanded program would begin in 2017, with the benefit seen by consumers starting in 2018.

- Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers).
  - Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

- ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:
  - Reduce electricity peak demand and electricity system costs by incenting more consumers to lower their electricity demand during peak periods;
  - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
  - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

# ICI Expansion – Projected Impact

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

- The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility
  - Short-term refers to the expected impact once ICI billing begins for new Class A consumers (one year after expanded eligibility takes place).
  - Long-term is the expected impact once new Class A consumers have had time to significantly change their behaviour and investment decisions in response to the ICI.

- The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating.

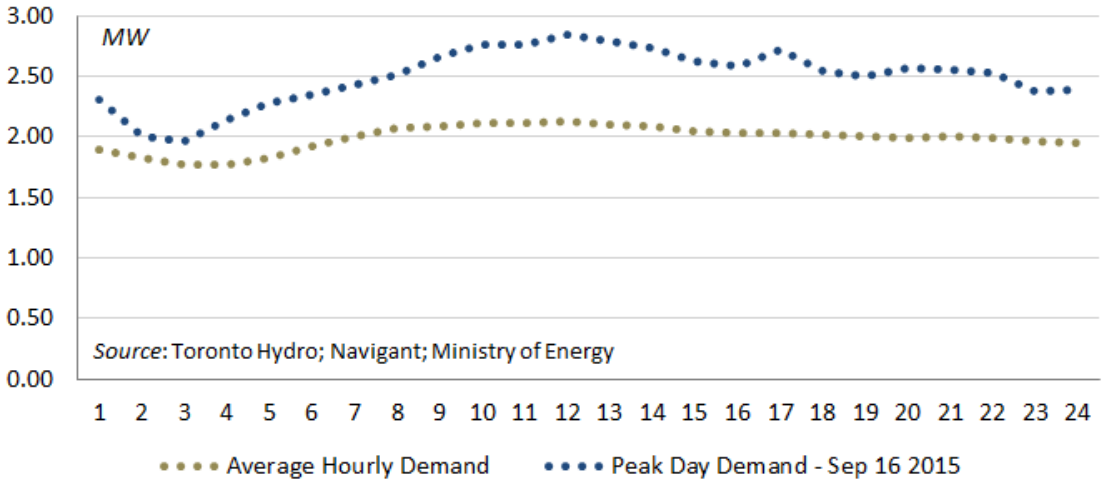
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.

# ICI Expansion – Illustrative Example of Newly Eligible Consumer

- Plastics manufacturers, such as Poly Five Plastics in Toronto, are among the consumers that would become eligible if the threshold was lowered.
- Such manufacturers fall under NAICS* code 32 and have relatively flat load profiles, reflecting around the clock production. This means they would be beneficiaries of ICI even with no change in consumption behaviour.
- Companies like Poly Five Plastics could expect to see greater savings if they are willing and able to respond to the higher prices during high demand hours.

**Typical Demand Profile, 2-3 MW Consumer**

*Manufacturer, NAICS Code 32 - Nov 2014 to Oct 2015*




**Illustrative Bill Savings, 2-3 MW Consumer**

| | *Status Quo* | *No Price Response* | *Short Term Response* | *Long Term Response* |
|---|---|---|---|---|
| | **Class B** | **Class A** | **Class A** | **Class A** |
| GA | 75.26 | 58.06 | 43.55 | 32.03 |
| Total bill | **126.28** | **109.09** | **94.58** | **83.06** |
| *Savings* | | *-14%* | *-25%* | *-34%* |

Source: Navigant; Ministry of Energy

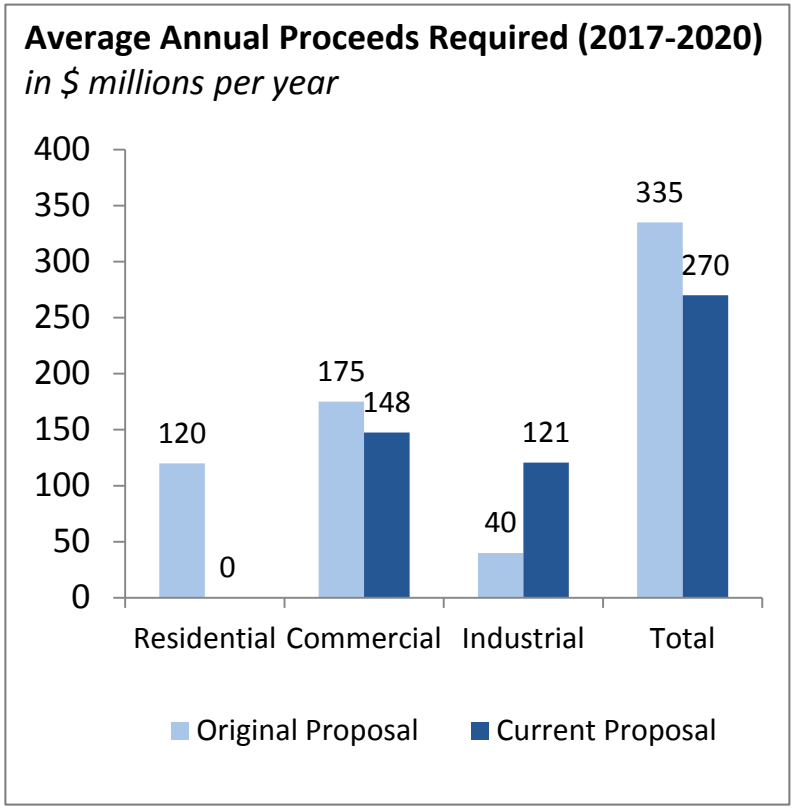
*** Note:** North American Industry Classification System (NAICS) is the standard used by statistical agencies in classifying business establishments.

# Redirect Cap and Trade Proceeds Recycling

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.
  - To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).

- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

- The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $0.24 billion over the first compliance period).




**Note:** The original proposal was to offset the impact of cap and trade via GA to the average industrial, and would provide a benefit to commercial and residential consumers. Current proposal would recycle proceeds volumetrically to industrial and commercial consumers.

# Redirect Cap and Trade Proceeds Recycling

- Redirecting cap and trade auction proceeds to lower the cost of electricity would offset consumers' contributions to non-emitting generation.

- Redirecting helps pay for committed investments/initiatives which reduce GHGs (e.g., non-emitting generation and conservation programs).
  - Due to the long-term nature (typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period. These costs will continue well beyond the timelines described in the CCAP.

- Redirecting cap and trade auction proceeds volumetrically to Class B (commercial) and Class A (industrial) consumers maintains the incentive to shift consumption from on-peak to off-peak hours.

- Using cap and trade auction proceeds to lower the cost of electricity would make it more competitive with traditionally cheaper fossil fuels.

- By using the proceeds to lower the cost of electricity, there is potential to incent fuel-switching away from fossil fuels toward much cleaner grid-connected electricity and support CCAP goals of electrification.

# Considerations

# Implementation

- On September 15, 2016, ENERGY is proposing to introduce the *Ontario Rebate for Electricity Consumers Act, 2016*.
  - If passed, the legislation would require a general regulation.
  - Amendments would also be required to various regulations to expand ICI and RRRP.

- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. ENERGY (possibly through Ontario Energy Board) will consult with LDCs to accurately assess these impacts once the program has been announced.
  - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - Timing concerns may be alleviated by allowing LDCs to provide retroactive rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.

- Detailed messaging on bills (for "low-volume" consumer bills ) could be implemented by amending O. Reg. 275/04 (made under the Ontario Energy Board Act, 1998).
  - The rebate would not be directly linked to HST.
  - With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.

- While the impact of cap and trade would be added to electricity bills as of January 2017, the offsetting effect of proceeds recycling may not occur immediately depending on implementation and potential alignment with the first auction expected in March 2017.
  - Should there be low demand for carbon allowances, auction proceeds would be less than the amount projected in the CCAP. This could mean a short-fall for proceeds recycling as proposed. However, natural gas utilities are expected to purchase allowances quarterly equal to their emissions.

- ENERGY will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

# Fiscal

- The Climate Change Action Plan (CCAP) committed about $1.3 billion over four years for electricity mitigation for industrial, commercial and residential consumers from GGRA proceeds.
  - The current rate mitigation proposal requires approximately 20% less in proceeds, saving approximately $0.24 billion relative to the CCAP commitment over the first compliance period (2017-2020).

- The 8% rebate is expected to cost about $1 billion per year (i.e., $4 billion from 2017-2020), representing an additional pressure on the fiscal plan.
  - Consideration could be given to allocating the $0.24 billion in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset.
  - If cap and trade auctions are under-subscribed, the $0.24 billion may not be available for reallocation to the fiscal plan.

- In the absence of any offset strategies, the full cost of the rate mitigation approach would add to the pressures and risks that need to be managed in order for the government to balance the budget in 2017-18 and stay balanced in 2018-19 and beyond.

# Legal

- In order to avoid characterization as an unconstitutional tax, a non-tax levy must have a sufficient nexus between those who pay and the regulatory scheme in the sense that those who pay have caused the need for or benefit from the regulatory scheme. Although the case law is not developed on the extent to which some regulated actors can be required to subsidize others, risk is reduced to the extent that any cross-subsidization serves true regulatory goals rather than revenue re-distribution goals.

- ~~HST~~ 8% Rebate of the pre-tax electricity costs (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):
  - Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

- ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):
  - Shifting costs to some consumers to lower rates for others without more carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

- RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):
  - Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

- Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):
  - To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

# Communications

- Public high-profile communications would coincide with introduction of legislation (September 2016).
  - Stakeholder outreach/technical briefings with LDCs, Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.
  - Echo public announcements in southwest and north; proactive provincial/local media.

- **Positioning:**
  - A fiscally prudent plan to benefit all ratepayers in a lasting, meaningful way.
  - Rural customers will receive the largest single rate relief ever.
  - Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.

- **Issues Considerations:**
  - Significant benefit for rural and remote residential customers; net gain for all residential customers.
  - More complex to communicate, but can be presented as a full plan that includes reforms and improvements to the system.
  - Consistent with cap-and-trade commitment that no business sector will be left worse off, though small businesses outside ICI will benefit the least.

Pending Update

Ontario

# Key Messages

- We are taking unprecedented action to help people in their everyday lives.
- Residential ratepayers and other RPP eligible ratepayers will receive an eight per cent rebate on their electricity bill, equivalent to the provincial portion of the HST.
- Modernizing the RRRP will benefit 330,000 families in rural Ontario with significant reductions to their electricity bills – $28 a month, in addition to the eight per cent rebate.
- Over a thousand more Ontario businesses will be eligible to benefit from the ICI program, helping them stay competitive and grow.
- These actions will assist over five million families, farms and small businesses across Ontario.
- These actions today join our many existing initiatives too help keep electricity in Ontario clean, reliable and affordable.

# Proposed Cabinet Minute

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

   i. Provide a rebate of 8% ~~on~~ of the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

   ii. Increase the total amount of rate protection available to R2 low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2004.

   iii. Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

   iv. Expand eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

# Proposed Cabinet Minute (cont'd)

2. ENERGY seek necessary TB/MBC approvals. **[TBD]**

3. ENERGY seek approvals for the proposed *Ontario Rebate for Electricity Consumers Act, 2016* which would, subject to the Legislature's approval of the Act, include the following elements:
   i. The rebate would be available starting January 1, 2017;
   ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
   iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers' electricity bills;
   iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way in which electricity vendors providing the rebate are to be reimbursed;
   v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;
   vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments; and
   vii. The legislation would include consequential amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*; and
   viii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date

# Proposed Cabinet Minute (cont'd)

4. ENERGY to report back to LRC and Cabinet for approval of any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments.

5. ENERGY notes the following amendments:

   i. Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the *Electricity Act, 1998* to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

   ii. Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density electricity customers and provide for a periodic adjustment mechanism.

6. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

7. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan

# Proposed Cabinet Minute (cont'd)

Cabinet approved version of the proposed *Ontario Rebate for Electricity Consumers Act, 2016* for introduction, subject to the following:

1. The Office of Legislative Counsel is authorized to prepare a French version and to make minor adjustments to the English version, for the purpose of ensuring consistency between the two versions and making other improvements or correcting mistakes discovered in the translation process.

# Appendix

# Illustrative Bill Impacts

| | Current Bill (after cost of new programs, before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (after cost of new programs, before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $140 /month | N/A | 8% ~~pre-tax~~ rebate: - $11 | $129 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $231 /month | RRRP: –$32 | 8% ~~pre-tax~~ rebate + Updated RRRP: - $45 | $186 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $102 /month | OESP: -$38 | 8% ~~pre-ta~~x rebate: - $8 | $94 /month |
| Small Business (Toronto – 403,200 kWh/month) | $150 /MWh | N/A | 8% ~~pre-tax~~ rebate: - $12/MWh | $138 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $204 /MWh | N/A | 8% ~~pre-ta~~x rebate: - $16/MWh | $188 /MWh |

***Note:** Some residential consumers ~~can~~ may also receive relief for sales tax on home energy of up to $224 for 2016 through the ~~tax credits based on income, age and geography (Northern Ontario Energy Credit and~~ Ontario Energy and Property Tax Credit~~)~~. People who live in the North may receive additional relief for home energy costs of up to $224 for 2016 through the Northern Ontario Energy Credit. These credits are delivered through the Ontario Trillium Benefit ~~Tax Credit and can be as high as $1,332 per year for a family~~.
** income of less than $28,000, family of 4.

Totals may not add due to rounding.

# Illustrative Bill Impacts (cont'd)

| | Current Rate | Current Rate mitigation initiatives* | Cost of new initiatives (RRRP and ICI) | New Rate Mitigation initiatives | Net Impact, | New Rate, |
|---|---|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | -$0.90 /MWh (-1%) | $107 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI + NIERP: -$69/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $68 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling + ICI: -$53.90/MWh | -$52 /MWh (-34%) | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $151 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh | $153 /MWh |

**Notes:**

1) There is the potential for a consumer eligible for the Regulated Price Plan to opt-out of the Regulated Price Plan to opt-in to Class A and receive all three benefits (i.e., Regulated Price Plan, ICI and proceeds recycling).

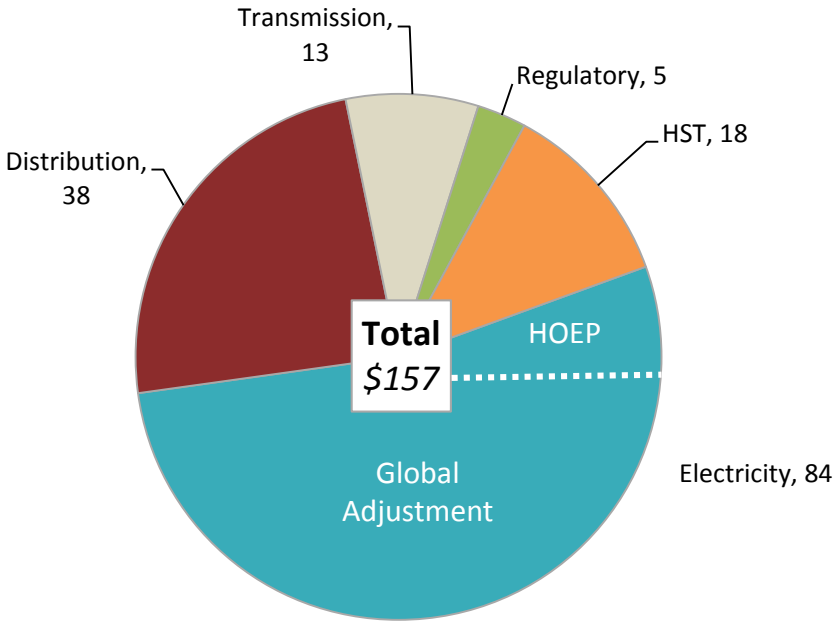
2) The impact of cap and trade would not be added to electricity bills until 2017 and varies per year over the course of the first compliance period. For illustrative purposes, the estimated average benefit of proceeds recycling is shown above.

# Residential Electricity Prices

- There are approximately 5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of May 1, 2016 (750 kWh/month)*




*Source*: OEB, Toronto Hydro

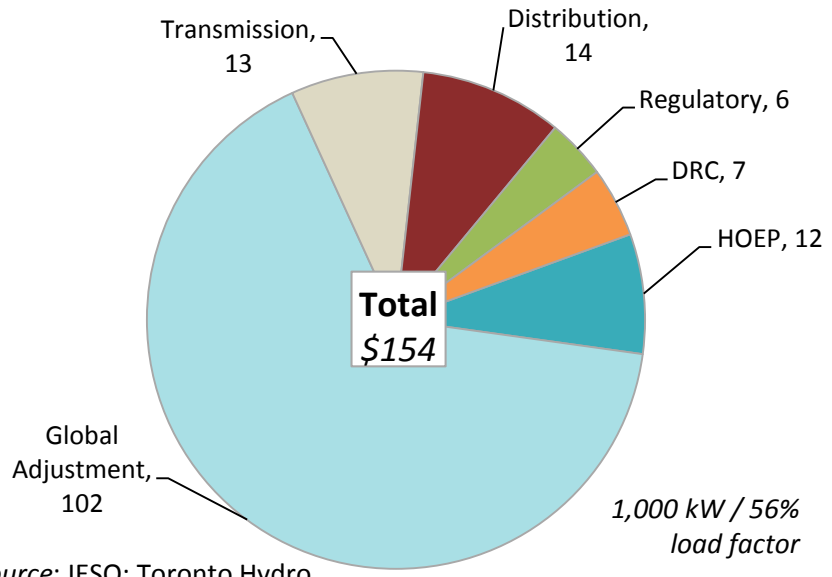
# Commercial Electricity Prices

- There are approximately 400,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.

- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




*Source*: IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.

- Targeted pricing programs are currently not available for Class B consumers.

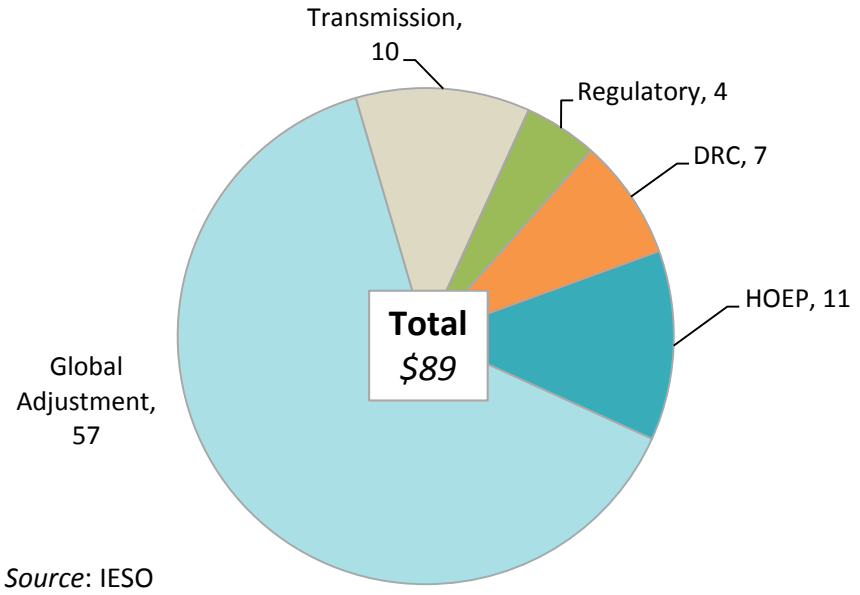
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*




*Source*: IESO

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $64/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Sales Tax Treatment in Other Jurisdictions

| Jurisdiction | Tax | Tax Paid by Business Consumers | Tax Paid by Residential Consumers | Comment |
|---|---|---|---|---|
| **British Columbia** | PST | Yes – 7% | No | • PST does not apply to residential energy, including electricity, acquired solely for residential use in a residential dwelling<br>• BC's carbon tax does not apply to electricity bills. |
| **Alberta** | None | N/A | N/A | • Alberta does not have a provincial sales tax. |
| **Saskatchewan** | PST | Yes – 5%<br>Except for electricity purchased to heat a building. | No | • PST does not apply to electricity purchased for use in a residential dwelling.<br>• PST does not apply to electricity purchased for use in heating a building that is heated solely by the electricity. |
| **Manitoba** | PST | Yes – 8%<br>Reduced rate of 1.6% applies to electricity used by a qualifying business to operate machinery | Yes – 8%<br>Electricity purchased for mixed use, 80% of which is home heating, has a reduced rate of 1.4%. Electricity solely to heat the purchaser's home is exempt. | • Winnipeg also applies a tax of 2.5% on residential and 5% on commercial. |
| **Ontario** | HST | Yes (less ITC (input tax credits)) | Yes – 8% | |
| **Quebec** | QST | Yes (less ITCs) | Yes – 9.975% | |
| **Nova Scotia** | HST | Yes (less ITCs) | Yes – 10% less provincially administered rebate. | • Rebate is equal to the provincial portion of the HST, and is administered similar to OCEB, but applies to many energy sources. |
| **New Brunswick** | HST | Yes (less ITCs) | Yes – 10% | |
| **Prince Edward Island** | HST | Yes (less ITCs) | Yes – 9% (10% beginning Oct 1, 2016) | |
| **Newfoundland and Labrador** | HST | Yes (less ITCs) | Yes – 10% | • Had a provincially administered Home Heating Rebate program until July 2015. |
| **Federal** | GST | Yes (less ITCs) | Yes – 5% | |

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | John Kim |
| **Subject:** | FW: Calculation Question |
| **Date:** | Wednesday, September 07, 2016 4:23:08 PM |
| **Attachments:** | Rebate QA - 21060906 DMO.DOCX<br>Bill Impacts - Options.xlsx |

Will wait to hear back. I've illustrated 3 options in how the Bill can be calculated. I think Option 3 is correct, but will want confirmation. The rounding makes the calculation tough.

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Wednesday, September 07, 2016 4:22 PM
**To:** Daniel Cayley (ENERGY) <Daniel.Cayley@ontario.ca>
**Subject:** Calculation Question

Hi Daniel,

We got the attached word document explaining the calculation for the 8% rebate.

We're trying to figure out the calculation of the rebate including how you apply the ICI and RRRP impacts. However due to rounding we're not too sure.

I've constructed the attached excel chart showing 3 options on how to perform the calculation. I believe Option 3 is how the calculation ***should be*** performed but have heard conflicting viewpoints (illustrated in Options 1 and 2).

Would you have a minute tomorrow to chat. Just want to make sure we're doing the calculation the right way.

Thanks,
Shajee

**Shajee Kathirgamanathan**
Senior Advisor
Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
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shajee.kathirgamanathan@ofina.on.ca

**Q. For a typical residential consumer, what is the benefit of the proposed 8% rebate?**

A. For a current Regulated Price Plan time-of-use consumer in Toronto using 750 kWh per month, the pre-tax monthly bill is about $139 ($157 with tax).

The proposed rebate would be applied pre-tax, and therefore would save a typical residential consumer just over $11/month, or $133 annually. As electricity charges increase over time, the amount of the benefit would increase.

[Note: the net benefit after the cost of new programs is $10 per month.]

Bill Impacts for Average Consumer – Toronto Hydro (750 kWh – $/month)

| Current bill (after tax) | HST on Current Bill | Current bill (pre-tax) | 8% pre-tax rebate | Cost of RRRP and ICI expansion | New bill (pre-tax) | Net benefit (pre-tax) | New bill (after tax) | Net benefit (after tax) |
|---|---|---|---|---|---|---|---|---|
| $157 | $18 | $139 | **$11** | $1.31 | $129 | **$10** | $147 | **$10 (6%)** |

**Q. What is the combined benefit of the 8% rebate and updated RRRP subsidy?**

A. A Hydro One R2 consumer using 1000 kWh per month currently pays $229 before tax. The updated RRRP subsidy would decrease this by $29 to $200 per month and the 8% rebate would decrease their bill by a further $16 for a new total of $184 per month before tax. This represents a $45 per month pre-tax benefit or $540 per year.

[Note: the net benefit after the cost of additional programs is $46 per month]

Bill Impacts for Rural Consumers – Hydro One R2 (1000 kWh – $/month)

| Current bill (after tax) | HST on Current Bill | Current bill (pre-tax) | Update RRRP Subsidy | 8% pre-tax rebate | Net benefit (pre-tax) w/o cost of ICI/RRRP | Cost of RRRP and ICI expansion | New bill (pre-tax) | Net benefit (pre-tax) | New bill (after tax) | Net benefit (after tax) |
|---|---|---|---|---|---|---|---|---|---|---|
| $259 | $30 | $229 | $29 | $16 | **$45** | $1.74 | $186 | **$43** | $212 | **$46 (18%)** |

*Note some totals may not sum due to rounding.

| Current Bill | |
|---|---|
| Current Bill (pre-tax) | 139 |
| HST on Current Bill | 18.07 |
| Current Bill (after-tax) | **157.07** |

| | Option 1 (original I |
|---|---|
| Current Bill (pre-tax) | |
| 8% Pre-tax Rebate | |
| Cost of ICI, RRRP Expansion | |
| New Bill (Pre-tax) | |
| HST on Current Bill | |
| New Bill (after-tax) | |
| Net Benefit (after tax) | |

| New Bill | | | |
|---|---|---|---|
| HST) | Option 2 (new bill HST) | | Option 3 (include ICI, RRRP; then H |
| 139 | Current Bill (pre-tax) | 139 | Current Bill w/ ICI, RRRP |
| (11.12) | 8% Pre-tax Rebate | (11.12) | 8% Pre-tax Rebate |
| 1.31 | Cost of ICI, RRRP Expansion | 1.31 | |
| 129.19 | New Bill (Pre-tax) | 129.19 | New Bill (Pre-tax) |
| 18.07 | HST on New Bill | 16.79 | HST on *Current Bill w/ ICI, RRRP* |
| **147.26** | New Bill (after-tax) | **145.98** | New Bill (after-tax) |
| **9.81** | Net Benefit (after tax) | **11.09** | Net Benefit (after tax) |

| (ST) |
| --- |
| 140.31 |
| (11.22) |
| 129.09 |
| 18.24 |
| **147.33** |
| **9.74** |

**From:** Shajee Kathirgamanathan
**To:** John Kim
**Subject:** FW: Calculation Question
**Date:** Thursday, September 08, 2016 11:05:53 AM
**Importance:** Low

---

I got a verbal confirmation on Option 3 from ENERGY, will reply back to James et al. to sort out the confusion.

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

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**From:** Shajee Kathirgamanathan
**Sent:** Thursday, September 08, 2016 10:49 AM
**To:** Mark Bergman (ENERGY) <Mark.Bergman@ontario.ca>
**Cc:** Daniel Cayley (ENERGY) <Daniel.Cayley@ontario.ca>
**Subject:** RE: Calculation Question
**Importance:** Low

Option 3 it is.

Thanks for the follow up Mark.

All the best, I'm sure the next little while will be busy!

Cheers,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Wednesday, September 07, 2016 4:22 PM
**To:** Daniel Cayley (ENERGY) <Daniel.Cayley@ontario.ca>
**Subject:** Calculation Question

Hi Daniel,

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Would you have a minute tomorrow to chat. Just want to make sure we're doing the calculation the right way.

Thanks,
Shajee

**Shajee Kathirgamanathan**
Senior Advisor
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Ontario Financing Authority
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan |
| **Subject:** | FW: Comments on Electricity Sector Transformation Proposals.doc |
| **Date:** | Monday, December 12, 2016 4:19:53 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals_SIFBmarkup.doc<br>Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy_SIFBmarkup.pptx |

Use this version pls.

---

**From:** Darren Scanlan
**Sent:** Monday, December 12, 2016 4:18 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals.doc

Hi John – I have added our initial markups to your latest staff note and have made a few markups to the deck (both attached). Sending to assist with the consolidation. Happy to discuss, but please let us know before sending anything to Ron. Francisco was able to take a quick look, but should be able to take a more thorough look once home. Saved here.

---

**From:** John Kim
**Sent:** Monday, December 12, 2016 4:02 PM
**To:** Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals.doc

Latest….asked Shajee to have a look but here it is.

**COMMERCIALLY SENSITIVE AND CONFIDENTIAL**

## Comments on Proposed Initiatives to Transform Ontario's Electricity Sector

The Ministry of Energy is providing an update on progress related to transforming the province's electricity sector by elaborating on the potential initiatives, as outlined in its deck.

**CONTEXT**

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e. meeting goals towards decarbonize) and modernize the electricity infrastructure (i.e. more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One in Hydro One transmission and distribution systems.

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2018 for eligible small businesses, farms and residential consumer and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month.

**COMMENTS**

Energy's proposals generally involve shifting some costs from the rate base to the tax base. A general comment on the proposals would be that while thee proposals may have a fairly limited impact, e.g. about $5-6/month for residential (less than 5% of the average monthly bill), the proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion), somewhat down from the impacts from an earlier deck ($1.3 billion to $1.9 billion).

Over the past five years, the fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,195 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt etirement Charge
NIERP – Northern Ontario Electricity Rate program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This includes shifting the cost of the Ontario Electricity Support Program (OESP), as well as an additional 50% increase, and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework and to transition costs to the new "green bank eneity" over time.

- The cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects. Incremental investments would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.) May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.

- This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
- Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):

- Ending the DRC early for Class B customers (commercial, small industrial) (about $0.45 billion/year to 2017-18)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |

| | | | | | |
|---|---|---|---|---|---|
| **NIERP** | 120 | 120 | 120 | 120 | 120 |
| **NOEC** | 25 | 25 | 25 | 25 | 25 |
| **OEPTC**[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| **1. OESP, RRRP, First Nation rate** | | 398 | 419 | 433 | 447 |
| **2. Conservation Programs through Tax Base** | 110 | 450 | 450 | 450 | 450 |
| **4. Departure Tax** | | TBD | TBD | TBD | TBD |
| **7. DRC Ended for Class B** | 110 | 450 | | | |
| **TOTAL** | **1,415** | **3,303** | **2,584** | **2,709** | **2,723** |

**Commented [DS1]:** Can add TBDs for a new Trillium Trust row, but just wanted to check in case you are updating / changing the order of items based on the latest deck

**Electricity Finance Branch, Corporate and Electricity Finance Division**
**Ontario Financing Authority**
**December 12, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8%  per cent rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured,  the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP),  which provides an opportunity to consider a range of policy changes to  how the Ontario energy sector operates.

# Broad Policy Themes / Rationale

- No longer use rate-base to pay for social programs by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.
- Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.
- Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" beyond the Moving Ontario Forward initiative to make certain investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties ~~and expansion of natural gas to rural areas~~, etc. (note that expanding access to natural gas is already included under Moving Ontario Forward.)
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" a single rate plan as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time.
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.16 | 2.31 | 2.41 | 2.49 | 2.54 | 2.58 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.13 | 0.13 | 0.14 | 0.14 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.88 | 3.08 | 3.21 | 3.33 | 3.39 | 3.44 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 2.82 | 3.05 | 2.47 | 2.56 | 2.13 | 2.14 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.10 | 0.10 | 0.11 | 0.11 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Taxpayer Funded Electricity Price Mitigation

| *($M)* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | | 398 | 419 | 433 | 447 |
| 2. Expand the OESP (i.e., 50% increase) | TBD | TBD | TBD | TBD | TBD |
| 3. Fund Conservation Programs Through The Tax-Base | 110 | 450 | 450 | 450 | 450 |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC efficiencies | - | - | - | - | - |
| c. OPG – Borrowing | - | - | - | - | - |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | 110 | 450 | - | - | - |
| 8. Cancel / Adjust FIT | - | - | - | - | - |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| 2. Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy

# Considerations / Outcomes

- The proposed initiatives provide the following opportunities to:
  - Lower the cost of electricity for all consumers;
  - Re-set how electricity programs and energy infrastructure is funded (i.e., shifting costs to the tax-base from rate-base);
  - Provide electricity consumers with greater choices (i.e., signal rate plan);
  - Provide system benefits (e.g., market renewal); and
  - Increase cost effectiveness and improve efficiency.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Gavin He; Shajee Kathirgamanathan |
| **Subject:** | FW: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx |
| **Date:** | Monday, January 16, 2017 7:49:55 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v11 (CEFD)_Markup.docx<br>Book1.xlsx |

I'm having another look but could you check the tables, among other things?

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**From:** John Kim
**Sent:** Monday, January 16, 2017 6:52 AM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Went through the tables and double checked the numbers, also based on updated. (Sorry about the messy check file but attached, as an fyi.)

Thanks,

John.

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**From:** John Kim
**Sent:** January 16, 2017 6:21 AM
**To:** Ronald Kwan; Francisco Chinchon; Emily Kerr
**Cc:** Gavin He
**Subject:** Re: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Good morning. Just having a look now and did a file compare for everyone's convenience.

Thanks,

John.

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**From:** Ronald Kwan
**Sent:** January 16, 2017 6:16 AM
**To:** Francisco Chinchon; John Kim; Emily Kerr
**Cc:** Gavin He
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi,

I made a couple more changes to the table at the end of the BN.

Ron

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**From:** Ronald Kwan
**Sent:** January-16-17 6:06 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi All,

I made some additional changes. Revised version attached. Please review ASAP in the morning.

Thanks,
Ron

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**From:** Emily Kerr
**Sent:** January-15-17 9:35 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Sorry, one more change in the attached.

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**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 8:42 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi all, I added on the TT per Ron's comment.

Francisco

On Jan 15, 2017, at 6:56 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi,
>
> Just started to review. Looks good.
>
> On the table, I marked out some requests – split OESP and RRRP into separate rows, and add a 17-18 fiscal cost / exposure column (including commenting more

on and adding in the fiscal risk of the OPG efficiencies related proposal). On the Trillium Trust, it might be fair to point out that Energy raises the prospect of investing in projects that would not otherwise be viewed by the OEB as projects that meet a system benefits test – so not really a rate saving if the projects would not have been done on the rate base. Really a tax-based subsidisation for other policy reasons.

I'll review more later this evening.

Thanks,
Ron

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**From:** Gavin He
**Sent:** January-15-17 4:40 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi Ron,

Please find attached updated notes and Energy's deck with proposed edits and comments from SIFB, EFB, and SPFB.

The files are also saved under below folder:
S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Energy_Jan16

Thanks,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge
>
>
> Sent from my iPad

<Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup2.docx>

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

- A significant number of Energy's proposals involve shifting costs from the rate base to the tax base.
- While the subset of proposals costed by Energy may have a fairly limited residential rate payer impact (e.g. about $6-7/month for residential, or less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (about $2 billion in 2017-18).
- Additional fiscal exposure comes from proposals not yet costed by Energy (e.g., conservation costs, with Energy consulting OPCD on accounting). Energy also presents other proposals where costs and impacts are "TBD".
- In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts (e.g., of about $5.5 Bn in calendar 2017) during the period that GA costs are deferred, depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,~~005~~035 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

## ENERGY'S BROAD POLICY THEMES / RATIONALES

A key theme / rationale cited by Energy is to no longer use the rate-base to pay for "social programs" by shifting the cost of OESP, RRRP and a proposed First Nation Rate to the tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by ≈ $0.55 in 2017, increasing to ≈ $1.45 in 2022.** | • Would provide on-bill benefits.<br><br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. | • 2017-18: $162 M<br><br>• Increasing to $322 M in 2020-21. |
| **Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈** | | • 2017-18: $666 M<br><br>• Increasing to $719 M in 2020-21 |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **$1.55 in 2017, increasing to ≈ $1.75 in 2022.** | | |
| | | |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.<br>o Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC] |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax". | • $260 million annually from |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | 2017-18 to 2020-21. |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding the Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • Current legislated March 31, 2018 end of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end.<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant annual fiscal impact and increase in net debt (estimated by Energy to be up to $66 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • Annual fiscal impact not yet determined. |

**DETAIL ON ENERGY PROPOSALS**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
    - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
    - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
    - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
    - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
    - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
    - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

<u>Departure Tax</u>:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset

by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).

- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.

- If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 2&3), or more (e.g., about $5.5 bn in 2017 under option 4), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

## SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| Conservation Funding | | TBD | TBD | TBD | TBD |
| [Trillium Trust] | 100 | 390 | 390 | 390 | 390 |
| Departure Tax | 260 | 260 | 260 | 260 | 260 |
| DRC removal for Class B | 110 | 450 | | | |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total:[3] | **530** | **2,1687** | **1,800** | **1,869602** | **1,931659** |
| | | | | | |
| Amortise and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total: | **1,225** | **2,0305** | **1,715** | **1,826** | **1,826** |
| TOTAL (Excl. GA)[3] | 1,695 | 3,9334,203 | 3,2753,515 | 3,1883,695 | 3,2453,757 |

1. Based on estimated / forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**January 16, 2017**

| | |
|---|---|
| 43.0275 | |
| 83.54 | 0.515053 |
| 149.52 | |
| 0.558721 | |

Where the

| | | | | |
|---|---|---|---|---|
| | 666 | 684 | 433 |
| | 162 | 226 | 279 |
| | TBD | TBD | TBD |
| 100 | 390 | 390 | 390 |
| 260 | 260 | 260 | 260 |
| 110 | 450 | | |
| TBD | TBD | TBD | TBD |
| 470 | 1928 | 1560 | 1362 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** |
| 1695 | 3933 | 3275 | 3188 |

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | | | | |
| Conservation Funding | | | | | |
| [Trillium Trust] | 100 | 390 | 390 | 390 | 390 |
| Departure Tax | 260 | 260 | 260 | 260 | 260 |
| DRC removal for Class B | 110 | 450 | | | |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | | | | | |
| Check | 530 | 2168 | 1800 | 1869 | 1931 |
| **Proposed Program Total:[3]** | **530** | **2,167** | **1,800** | **1,602** | **1,659** |
| | | | | | |
| Amortise and Debt-Finance Global Adjustment Costs | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **EXISTING TAX-BASE FUNDED PROGRAMS** | | | | | |
| **OREC** | 300 | 1,100 | 1,100 | 1,200 | 1,200 |
| **Ending DRC** | 330 | 330 | -- | -- | -- |
| **NIERP** | 120 | 120 | 120 | 120 | 120 |
| **NOEC** | 25 | 25 | 25 | 25 | 25 |
| **OEPTC**[2] | 450 | 460 | 470 | 481 | 481 |
| **Check** | 1225 | 2035 | 1715 | 1826 | 1826 |
| **Existing Program Total:** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL (Excl. GA)**[3] | **1,695** | **3,933** | **3,275** | **3,188** | **3,245** |

Delta

problem lied earlier.

| |
|---|
| 447 |
| 322 |
| TBD |
| 390 |
| 260 |
| |
| TBD |

1419

**1,826**

3245

| | 2019-20 | 2020-21 |
|---|---|---|
| Delta | 267 | 272 |

| | | | | | |
|---|---|---|---|---|---|
| | 2017-18 | | | | |
| Delta | 30 | | | | |
| 1755 | 4203 | 3515 | 3695 | 3757 | |
| 60 | 270 | 240 | 507 | 512 | |

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon; John Kim; Emily Kerr; Darren Scanlan |
| **Subject:** | FW: Comments on Energy"s deck |
| **Date:** | Wednesday, December 07, 2016 11:02:37 AM |
| **Attachments:** | Price Mitigation Proposals_Dec5-16_v11.pptx |

Hi All,

FYI.

Ron

**From:** Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
**Sent:** December-07-16 10:59
**To:** Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** FW: Comments on Energy's deck

FYI – TBS' comments on the rate mitigation deck. Not out of step with our analysis.

**From:** MacIntyre, Kyle (TBS) <Kyle.MacIntyre@ontario.ca>
**Sent:** Wednesday, December 7, 2016 10:39 AM
**To:** Katona, Keley (ENERGY)
**Cc:** McLean, David (MOF)
**Subject:** Comments on Energy's deck

Hi Keley,

Thanks for the opportunity to review. Here are our key comments:

- There is a need for greater understanding/information of the cost, objectives and outcomes of the proposals on additional electricity price relief is required. Some of the proposals, such as transitioning rate-based programs to tax-based, have significant fiscal impacts which need to be better outlined/understood in the deck. Clarity is also needed to understand the objectives and outcomes of moving these programs to the tax-base, including the impacts this would have for electricity consumers.

- Timing is a key consideration that should be addressed – should these proposals be for immediate and near-term implementation, it would create significant fiscal impacts in 2017-18 and 2018-19. Scalable options should be considered for all initiatives (i.e., options for the implementation of initiatives to be spread over the long-term, or through a staged-approach to help minimize the fiscal impact).

- Some of the proposals from Energy would require accounting changes (e.g. amortizing conversation program costs). Energy should work with OPCD in developing these proposals. The Auditor General may also need to be consulted.

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II); and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.

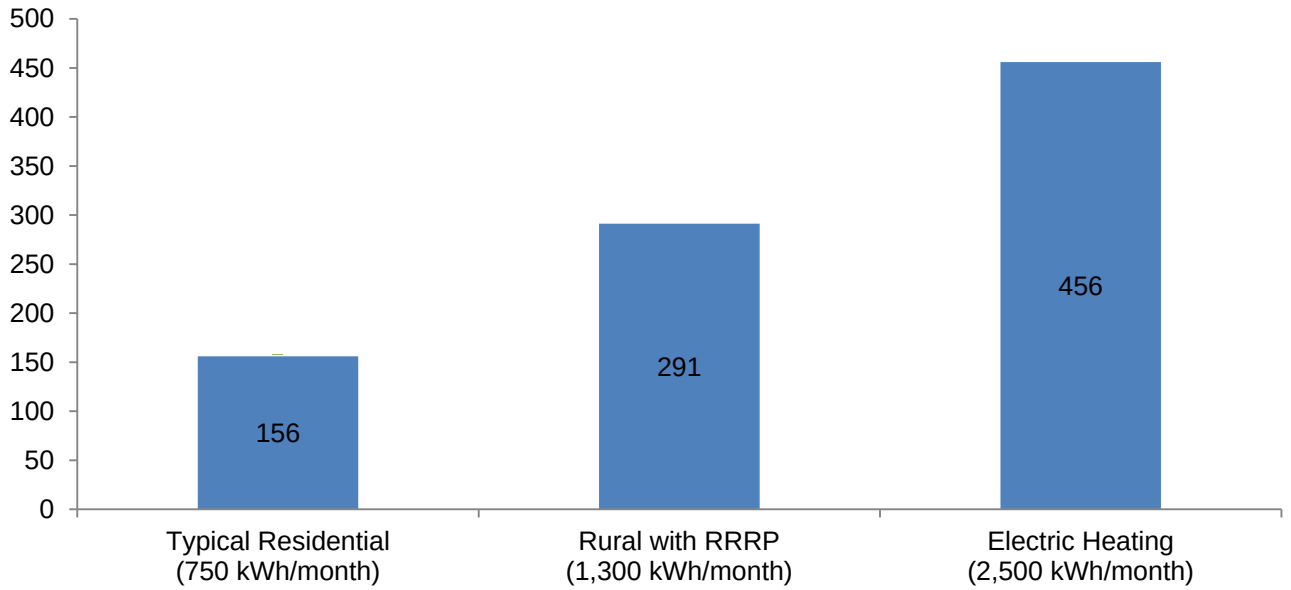
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

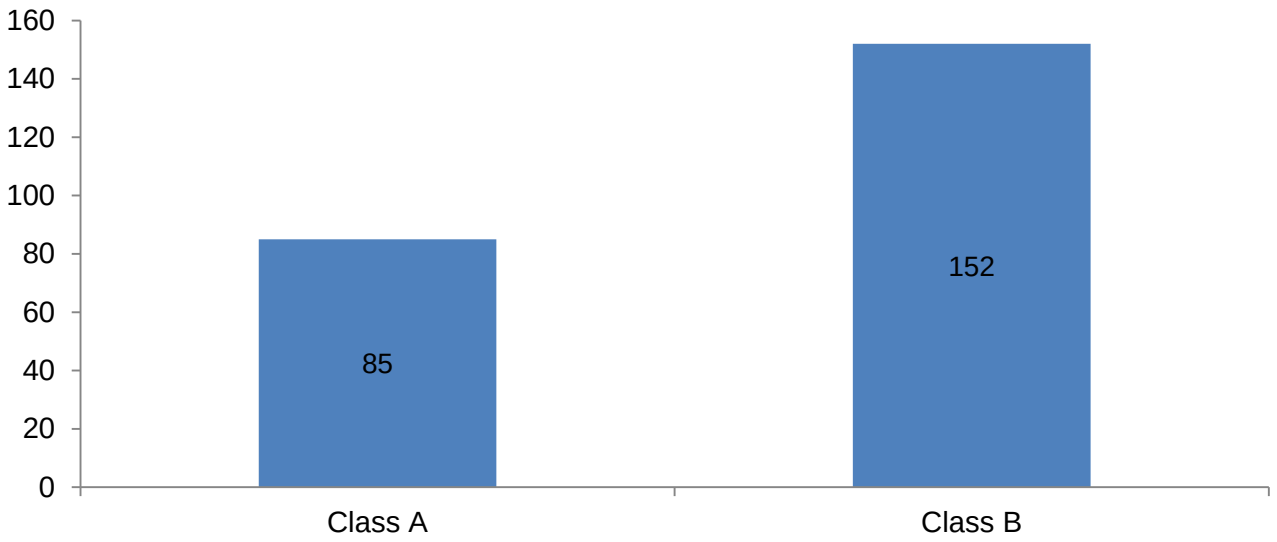



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of $xx [placeholder for OFA] on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $20 to $35 million annual fiscal pressure to the province [TBC by OPG / OFA].

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESB) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.
- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.
- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

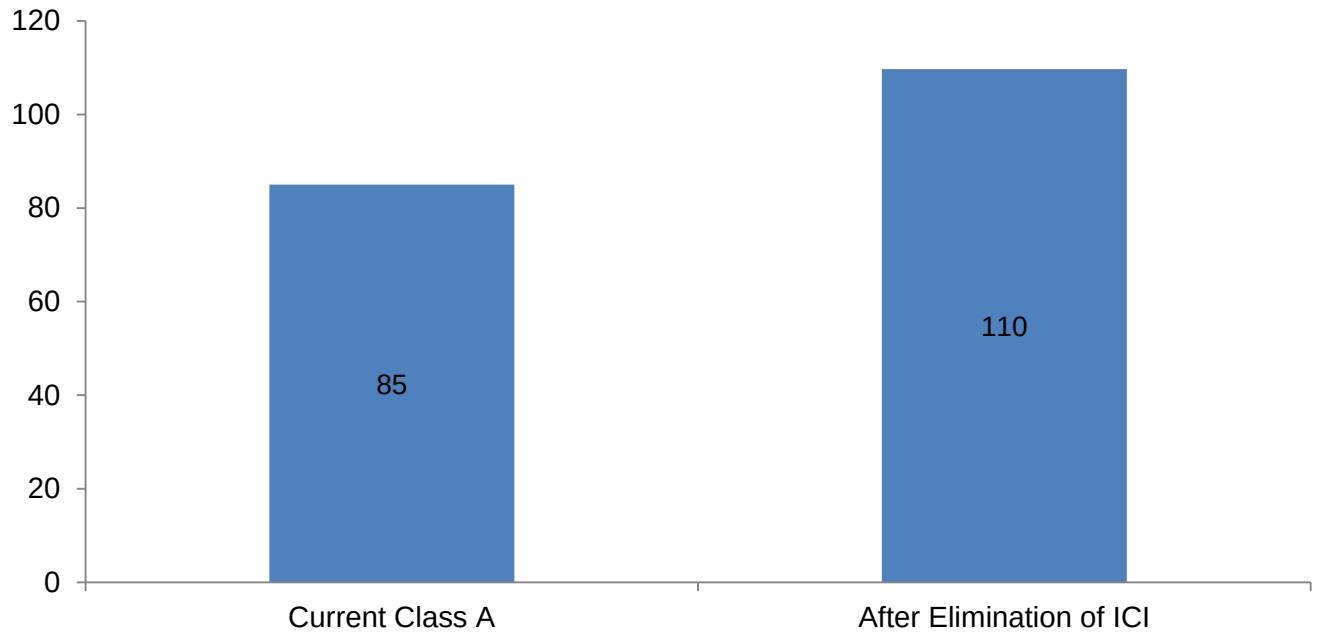
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

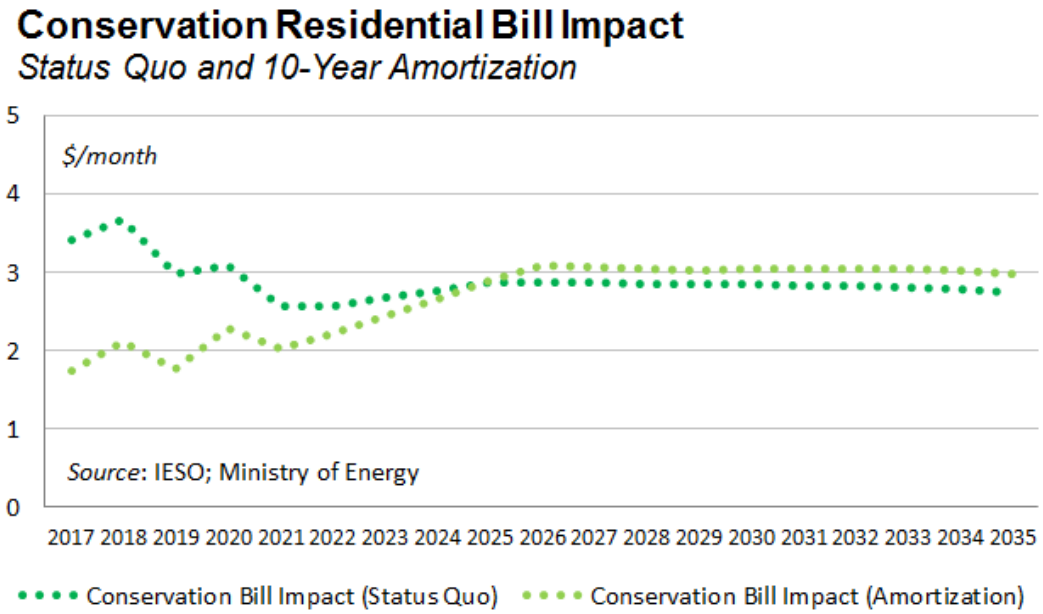
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

# Electricity Consumer Classes

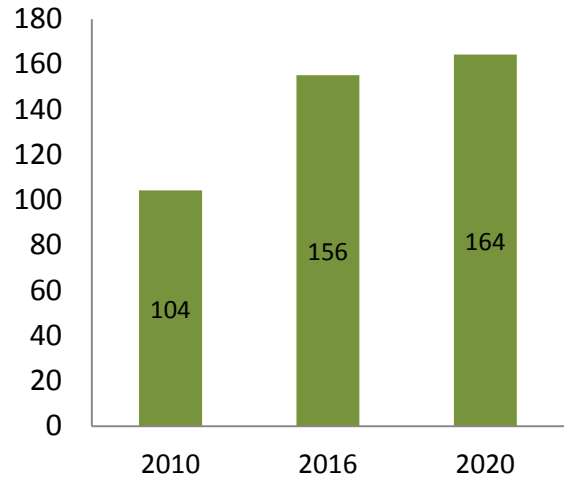
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

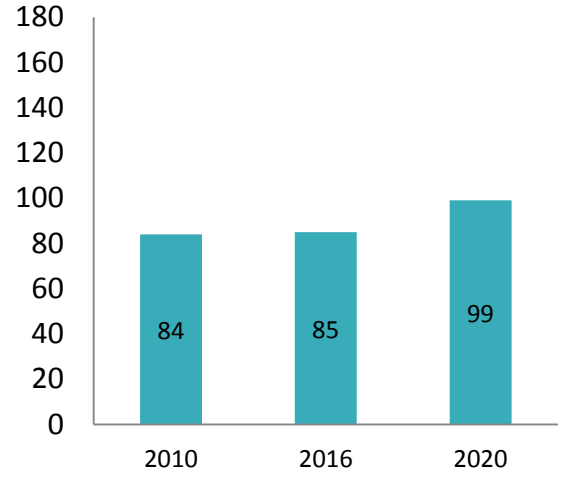
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

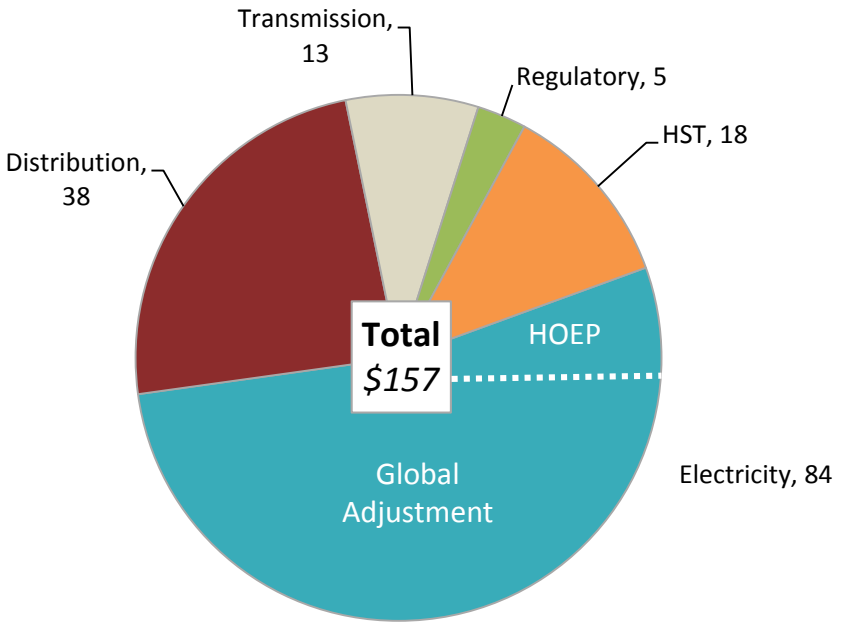
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



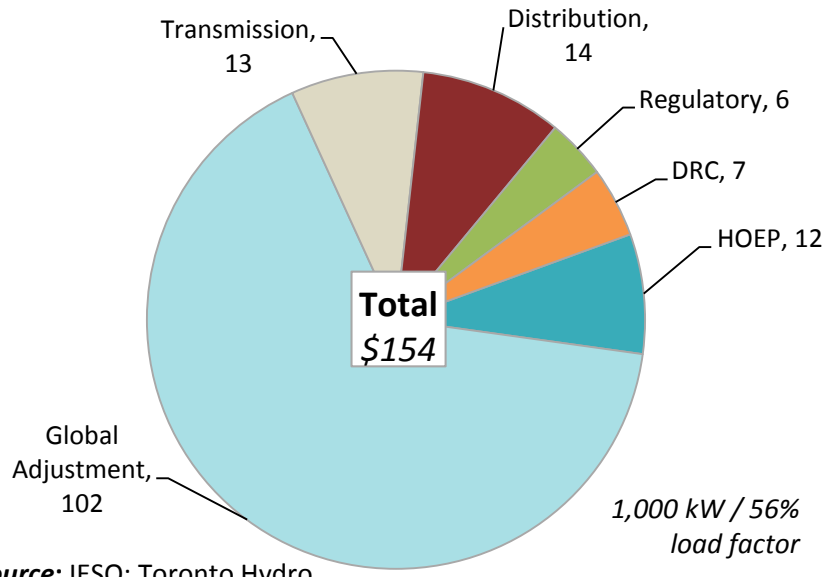

***Source*:** OEB, Toronto Hydro

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

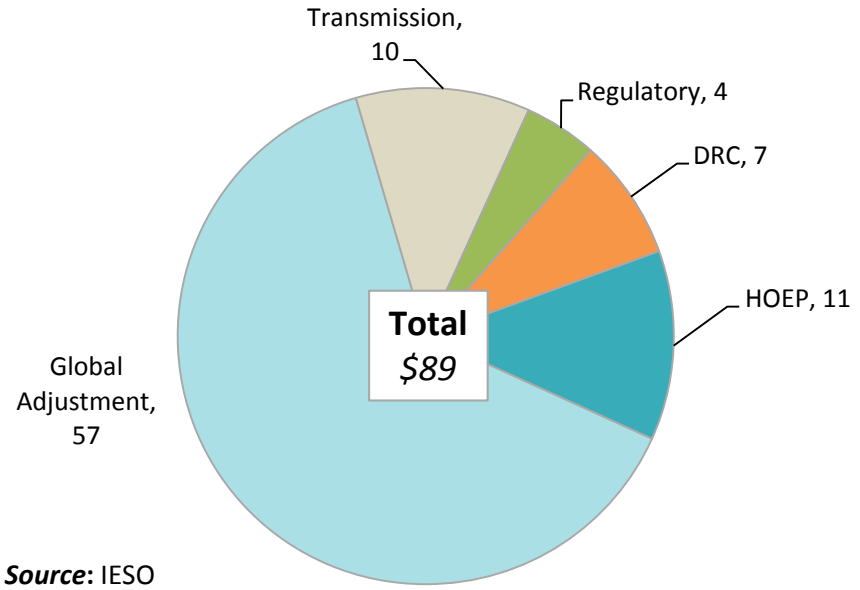
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



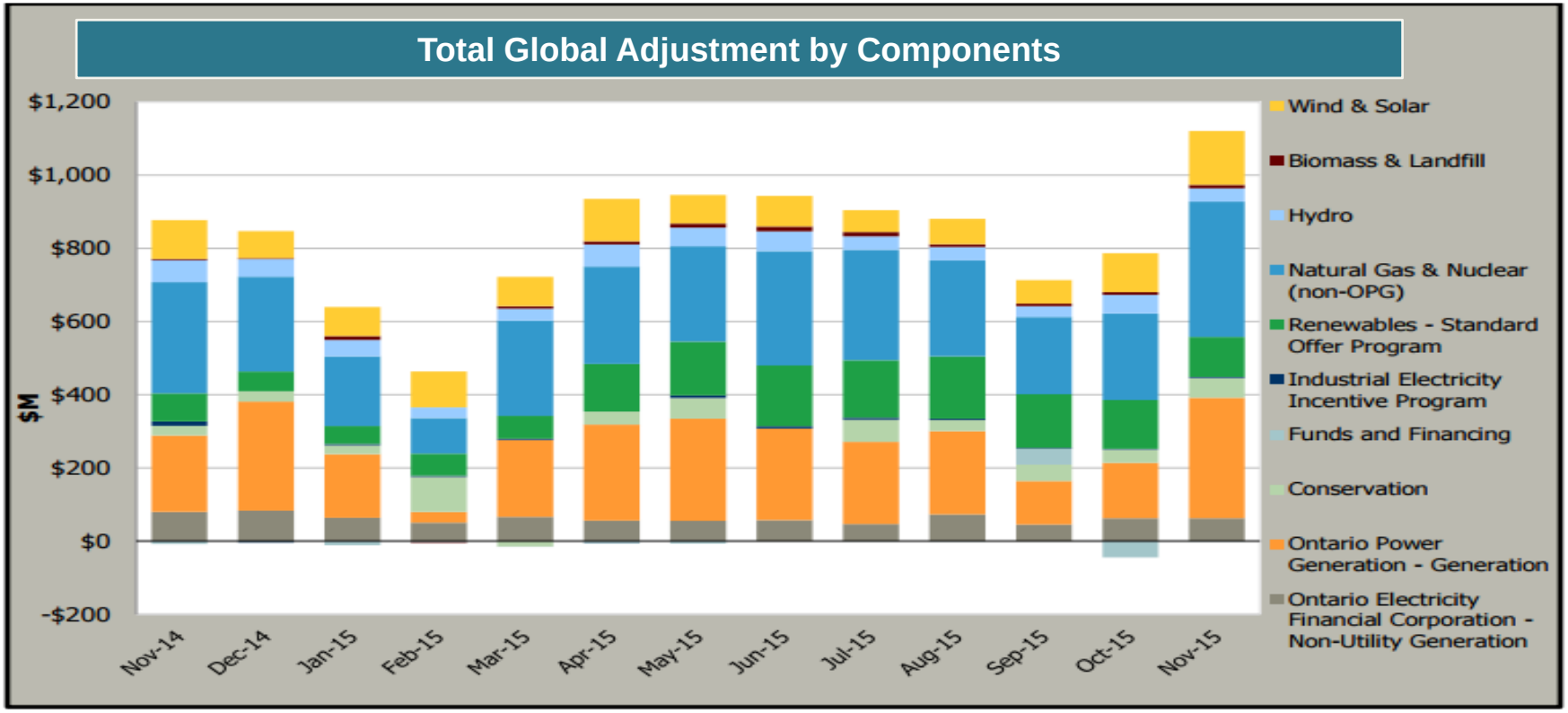

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Francisco Chinchon; Darren Scanlan |
| **Cc:** | Salman Qadir |
| **Subject:** | FW: Cost Shifting - CEFD Slides-v8.pptx |
| **Date:** | Tuesday, December 06, 2016 11:41:36 AM |
| **Attachments:** | Cost Shifting - CEFD Slides-v8.pptx |

---

Not sure if I have the latest version that went out.

---

**From:** John Kim
**Sent:** Monday, December 05, 2016 10:33 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Cost Shifting - CEFD Slides-v8.pptx

This one we did recently….

DRAFT

# Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,200* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,105** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from November LRC Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

DRAFT

# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month, and provided a full 10 per cent benefit to almost all residential customers and most small retail businesses.<br><br>OCEB expired December 31, 2015, as planned. OCEB was put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. |
| **Ending DRC from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | The government removed the Debt Retirement Charge (DRC) from residential electricity users' bills as of January 1, 2016.<br><br>This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate Program** | 120 | March 2010 | As announced in 2015 Budget, the government committed to ongoing support for northern industrials with $120 million allocated annually.<br>The Northern Industrial Electricity Rate (NIER) was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year. Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER was initially established as a three-year program in Budget 2010, effective April 1, 2010,. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families, and up to $1,148 for qualifying seniors. [1] |

1. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

DRAFT

# Timeline – Taxpayer-funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

DRAFT

# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

**From:** Shajee Kathirgamanathan
**To:** Emily Kerr
**Cc:** John Kim
**Subject:** FW: Cost Shifts in the Electricity Sector
**Date:** Monday, November 21, 2016 3:25:36 PM
**Attachments:** Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v2-Table.pptx

---

Hi Emily,

We drafted a table to outline a list of electricity price mitigation programs with fiscal impacts. I'm still working on a timeline, will have that ready shortly. In the meantime just wanted to share this with you.

Please see file attached or found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Cost Shifts\Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v2-Table.pptx

If you have any comments/issues please let us know.

Thanks,
Shajee

Shajee Kathirgamanathan
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

-----Original Message-----
From: John Kim
Sent: Sunday, November 20, 2016 10:31 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
Subject: RE: Cost Shifts in the Electricity Sector

Hi Ron,

Sure, will provide you a draft tomorrow.

Thanks,

John.

-----Original Message-----
From: Ronald Kwan
Sent: Sunday, November 20, 2016 10:27 AM

To: John Kim <John.Kim@ofina.on.ca>
Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
Subject: Re: Cost Shifts in the Electricity Sector

Hi,

As a first product, is a quick draft of a table on the cost of current rate migration fiscal costs doable for Monday?

Ron

> On Nov 19, 2016, at 9:08 PM, John Kim <John.Kim@ofina.on.ca> wrote:
>
> Hi Ron,
>
> Sorry, just saw the FYI and didn't realize there was a question on the approximate timeline.
>
> We should be able to expedite things if needed but I'd estimate middle of week would be certainly within the normal turnaround.
>
> Let us know if you have a turnaround in mind.
>
> Thanks,
>
> John.
>
> -----Original Message-----
> From: Ronald Kwan
> Sent: Friday, November 18, 2016 6:11 PM
> To: John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> Subject: FW: Cost Shifts in the Electricity Sector
> Importance: High
>
> Hi All,
>
> FYI.  I think we need to do our own version in order to provide better balance and a more complete picture.
>
> How long do you think it might take?
>
> Ron
>

> -----Original Message-----
> From: Ronald Kwan
> Sent: November-18-16 18:09
> To: Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>
> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> Subject: RE: Cost Shifts in the Electricity Sector
>
> Hi,
>
> While they list some tax-based programs that are not cost shifts, they do not list NIER nor the recent 8% rebate, and they only show to 2016, prior to the latter and the expansion of RRRP. I would have thought it would be helpful to show those.
>
> On slide 5, it would be helpful to show, for context, the cost of electricity programs already on the tax base, such as historically OCEB and the 8% going-forward, as well as NIER, OEPTC, NOEC, and ending the DRC early too.
>
> Ron
>
> -----Original Message-----
> From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
> Sent: November-18-16 17:48
> To: Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> Subject: FW: Cost Shifts in the Electricity Sector
>
> FYI both.
>
>
> _____
> From: Imbrogno, Serge (ENERGY)
> Sent: Friday, November 18, 2016 5:26:11 PM (UTC-05:00) Eastern Time (US & Canada)
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF)
> Subject: Fw: Cost Shifts in the Electricity Sector
>
> Hi Steve,
> The attached shows costs shifts within the electricity sector which are the result of rate mitigation programs which benefit some consumers. It also shows the total cost of these programs. This was produced in response to a request from Ed.
> Serge

Ontario

MINISTRY OF
ENERGY

# Cost Shifts in Ontario's Electricity Sector

## Working Draft

November 2016

CONFIDENTIAL DRAFT

# Context

- Necessary investments in Ontario's electricity system have led to increased prices, prompting government to introduced a number of price mitigation programs for all consumer types.
  - In addition to existing rate mitigation programs, the 2016 Throne Speech announced a package of rate mitigation initiatives to address electricity prices for residential, commercial and industrial consumers.

- Ontario has a number of programs in place to manage residential electricity prices, including:
  - Ontario Electricity Support Program (OESP);
  - Rural or Remote Rate Protect (RRRP);
  - Northern Ontario Energy Credit (NOEC); and
  - Ontario Energy and Property Tax Credit (OEPTC).

- Ontario also has a number of programs in place to manage industrial electricity prices, including:
  - Industrial Conservation Initiative (ICI);
  - Industrial Electricity Incentive (IEI);
  - Industrial Accelerator Program (IAP);
  - saveONenergy for Business Program; and
  - Demand Response.

# Context (cont'd)

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in Ontario's Electricity Sector

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in Ontario's Electricity Sector (cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

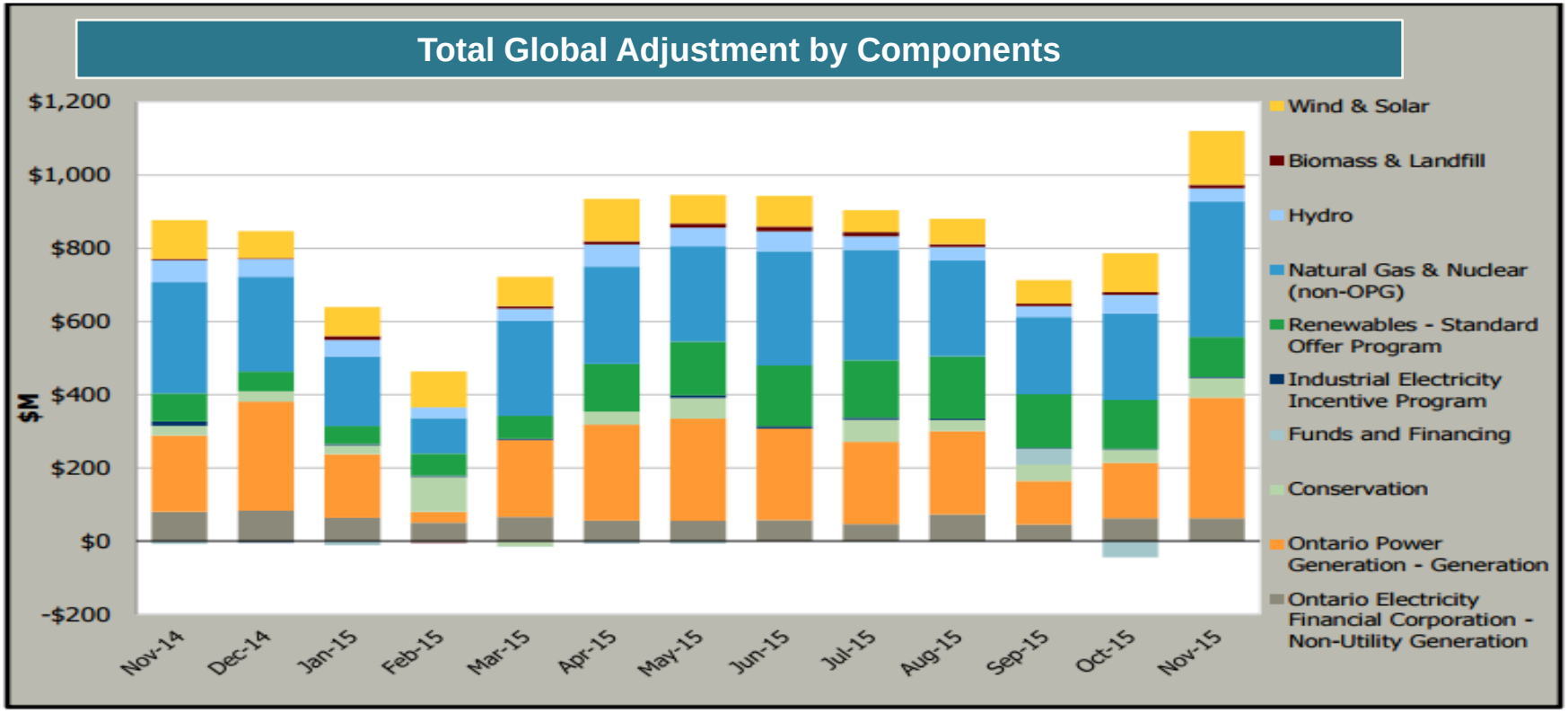
| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

DRAFT

# Taxpayer funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month, and provided a full 10 per cent benefit to almost all residential customers and most small retail businesses.<br><br>OCEB was a responsible way of helping Ontario families through the transition to a more reliable and cleaner electricity system, with the monthly cap balancing the fiscal implications of providing electricity relief.<br><br>Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. |
| **Ending DRC from Residential Bills** | ~300 | Jan 1, 2016 to Mar 31, 2018 | As part of its commitment to reduce electricity cost pressures, the government has removed the Debt Retirement Charge (DRC) from residential electricity users' bills as of January 1, 2016.<br><br>This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,000 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST), an eight per cent savings. |
| **Northern Industrial Electricity Rate Program** | 120 | March 2010 | The Northern Industrial Electricity Rate (NIER) was extended in 2012 for an additional three-year term, effective April 1, 2013, and expiring March 31, 2016, with an allocation up to $120 million per year.<br><br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br><br>NIER was initially established as a three-year program in Budget 2010 and effective as of April 1, 2010, to provide an estimated $150 million per year to eligible large industrial companies in northern Ontario. |
| **Northern Ontario Energy Credit** | 25 | Budget 2010 Announcement | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | 445 | Budget 2010 Announcement | Delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families, and up to $1,148 for qualifying seniors. [1] |

1. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

**From:** John Kim
**To:** Shajee Kathirgamanathan
**Subject:** FW: Cost Shifts in the Electricity Sector
**Date:** Sunday, November 20, 2016 10:37:26 AM

---

I can think of....

NIER
OREC
NOEC
OEPTC

For the last two, I know that about 3 years ago, there was an estimate done to allocate to electricity side from the total cost while doing the fiscal impact work.

Could you think of anything else?

-----Original Message-----
From: John Kim
Sent: Sunday, November 20, 2016 10:31 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
Subject: RE: Cost Shifts in the Electricity Sector

Hi Ron,

Sure, will provide you a draft tomorrow.

Thanks,

John.

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Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
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> Sent: Friday, November 18, 2016 6:11 PM
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> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> Subject: FW: Cost Shifts in the Electricity Sector
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> Sent: Friday, November 18, 2016 5:26:11 PM (UTC-05:00) Eastern Time (US & Canada)
> To: Orsini, Steve (CAB)

> Cc: Bromm, William (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF)
> Subject: Fw: Cost Shifts in the Electricity Sector
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**From:** Ronald Kwan
**To:** John Kim; Emily Kerr; Shajee Kathirgamanathan
**Cc:** Tomasz Bugajski
**Subject:** FW: Cost Shifts in the Electricity Sector
**Date:** Friday, November 18, 2016 6:11:29 PM
**Attachments:** Cost Shifting - Sent to MO on 2016-11-18.pptx
**Importance:** High

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Subject: RE: Cost Shifts in the Electricity Sector

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Serge

Ontario

MINISTRY OF
ENERGY

# Cost Shifts in Ontario's Electricity Sector

## Working Draft

November 2016

CONFIDENTIAL DRAFT

# Context

- Necessary investments in Ontario's electricity system have led to increased prices, prompting government to introduced a number of price mitigation programs for all consumer types.
  - In addition to existing rate mitigation programs, the 2016 Throne Speech announced a package of rate mitigation initiatives to address electricity prices for residential, commercial and industrial consumers.

- Ontario has a number of programs in place to manage residential electricity prices, including:
  - Ontario Electricity Support Program (OESP);
  - Rural or Remote Rate Protect (RRRP);
  - Northern Ontario Energy Credit (NOEC); and
  - Ontario Energy and Property Tax Credit (OEPTC).

- Ontario also has a number of programs in place to manage industrial electricity prices, including:
  - Industrial Conservation Initiative (ICI);
  - Industrial Electricity Incentive (IEI);
  - Industrial Accelerator Program (IAP);
  - saveONenergy for Business Program; and
  - Demand Response.

# Context (cont'd)

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in Ontario's Electricity Sector

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in Ontario's Electricity Sector (cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

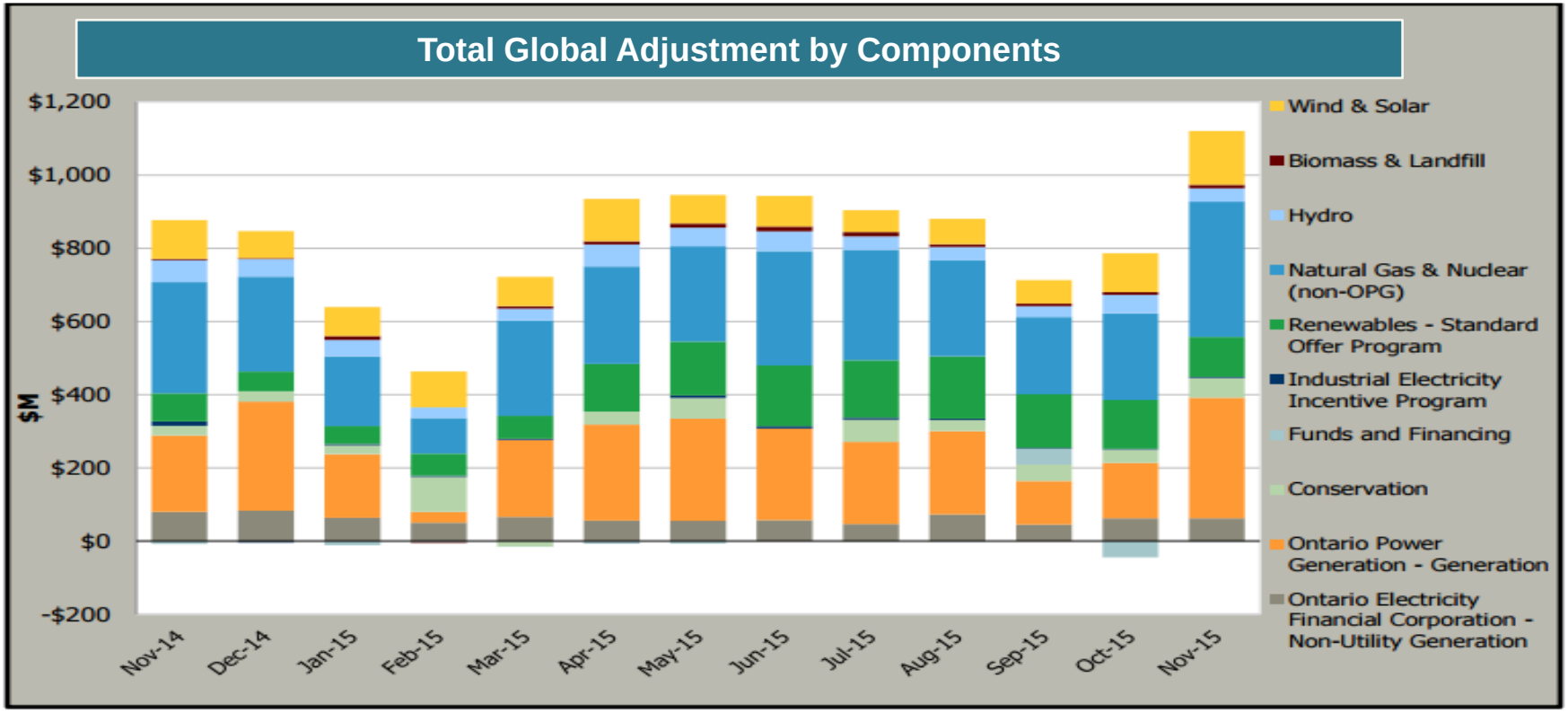
| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

**From:** Shajee Kathirgamanathan
**To:** John Kim
**Subject:** FW: Cost Shifts in the Electricity Sector
**Date:** Tuesday, November 22, 2016 1:59:10 PM

---

Do you know what LRC submissions Ron's talking about re: 1.2B?

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Ronald Kwan
**Sent:** Monday, November 21, 2016 6:19 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Cost Shifts in the Electricity Sector

Thanks.

We should be able to get some historical year-by-year OEPTC and NOEC and NIER numbers.

DRC amount forgone I think was a little higher in the original submission. And the OREC amount in the LRC submission earlier this month is now at $1.2.

Can we do comments/markups of Energy's slides too?

Ron

---

**From:** Shajee Kathirgamanathan
**Sent:** November-21-16 18:12
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Cost Shifts in the Electricity Sector

Hi Ron,

EFB and SPFB developed some additional slides providing an overview of tax payer funded electricity price mitigation programs; fiscal impacts, overview and history/timeline.

File attached, also found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Cost Shifts\Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v5.pptx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Senior Advisor
Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
Office: 416-325-1402 | Mobile: 647-294-3359
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| | |
|---|---|
| **From:** | John Kim |
| **To:** | Salman Qadir; Gavin He |
| **Cc:** | Adam Prokop; Shajee Kathirgamanathan |
| **Subject:** | FW: Debt-Financing GA - Sent to MO on 2017-01-10_EFB_v3_Markup.pptx |
| **Date:** | Friday, January 13, 2017 10:58:12 AM |
| **Attachments:** | Debt-Financing GA - Sent to MO on 2017-01-10_EFB_v3_Markup.pptx |

Fyi.

**From:** John Kim
**Sent:** Friday, January 13, 2017 10:08 AM
**To:** Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** Debt-Financing GA - Sent to MO on 2017-01-10_EFB_v3_Markup.pptx

Hi Emily,

Staff pulled the attached together. If we can somehow combine comments, that'd be great!

Thanks,

John.

Ontario

MINISTRY OF
ENERGY

# Debt Financing the Global Adjustment

January 10, 2017

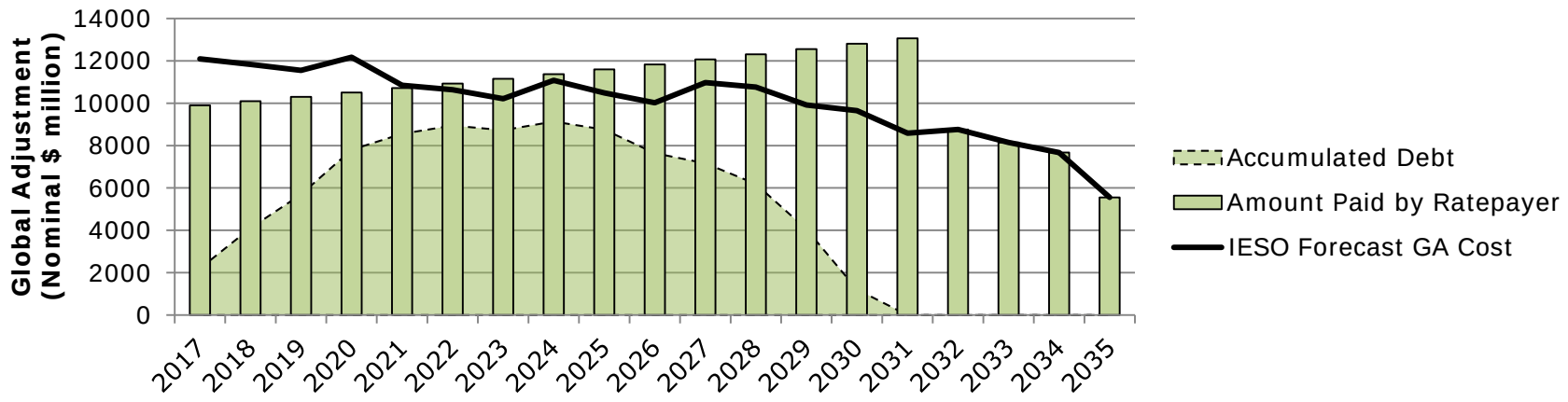
*Working Draft for Discussion Purposes Only*

# Purpose

- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.
- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.
- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

# Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.




**Sample debt financing**: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

# Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

# Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

# GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

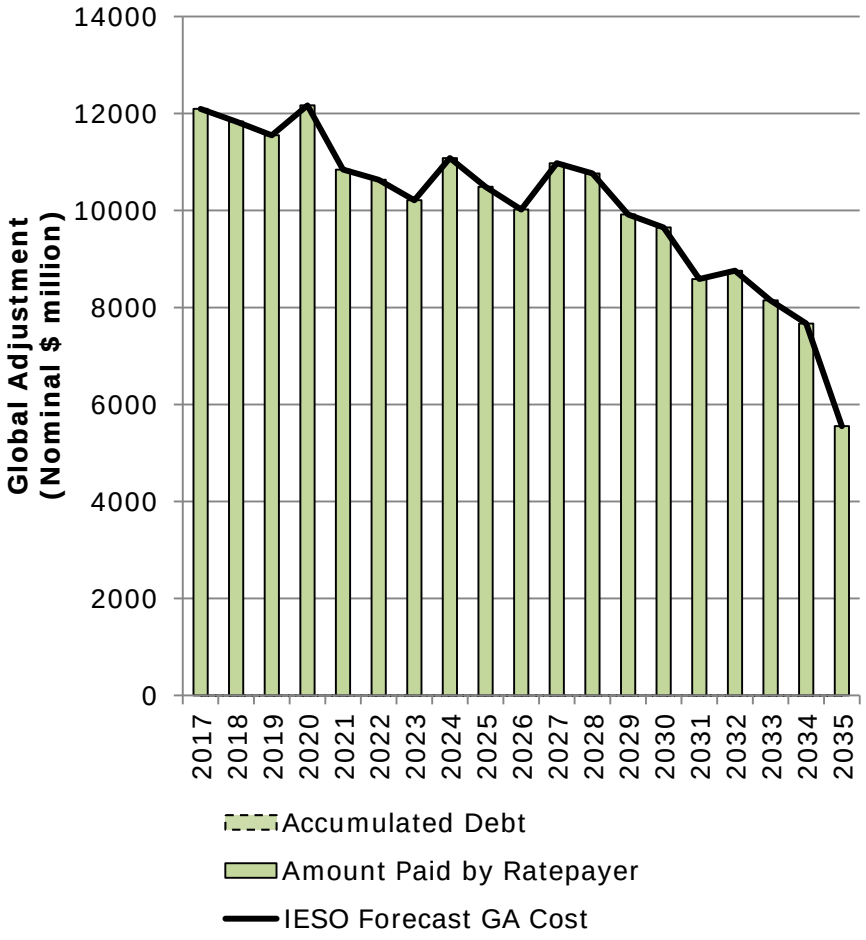
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

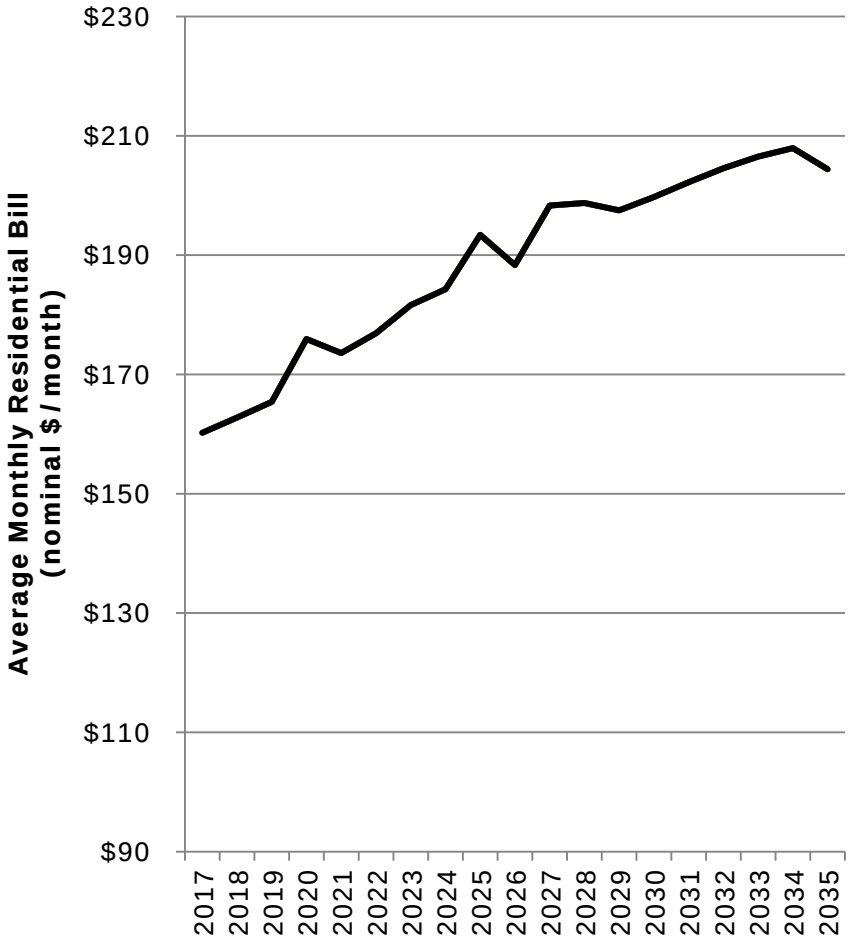
3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

# 1. Status Quo – Global and Residential Impacts

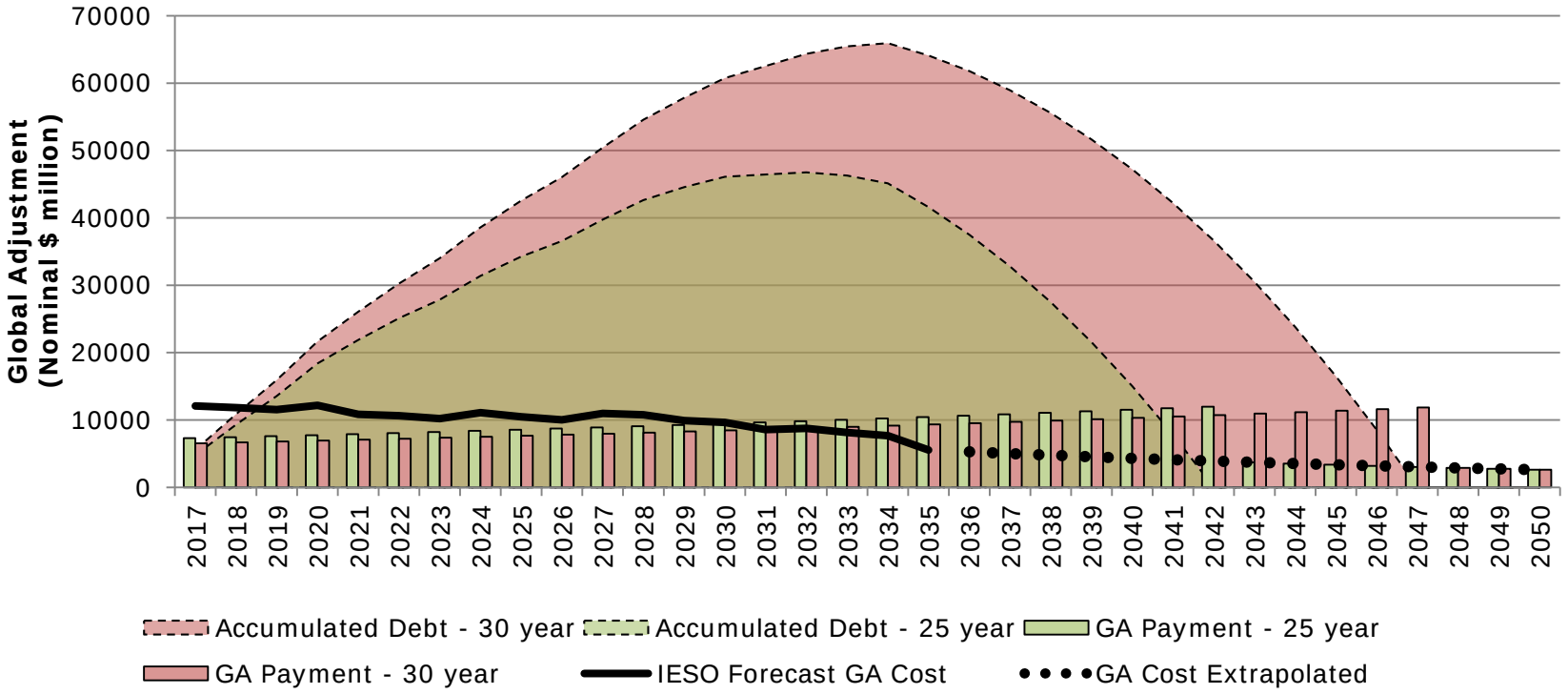
- Ratepayers continue paying the true cost of GA.



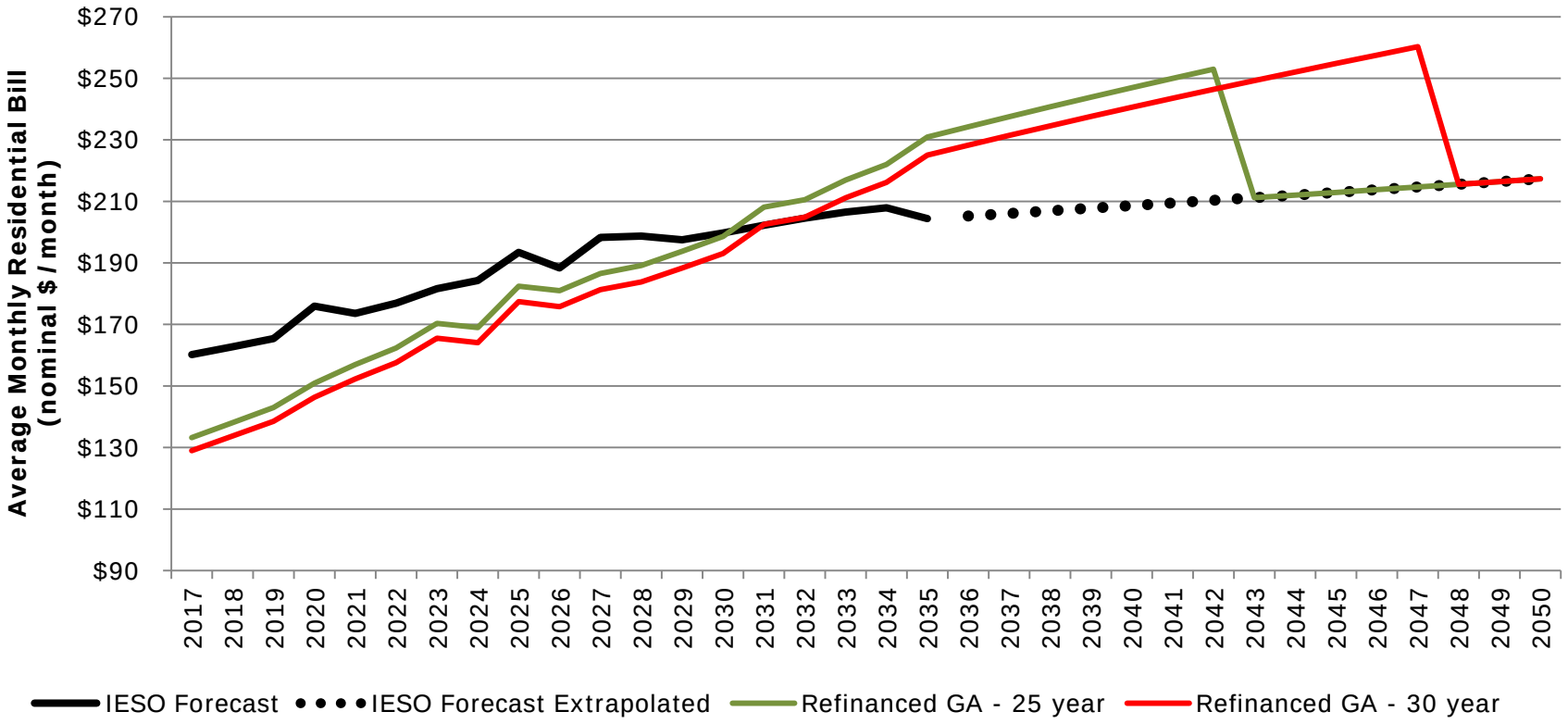
# 2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.




- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

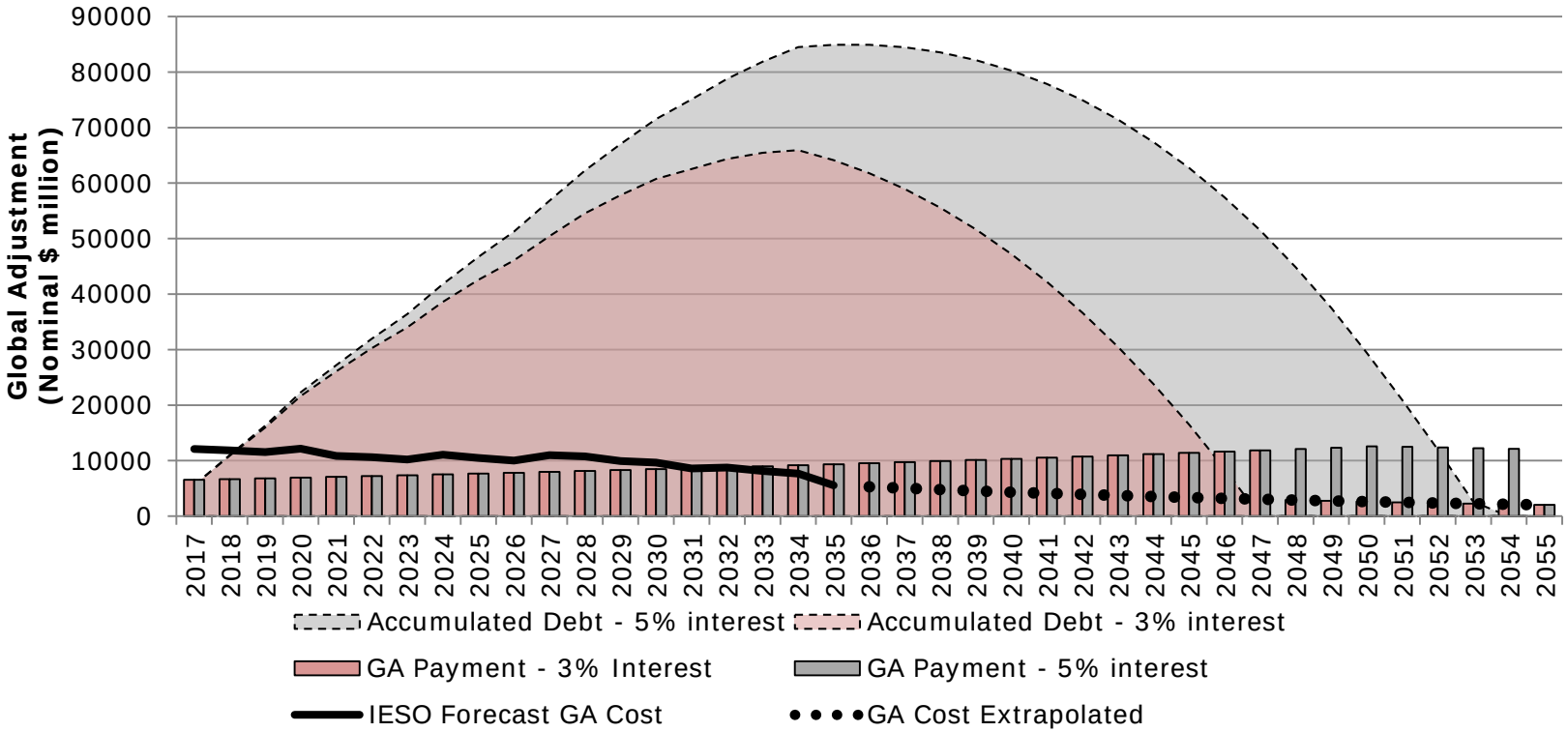
# 2. Maximize Short-term Cost Reduction – Residential Impacts




- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

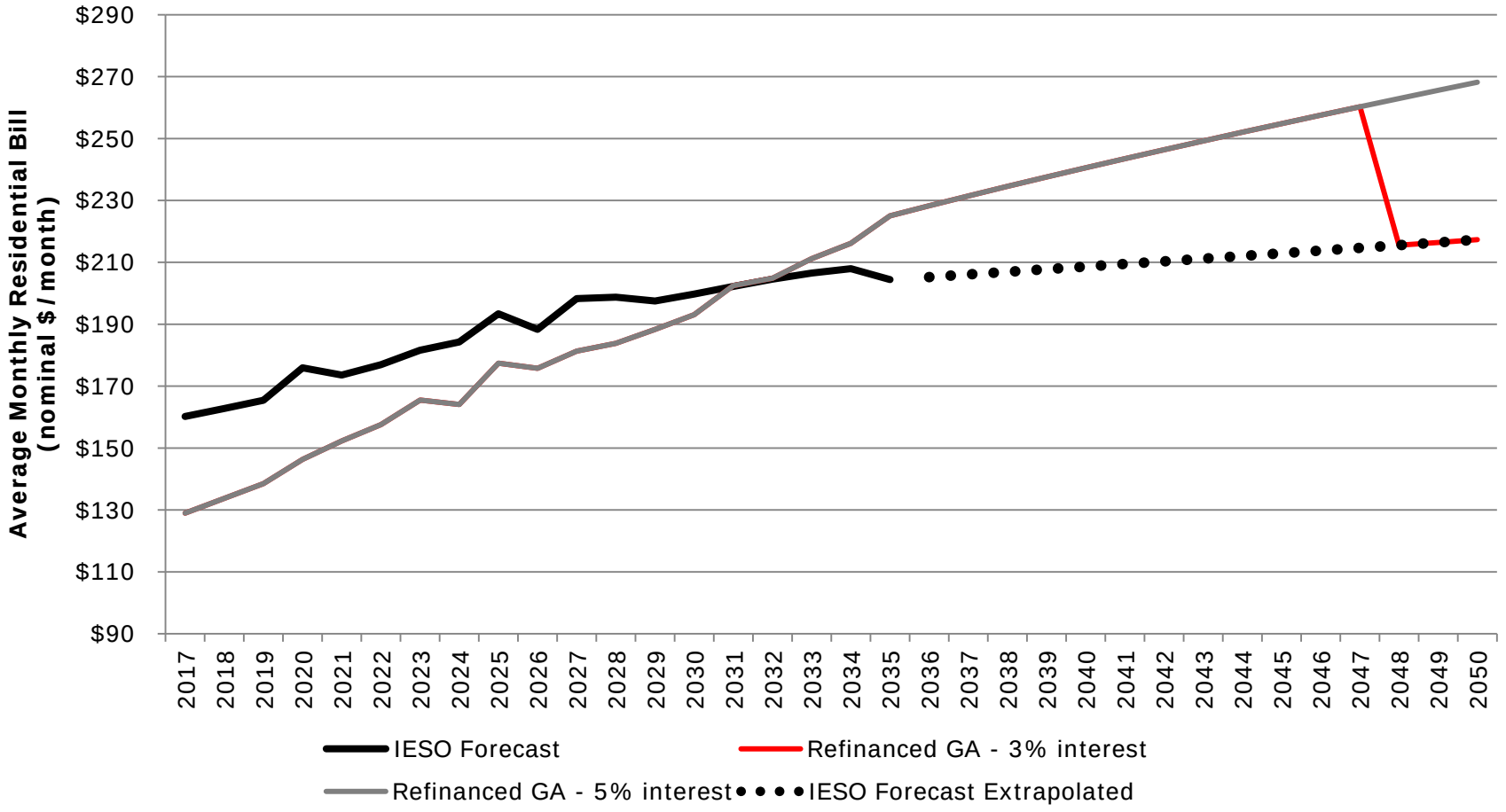
# 3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).




- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

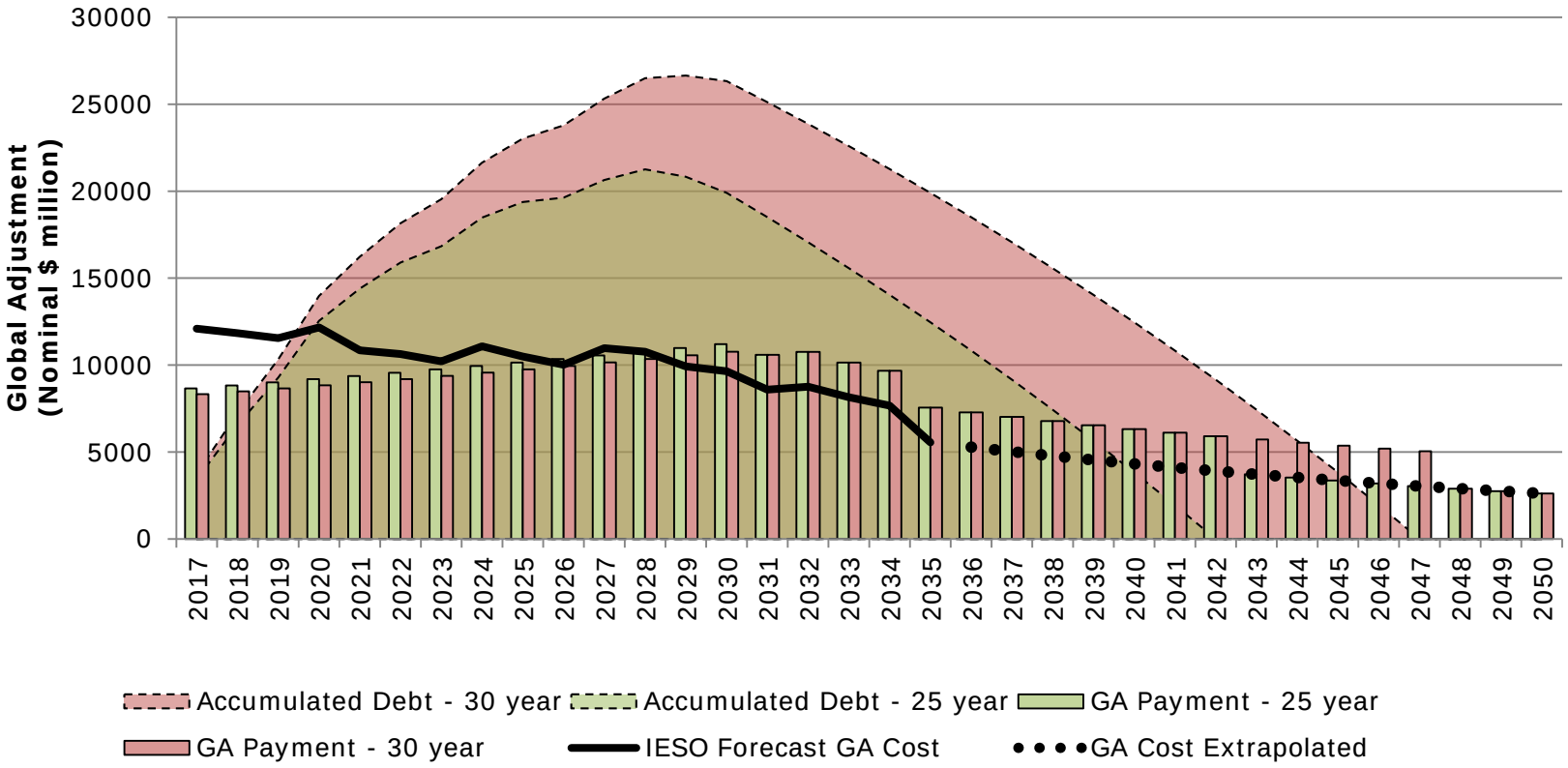
# 3. Interest Rate Risk – Residential Impacts




- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

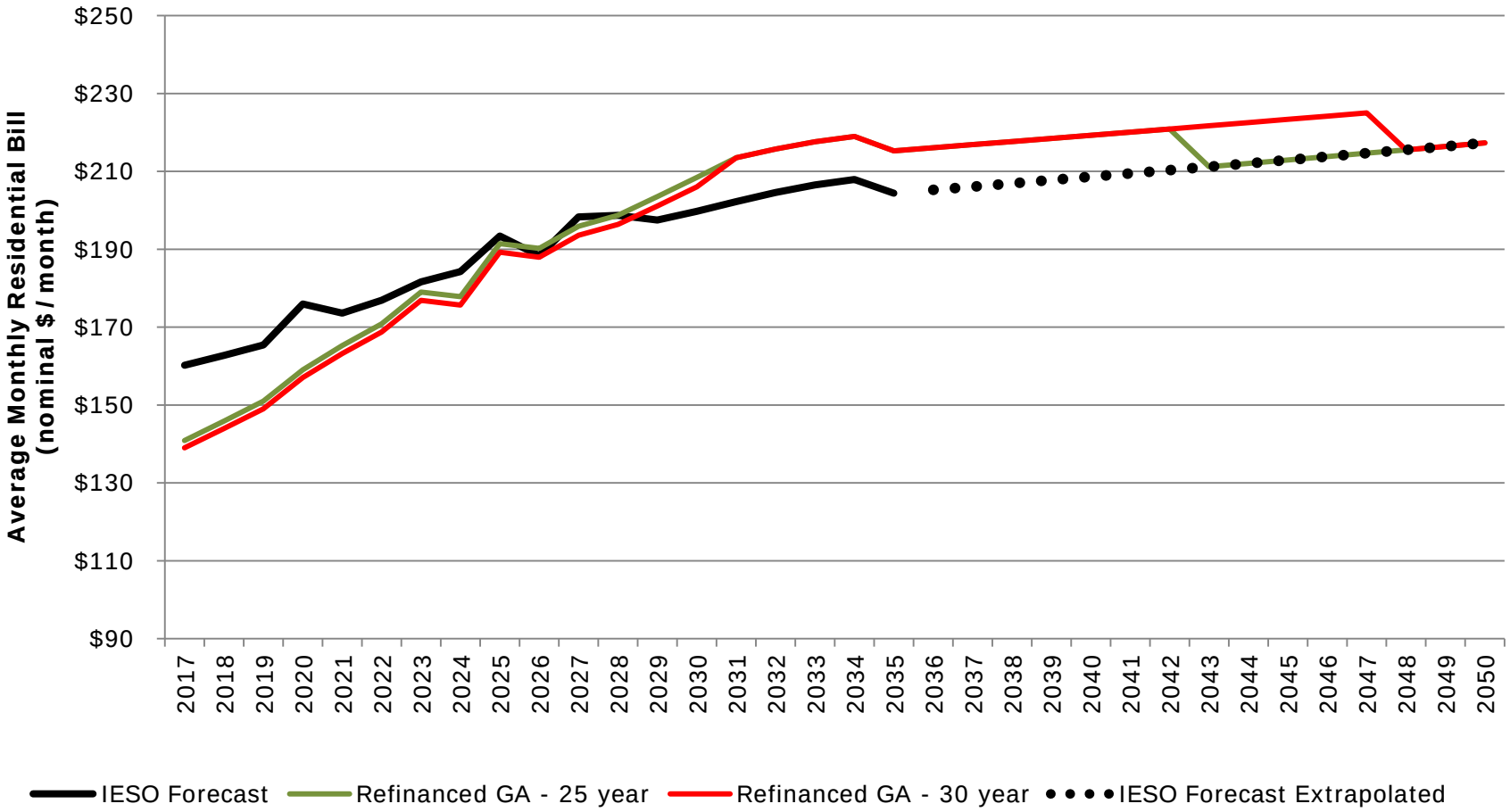
# 4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.




- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

# 4. Maximize Short-term Cost Reduction with Limits – Residential Impacts




- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Salman Qadir; Shajee Kathirgamanathan; Gavin He; Adam Prokop |
| **Subject:** | FW: Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup.pptx |
| **Date:** | Friday, January 13, 2017 12:05:26 PM |
| **Attachments:** | Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup.pptx |

Let's take one last look.

**From:** Karim Javeri
**Sent:** Friday, January 13, 2017 11:58 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** Re: Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup.pptx

Hi John,

We had a couple of comments to add to this. Our additions are in bold.

Thanks

Karim

Ontario

MINISTRY OF
ENERGY

# Debt Financing the Global Adjustment

January 10, 2017

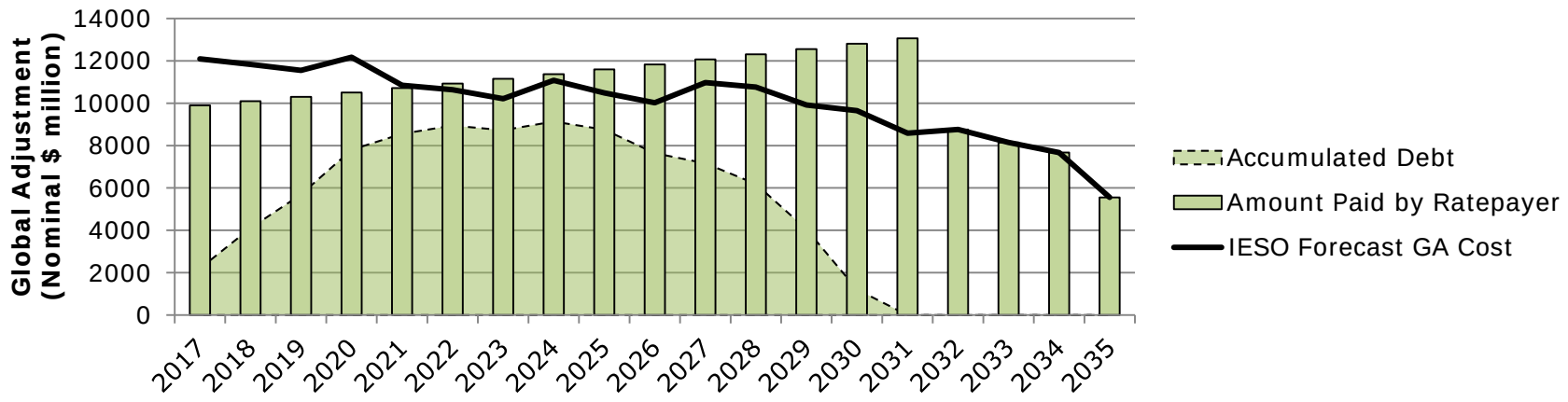
*Working Draft for Discussion Purposes Only*

# Purpose

- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.
- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.
- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

# Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.




**Sample debt financing**: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

# Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

# Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

# GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

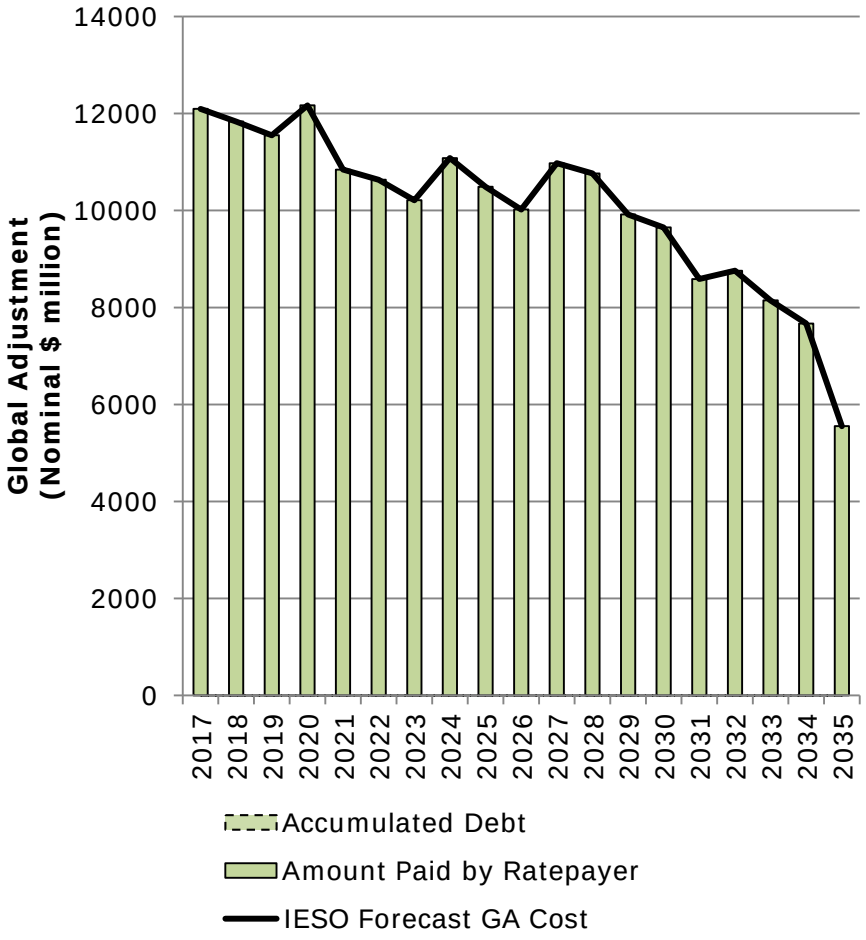
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

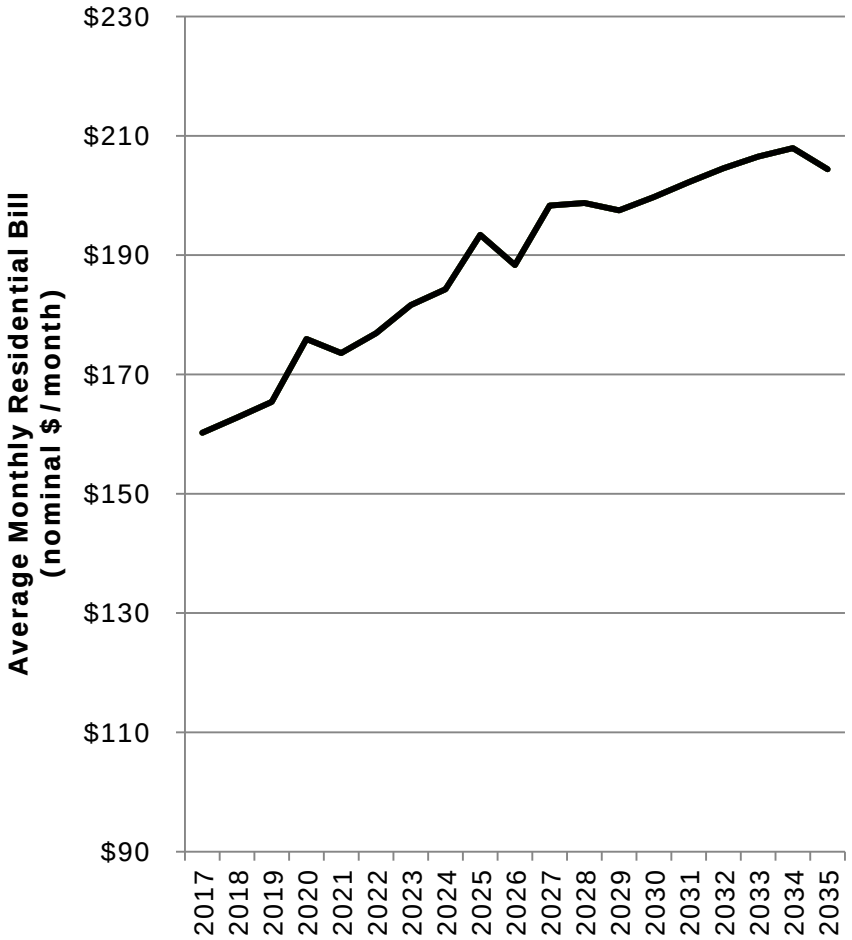
3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

# 1. Status Quo – Global and Residential Impacts

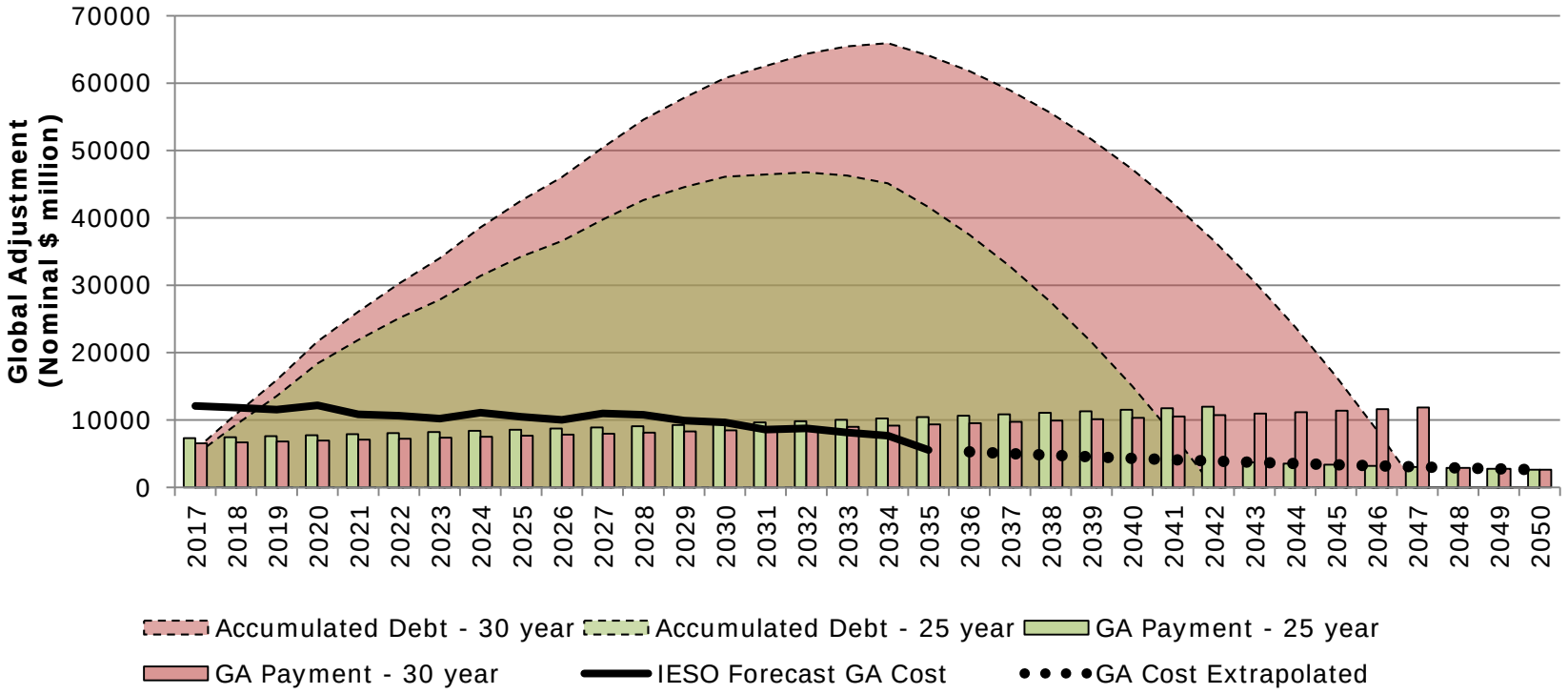
- Ratepayers continue paying the true cost of GA.



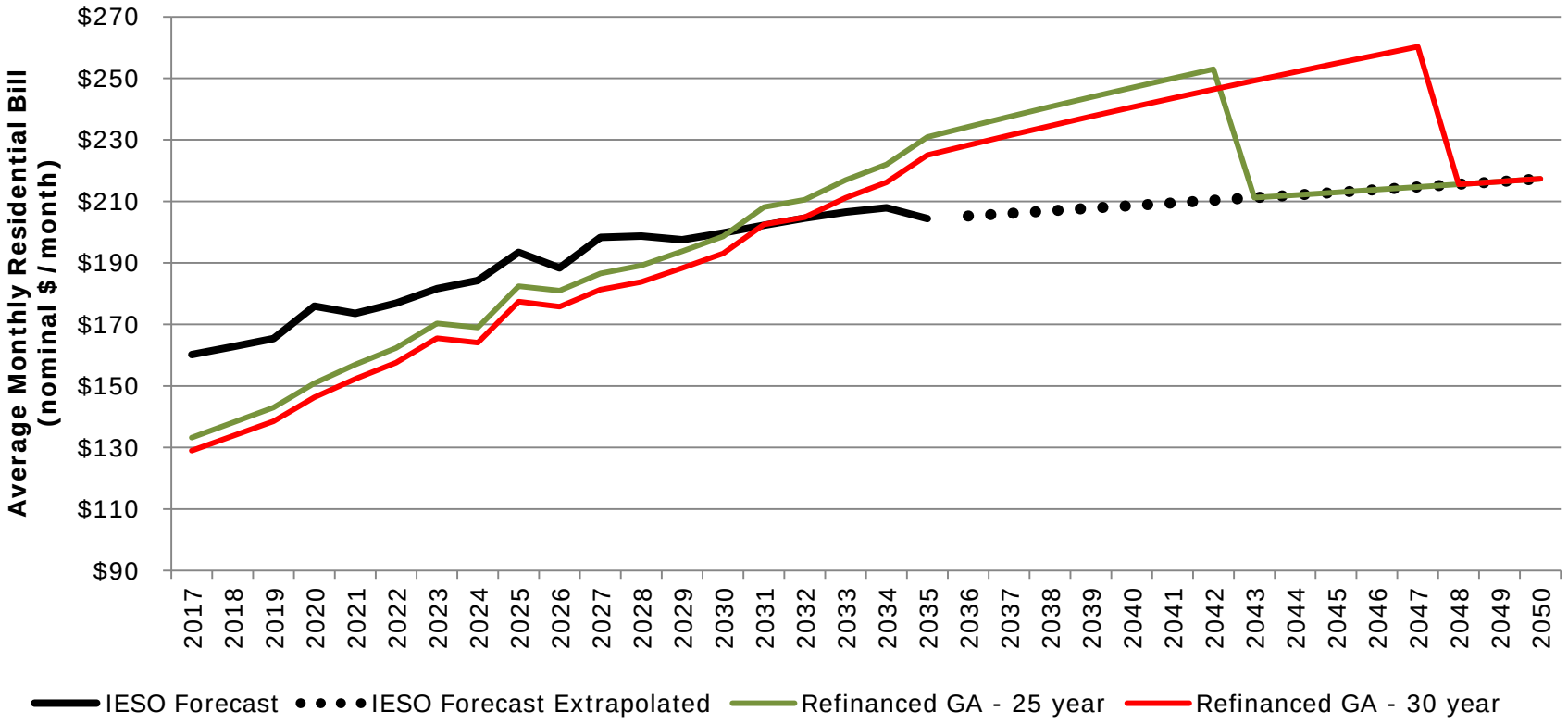
# 2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.




- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

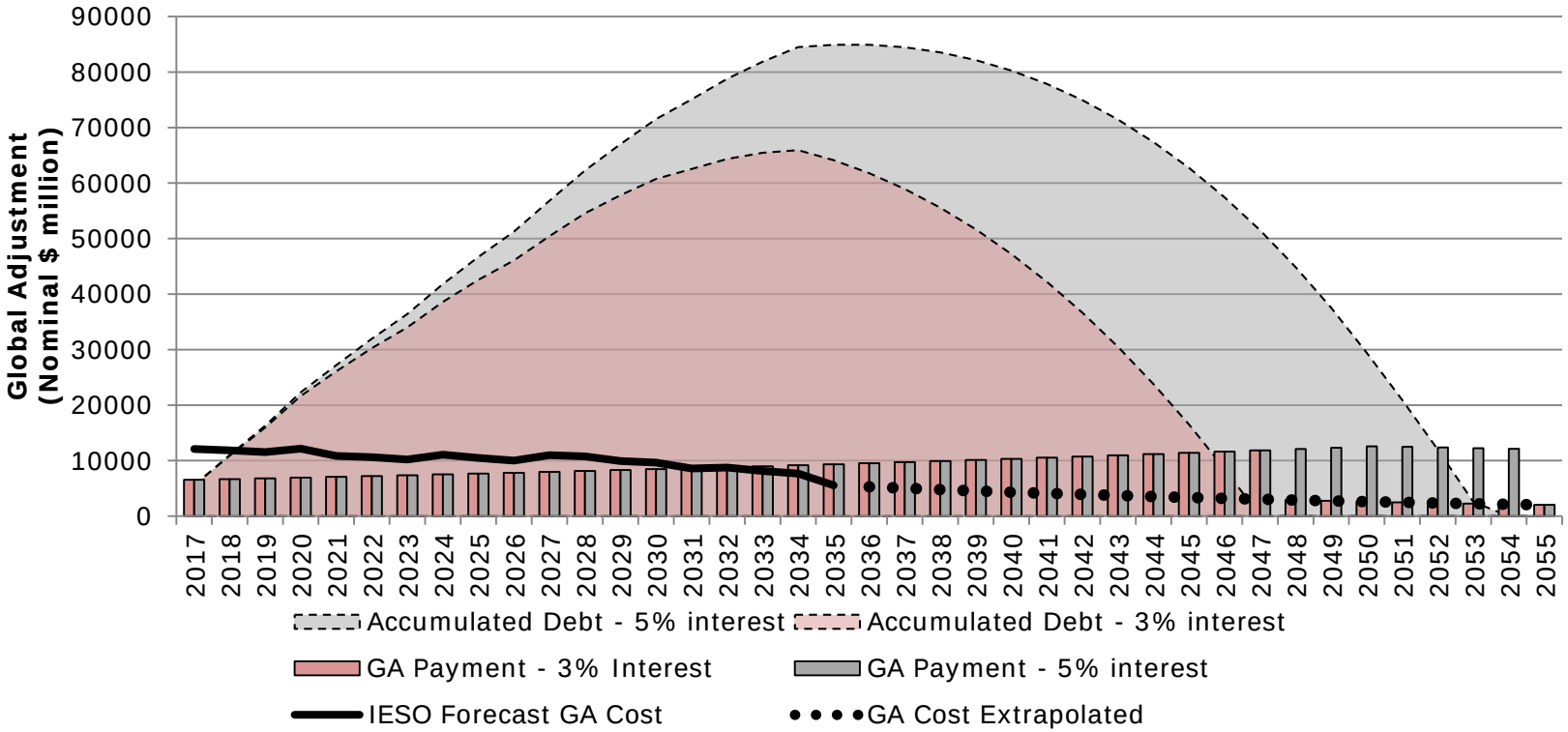
# 2. Maximize Short-term Cost Reduction – Residential Impacts




- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

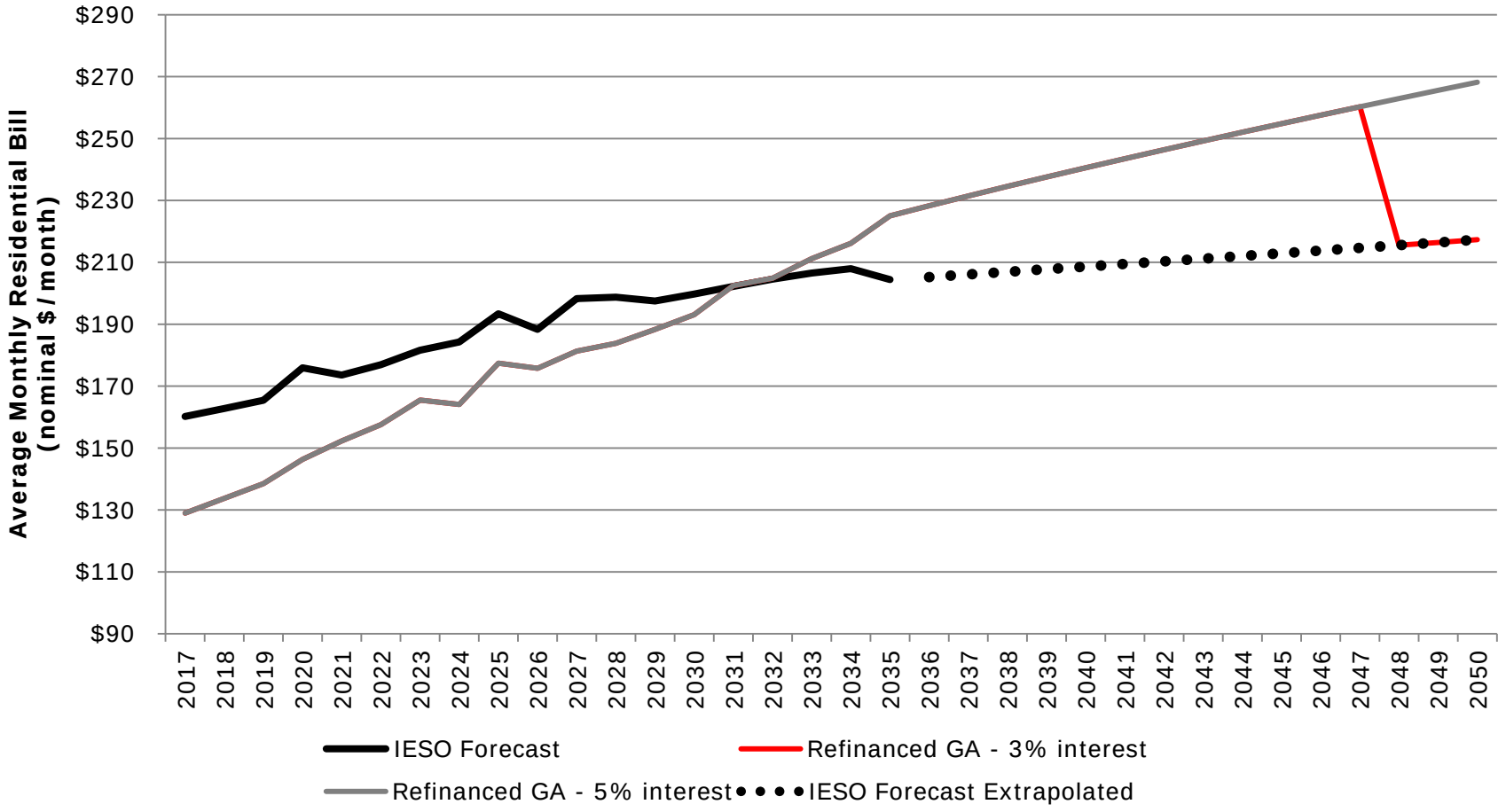
# 3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).




- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

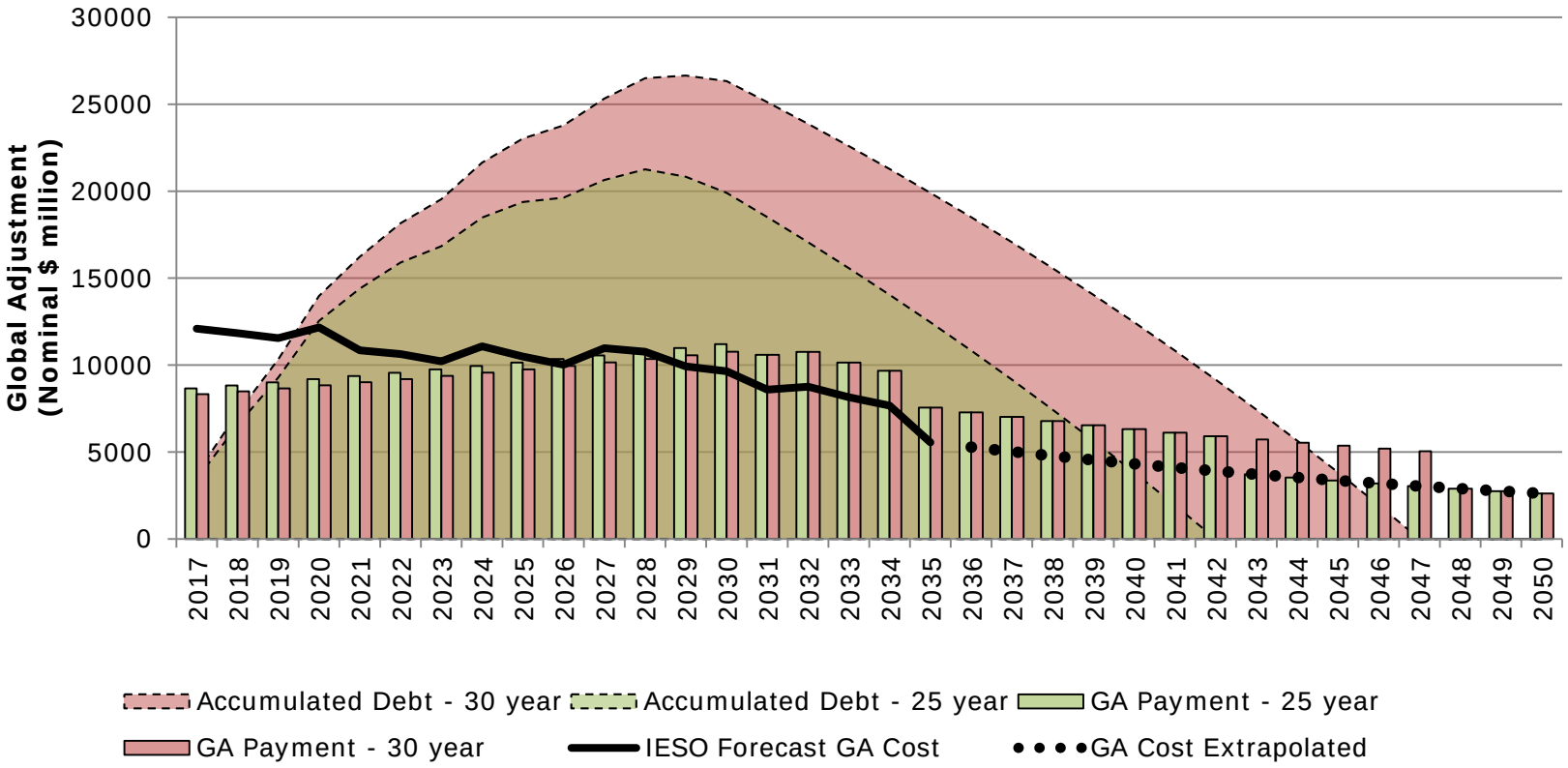
# 3. Interest Rate Risk – Residential Impacts




- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

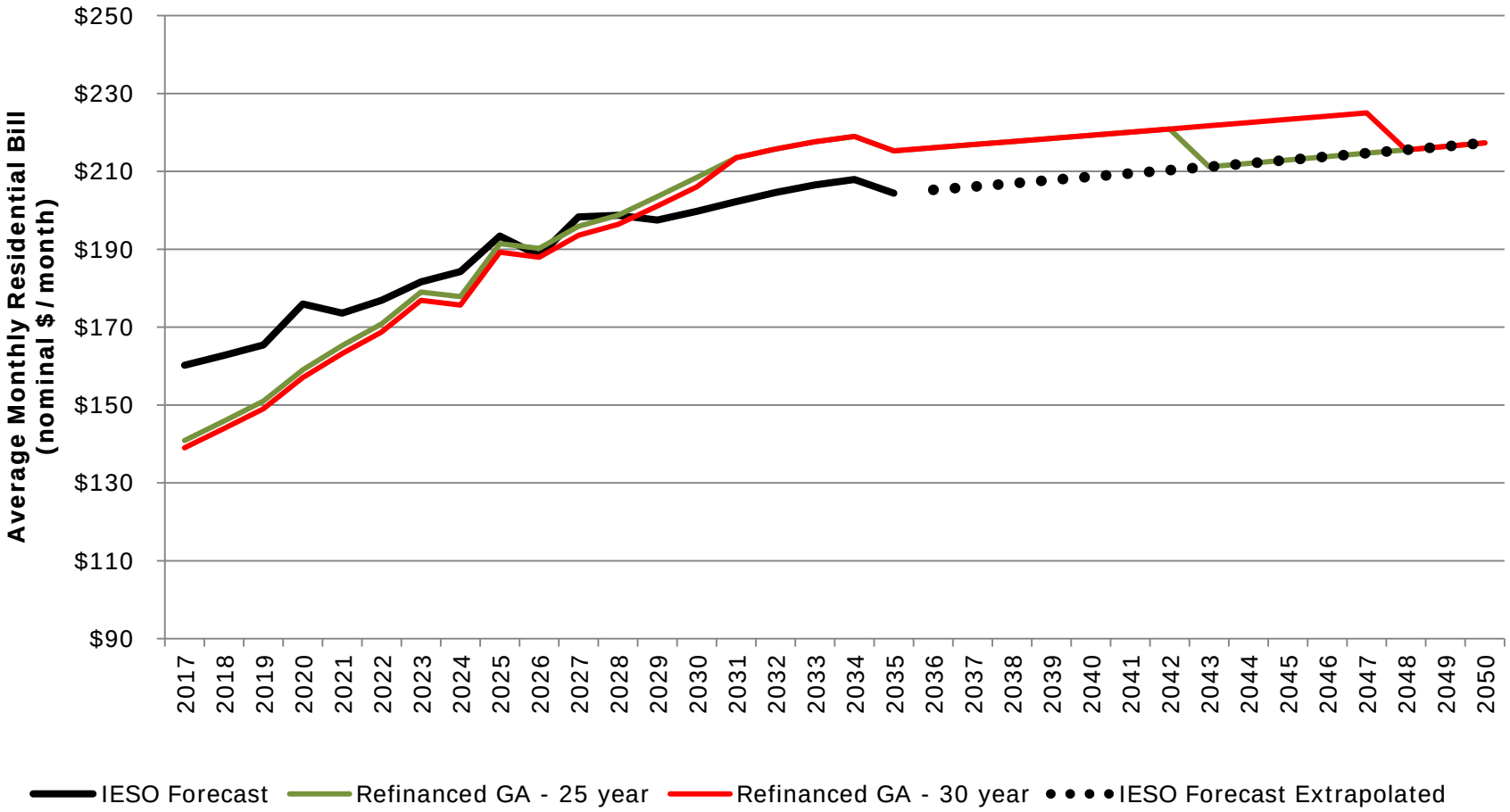
# 4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.




- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

# 4. Maximize Short-term Cost Reduction with Limits – Residential Impacts




- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

**From:** Ronald Kwan
**To:** John Kim; Emily Kerr
**Cc:** Gavin He; Francisco Chinchon
**Subject:** FW: Decks
**Date:** Tuesday, January 24, 2017 10:35:35 PM
**Attachments:** Delivery Line Overview and Options v1.pptx
Rate Mitigation Plan Options 20170124__Clean1.pptx

---

Hi,

See attached. Key comments are welcome.

Thanks,
Ron

---

**From:** Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
**Sent:** January-24-17 10:32 PM
**To:** Ghiassi, Ali (MOF) <Ali.Ghiassi@ontario.ca>; Elizabeth Mendes (MOF) <Elizabeth.Mendes@ontario.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>; Ronald Jaikaran (MOF) <Ronald.Jaikaran@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
**Cc:** David McLean (MOF) <David.McLean@ontario.ca>
**Subject:** FW: Decks

FYI all. Attached are the two Energy decks for FPC tomorrow. Note a second attachment which provides background and analysis on distribution costs and pressures.

---

**From:** Imbrogno, Serge (ENERGY)
**Sent:** Tuesday, January 24, 2017 10:15:17 PM (UTC-05:00) Eastern Time (US & Canada)
**To:** Orsini, Steve (CAB); Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
**Cc:** Bromm, William (CAB)
**Subject:** Decks

Hi,

Decks for tomorrow's meeting. My MO is still reviewing and they may have some edits.

Serge

Ontario

MINISTRY OF
ENERGY

# Distribution Rates & Cost Mitigation

January 2017

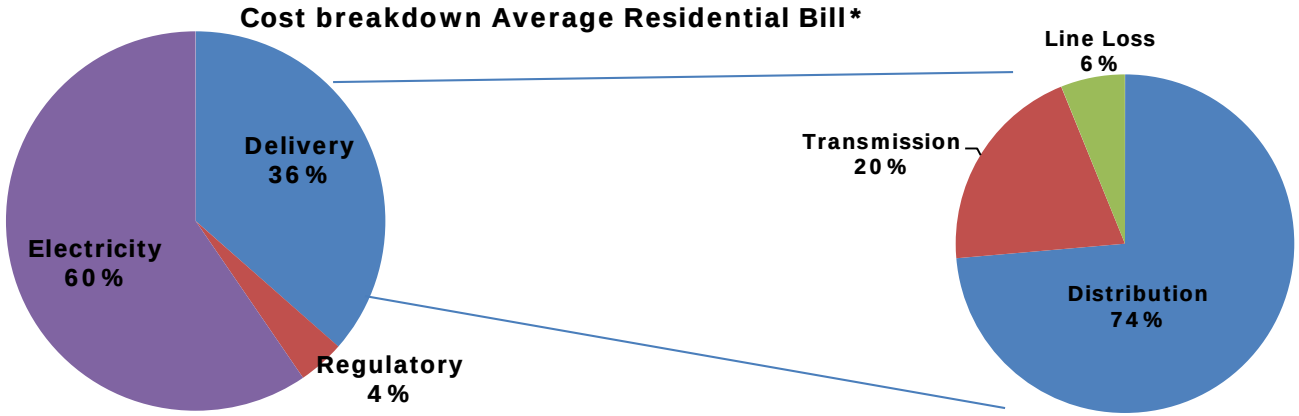
# Presentation Overview

- The delivery charge covers the cost of delivering electricity from generating stations across the province to end users.
  - It includes charges to allow Local Distribution Companies (LDCs) to recover the distribution costs associated with delivering electricity across low-voltage networks;
  - costs to cover transporting electricity over the high-voltage transmission network; and
  - costs to pay for any electricity that was lost during the delivery process.
- This presentation provides an overview of the delivery charge, including distribution & transmission rates; how distribution rates are set, who sets them and opportunities to contain those costs.
- The deck is divided into three main sections:
  1. Overview of Delivery Line Costs
  2. Existing Rate Mitigation Measures
  3. Further Rate Mitigation Options

# Overview of Delivery Line Costs

# Typical Consumer Bill – Delivery Line

- The "**Delivery"** line on a typical consumer bill accounts for roughly 25-35% of the total bill before taxes.
- Delivery covers the costs of getting electricity from generating stations across the province to homes and businesses and encompasses the sum** of three cost components of the electricity sector into one line item charge:
  - **Transmission:** The costs of moving electricity across high voltage lines from generating stations to the distribution system.
    - This cost is recovered through a variable charge that is approved by the OEB.
  - **Distribution:** The costs of moving electricity from the transmission system to homes and businesses.
    - This cost is currently recovered through both a variable charge and fixed charge, approved by the OEB. Distribution rates are moving to a fully-fixed charge over next 5 years.
  - **Line Loss:** The costs to recover electricity that is lost as heat when it is delivered over a power line.
    - Each LDC is assigned by the OEB a specific line-loss adjustment factor to reflect their loses particular to their assets. This factor is multiplied against the monthly electricity cost to determine the monthly cost.




** The combination of these charges into "Delivery" and their appearance on the bill are prescribed by O. Reg 275/04

* Toronto Hydro Bill @ 750Kwhs

# Delivery Line: Distribution Costs

- **Distribution costs** are the costs needed for LDCs to deliver electricity to local consumers over the lower-voltage networks operating at below 50 kV. Costs cover activities such as
  - Designing, building and maintaining overhead and underground distribution lines, poles, stations and local transformers,
  - Operating local systems (including reading meters, providing customer service, and emergency response)
  - Delivering electricity from the transmission system to homes and businesses, and
  - Regulated profit
- The cost to deliver electricity is not uniform and varies from LDC to LDC depending on a number of different cost drivers including:
  - Differences in business conditions and service territory among LDCs e.g. costs to service an urban service territory vs a rural service territory, ratio of overhead vs. underground wires, expanding customer base vs. stagnating or declining customers, relative age of assets; i.e. new system vs. old system;
  - Short-term rate impacts (both up and down) due to temporary additional charges known as “rate riders”; and
  - Management decisions with respect to investment and expenditure.
- In order to recover the costs to deliver electricity to its customer base LDCs charge customers distribution rates for the services that they provide.
  - These rates are regulated by the Ontario Energy Board.
  - As a result of investment requirements and other planning/policy decisions, distribution rates have been rising in recent years (see appendix).

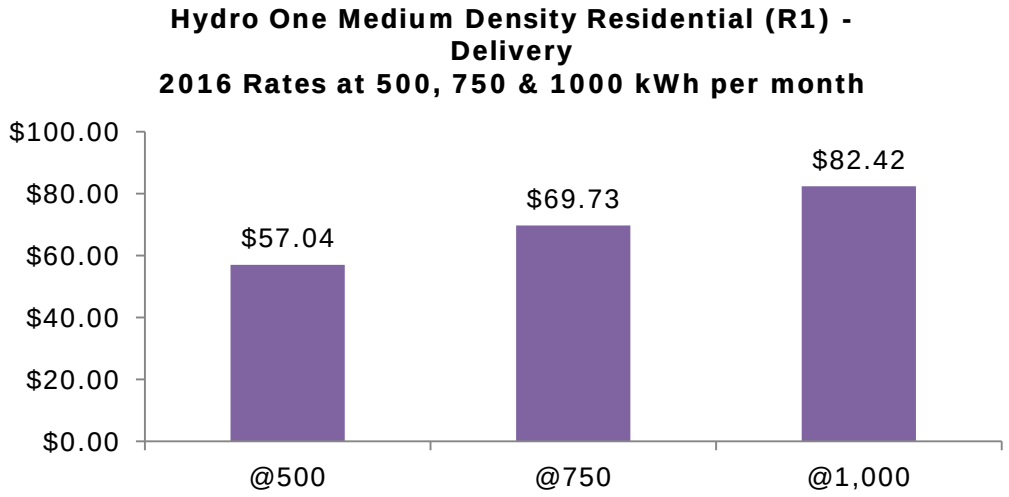
# Delivery Line: Transmission & Line Loss Costs

- **Transmission Costs** represent the costs associated with delivering electricity to LDCs through the high voltage transmission networks operating at 50 kV and above. Costs cover activities such as:
  - Designing, building and maintaining the high voltage transmission lines and towers, transformer stations, transmission corridors, and vegetation management,
  - Providing services and emergency response to maintain transmission system reliability,
  - Delivering electricity at high voltages to LDCs from generation sources,
  - Regulated profit.
  - Transmission rates charged to recover transmission costs from LDC residential customers are not uniform across the province. The vary based on how individual LDCs use the transmission system.
  - LDCs do not earn any profit or markup on transmission costs. These costs are simply passed through to customers distribution customers
- **Line Loss Costs** represent costs associated with distribution system losses. These losses occur during the distribution of energy through conductors and transformers. Losses can also occur through theft and metering errors, etc.
  - Distribution systems that operate at lower voltages and lower customer density have higher distribution losses. Therefore, line losses vary throughout the province.

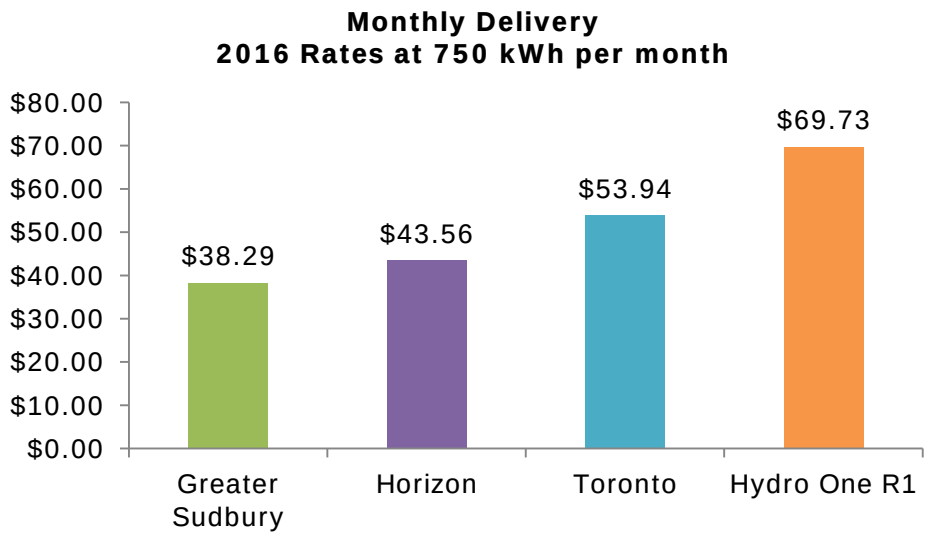
# Role of the Ontario Energy Board

- LDCs are licensed and regulated by the Ontario Energy Board (OEB), a quasi-judicial body responsible for regulating the electricity and natural gas sectors in the public interest.
- The OEB currently sets the rates for 69 LDCs across the province.
    - LDCs recover their costs (revenue requirement) through the distribution rates approved by the OEB.
- Costs to provide distribution services are unique to each LDC, which is why the OEB, through its rate-setting processes, undertakes comprehensive reviews of each utility's specific costs in order to set just and reasonable rates for each LDC.
- In addition to approving the amount of allowable costs LDCs can pass on to customers through rates, the OEB must also approve how those costs are allocated to the different customers of an LDC (i.e. residential, commercial, industrial), as well as the specific rates to recover those approved costs.
- The OEB uses an adjudicative process to set rates – see the slide "Setting Distribution Rates" in the appendix for more details on the process.

# Variation of Delivery Costs Across and Within LDCs

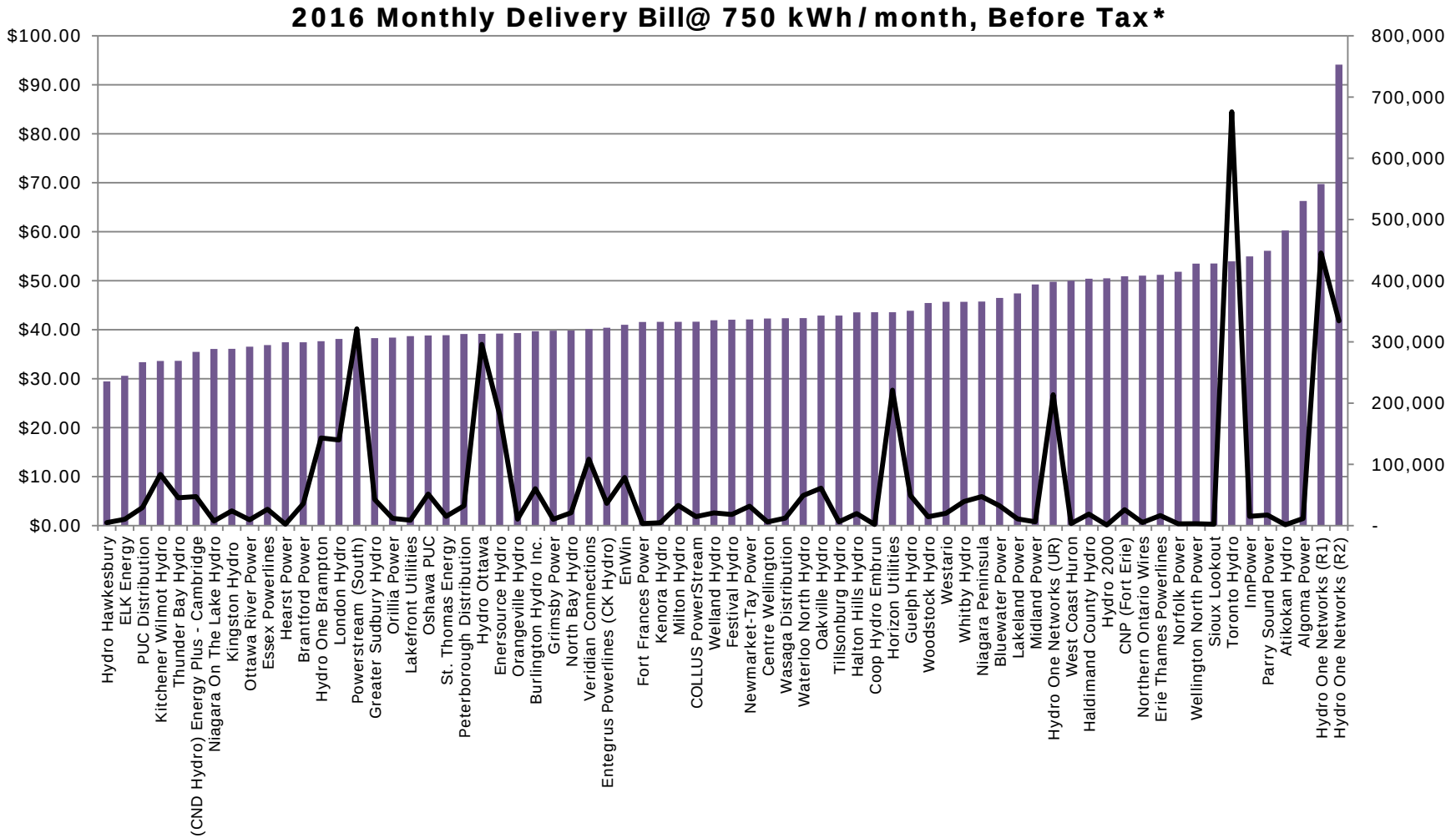



- Consumers within same LDC pay different monthly delivery charges:
  - The delivery charge includes costs that are both fixed and volumetric.
  - Delivery will vary for different customers depending on the total amount of kWhs consumed in a billing period.



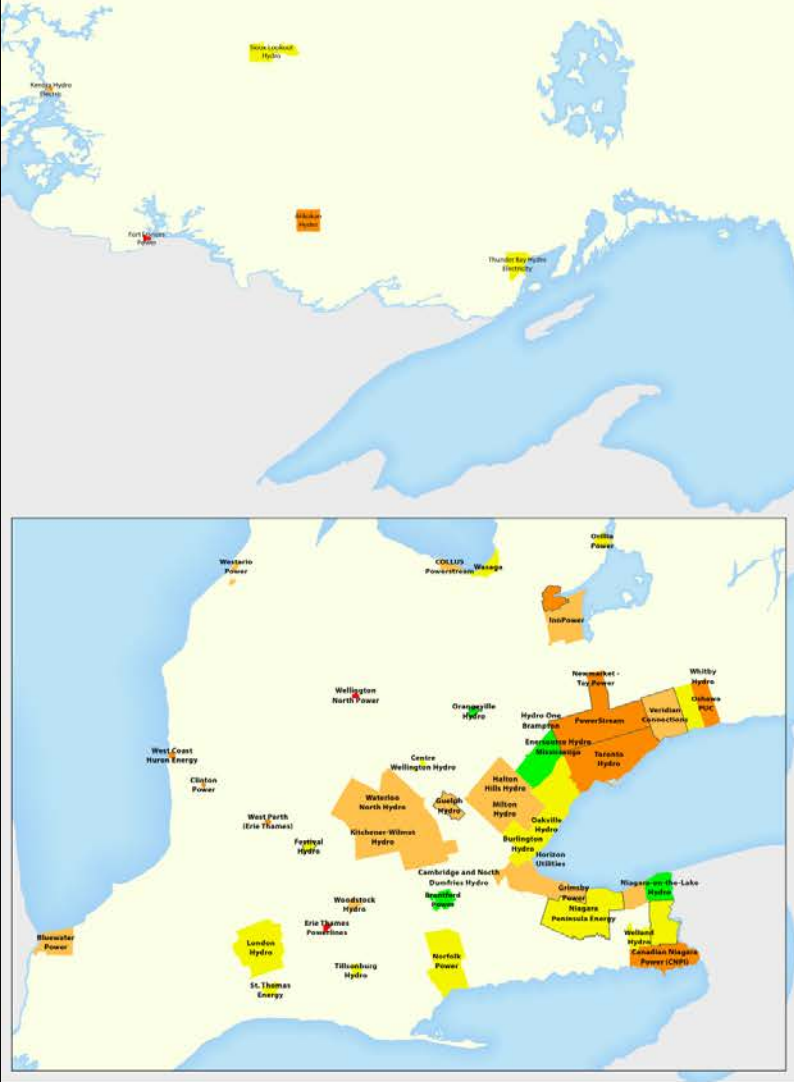

- Consumers with the same monthly consumption but served by different LDCs pay different delivery charges
  - The delivery charge can vary substantively for different LDCs, mostly due to the distribution cost component.
  - Approved revenue requirement for distribution rates, transmission rates and line loss factors are unique to each LDC.

# Wide Variation in Delivery Rates Across the Province




* Hydro One customer numbers are for 2016 and divided by rate class. Reflects RRRP as set for 2016 ($31.50)

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

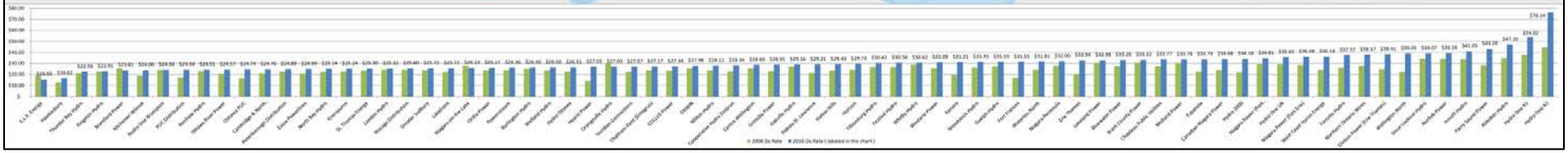
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# OEB Mandating Move to Fixed Distribution Rates

- By 2019, the variation of delivery costs across customers within the same LDC will level off, as the distribution charge (which makes up ~3/4 of the delivery charge) is moving to a fully fixed charge.
    - Currently, electricity distributors recover their costs through a combination of a fixed monthly charge and a volumetric charge based on kilowatt hours used, but the OEB is phasing in fully-fixed distribution rates. Most LDCs will have fully fixed rates within four years, with some variation to mitigate significant rate impacts for some customers.
- According to the OEB, fully fixed distribution rates will help achieve three main objectives:
    - It will enable residential customers to leverage new technologies, manage costs through conservation, and better understand the value of distribution services.
    - It is a fairer way to recover the costs of providing distribution service.
    - It will provide greater revenue stability for distributors, which will position them for technological change in the sector, remove any disincentive to promote conservation, and help with their investment planning.
- As LDCs transition to a single fixed charge to access the system, customers with the lowest consumption will pay more for distribution, while customers with high consumption will pay less.
- For customers of Hydro One Networks, the OEB approved a five-year transition to fixed distribution rates for its high density urban residential rate class (UR), and an eight-year transition for medium- and low-density residential (R1 and R2) and seasonal residential rate class customers.
    - This is to allow the impact of the change to be held at less than 10% for low volume customers at the $10^{th}$ percentile of consumption.
- The OEB is currently working on an initiative to look at the rate design of Commercial and Industrial Customers as well.

# Existing rate mitigation measures

# Rural or Remote Electricity Rate Protection (RRRP)

- There are existing rate-payer funded mechanisms in place to provide delivery charge protection to consumers who live in areas that are very costly to serve.
- The Rural or Remote Electricity Rate Protection (RRRP) is a rate subsidy intended to moderate charges for electricity distribution in lower density rural and remote areas where costs to serve customers are higher than for urban/more densely populated areas.
    - RRRP is provided to rural grid-connected residential customers served by Hydro One (R2 rate class) and to customers of Algoma Power.
    - RRRP also supports costs to provide electricity service to off-grid remote communities served by Hydro One Remote Communities, and three James bay communities connected to the grid (Fort Albany, Attawapiskat and Kashechewan).
- RRRP is governed by S.79 (2) of the Ontario Energy Board Act, 1998 (OEBA) which requires rate protection for prescribed rural and remote customers.
    - It also allows the government to determine cost protection, recovery, and rate classes through regulation (O.Reg 442/01).
- In the September 2016 Speech from the Throne*, the government announced an enhancement to RRRP to increase the amount of rate protection for Hydro One R2 customers. The cost of RRRP, including this enhancement, is expected to be about $290M annually.
    - As of January 1 2017, the RRRP subsidy supporting approximately 330,000 Hydro One R2 customers increased from $31.50/month to $60.50/month.
    - Hydro One customers classified as R2 have the highest distribution costs across the province.
- Costs to support the program are recovered through a regulated charge on all customers approved by the OEB and collected by the Independent Electricity System Operator (IESO) on all electricity used in the Province.
    - For 2017, an average residential consumer (750kWh/month) pays $1.58/month to contribute to RRRP.

# Other Rate Mitigation Programs

**Ontario Electricity Support Program (OESP)**

- The Ontario Energy Board (OEB) has developed the OESP, which provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements.
    - The OESP credit amount qualified customers receive is based on household income and household size.
    - OESP monthly credits range from $30-$50.

**The Low-Income Energy Assistance Program (LEAP)**

- LEAP, introduced by the OEB in January 2011, is a comprehensive province-wide strategy designed to help qualifying low-income consumers. The program includes:
    - Emergency financial assistance: A one-time grant towards your electricity or natural gas bill if you are temporarily unable to make ends meet in an emergency situation.
    - Special rules – Utilities have to follow special rules when dealing with customers with limited finances; for example, waiving security deposits, allowing longer payment times and more.

**Ontario Energy and Property Tax Credit (OEPTC)**

- OETPC provides low- to moderate-income individuals and families with relief on the sales tax they pay on energy and with their property taxes. Since July 2012, the OEPTC is paid monthly as part of the Ontario Trillium Benefit delivered through the income tax system. For the 2016 benefit year, qualifying individuals and families could receive a maximum benefit of $1,008 per year, and qualifying seniors could receive a maximum benefit of up to $1,148.

**Northern Ontario Energy Credit (NOEC)**

- NOEC provides targeted assistance to low- to moderate- income individuals and families living in northern Ontario who can be exposed to higher energy costs due to more severe winters and heavier reliance on more expensive home heating fuels. NOEC is paid monthly as part of the Ontario Trillium Benefit and is delivered through the income tax system. For the 2016 benefit year, qualifying individuals received up to $146 annually and families (including single parents), received up to $224 annually.

# Further Rate Mitigation Options

# Program Proposal: Delivery Charge Relief

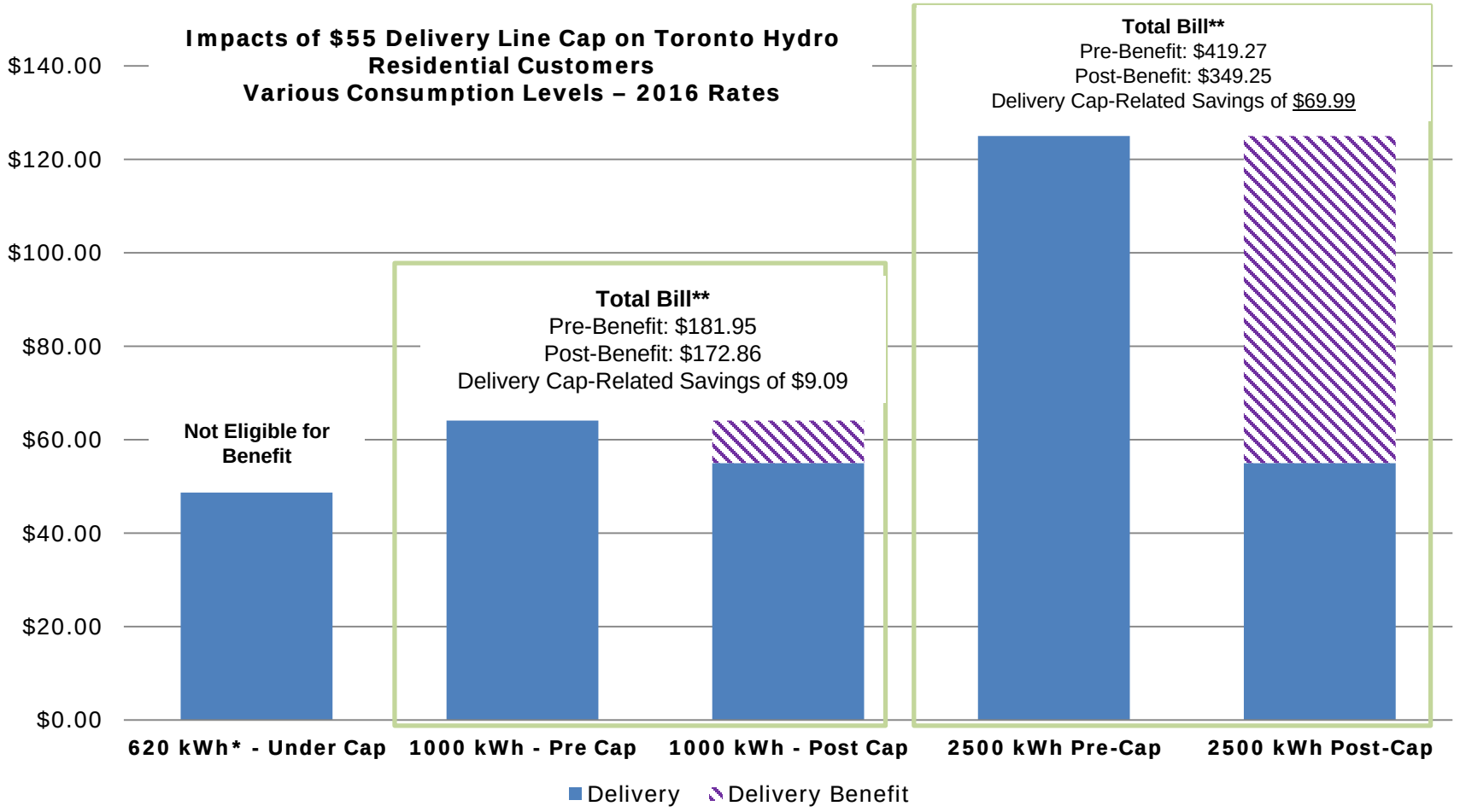
- To provide further relief for customers across the province, the province could create a 'customer-specific' program that would cap the delivery line cost.
- The proposed program would limit the amount an LDC can bill consumers for Delivery at a to-be-determined reasonable cost. Delivery costs that exceed the cap would be covered by support from the fiscal plan.
- The proposed program would target customers within the LDC territory based on their Delivery cost.
    - Delivery costs vary month to month and LDCs will need to keep track of the customers who will receive the receive the additional support.
- Eligibility for increased protection would be based solely on delivery charges above the established threshold and therefore would not be specific to any one LDC. All LDCs must be prepared to offer the program to some of their customers

o A delivery line item cap of **$55-$60** would align with what a Toronto Hydro customer consuming between 750-1000kWhs would pay in delivery costs (2016 rates).

- Additional information on fiscal projections and ratepayer impacts to be provided.

# Delivery Charge Relief: Ratepayer Impacts

- Below is an example of a Toronto Hydro customer at different consumption levels and the level of subsidy they would receive.




*620kWh is the average Toronto Hydro residential consumption level. ENERGY estimates 17.5% of Toronto Hydro consumers average >1000kWh/month.

** Includes Electricity, Delivery, and Regulatory Charges. Excludes HST and 8% rebate.



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# Delivery Charge Relief: Fiscal Considerations

- Setting a cap or threshold for maximum delivery charges is a more equitable approach to providing increased rate relief, as it is not specific to any one LDC and it targets rate protection for those with the highest delivery costs.
    - Eligibility for increased protection would be based solely on delivery charges above the established threshold and therefore would not be specific to any one LDC. All LDCs must be prepared to offer the program to some of their customers.
    - This program would be in addition to the existing RRRP program, which should remain as rate-payer funded protection for costs specifically driven by low-density.

**Risks**

- Costs and ratepayer impacts depend on the number of customers within each LDC whose delivery charges exceed the cap.
    - Costs to the tax base will fluctuate seasonally and will have year-over-year changes, creating uncertainty in forecasting. Ministry is preparing case study analysis.
    - Costs for LDCs to implement is likely material for many distributors to upgrade customer billing systems. Those costs would ultimately be passed back to the customers of those LDCs.
- There is a high risk of entrenching external subsidies, as there is no clear path to transition away from subsidies and toward a more sustainable, cost-based rate framework.

# Delivery Charge Relief: Implementation Considerations

- LDCs would track credit variances in a variance account and settle amounts with the IESO, which receives taxpayer funding from ENERGY/MoF in the same manner as the 8% rebate happens today.
    - While this new program would build on exiting transfer payment protocols in use under the ORECA, it would be complex for LDCs to implement, as CIS upgrades are likely needed.
    - OEB estimates that the implementation would take at least 6 months or more, following finalized regulations, given need to change customer billing systems and determine settlement procedures.
- This program structure could be temporary until the completion of the OEB-mandated move to completely fixed distribution costs, scheduled for 2019 (2020-2022 for Hydro One), as there would no longer be distribution cost variance between customers of the same LDC.

**Risks**

- New legislation would be required to establish this program. Legal and regulatory risks (particularly with regards to legal authority and to the Ontario Energy Board's role in setting rates and incenting efficiencies) require further analysis.
    - Capping delivery charges may impact OEB rate-setting processes and create disincentives towards utility productivity and performance improvements.
- Carrying costs for LDCs may also be a challenge for some LDCs with cash-flow constraints, and may affect debt-to-equity ratios.
- Providing a tax-based subsidy outside of exiting rate setting mechanism reduces incentives for customers and distributors to engage on operating costs and capital planning.

# Delivery Charge Relief: Options for Setting a Cap

- When implementing the program, setting the cap by linking with a specific LDC's delivery costs may be viewed as arbitrary.
- It could also create difficulties over time as the chosen LDC's rates (ex: Toronto Hydro) may change in unpredictable ways due to cost pressures unique to that LDC.
- A more robust effort to set a cap would be to link it to a specific rate level, relative to the spread of other rates in the province. Option include:
    - Setting the cap at the average of approved delivery charges for 1000kWh: **$53.46**
    - Setting the cap at a level where 75% of all approved delivery charges fall below for 1000kWh: **$58.17**
    - Setting the cap at a level equal to the lowest service territory currently receiving RRRP support for 750kWh: **$66.29**
- Various options and methods can be designed using simple or weighted rate averages and consumption thresholds.
- Selecting a level similar to Toronto Hydro's rates could satisfy the near-term policy intent while providing a reliable measure for adjusting the cap moving forward.
    - The OEB could be given authority to adjust the cap year-over-year based on the desired marker.

# Additional Option: Move RRRP to Tax-base

- RRRP is targeted at all customers who face the highest delivery costs in the province. Given that this program attempts to address a perceived inequity between rural and urban consumers, it could be funded by the tax-base rather than the rate-base.
- Bringing the current RRRP program to the taxbase would represent ~$290M/year in costs, with the OEB authorized to increase funding year-over-year in relation to the average distribution rate increase in Ontario.

| Year | RRRP($M) (Assuming 2.6% annual increase) |
|---|---|
| 2017 | $292 |
| 2018 | $300 |
| 2019 | $306 |
| 2020 | $315 |
| 2021 | $322 |
| 2022 | $329 |

- Doing so would save the average residential consumer (750kWh) $1.58/month in Regulatory charges.
- ENERGY recommends that the RRRP program *remain on the rate-base* to address the specific costs related to low density, with additional support coming from the tax-base through the proposed Delivery Charge Relief program.
    - RRRP provides funding to support off-grid communities serviced by Hydro One Remotes. Placing these costs on the tax-base may lead to an extensive re-evaluation of the funding framework for these communities, as well as other remote communities not serviced by Hydro One Remotes.

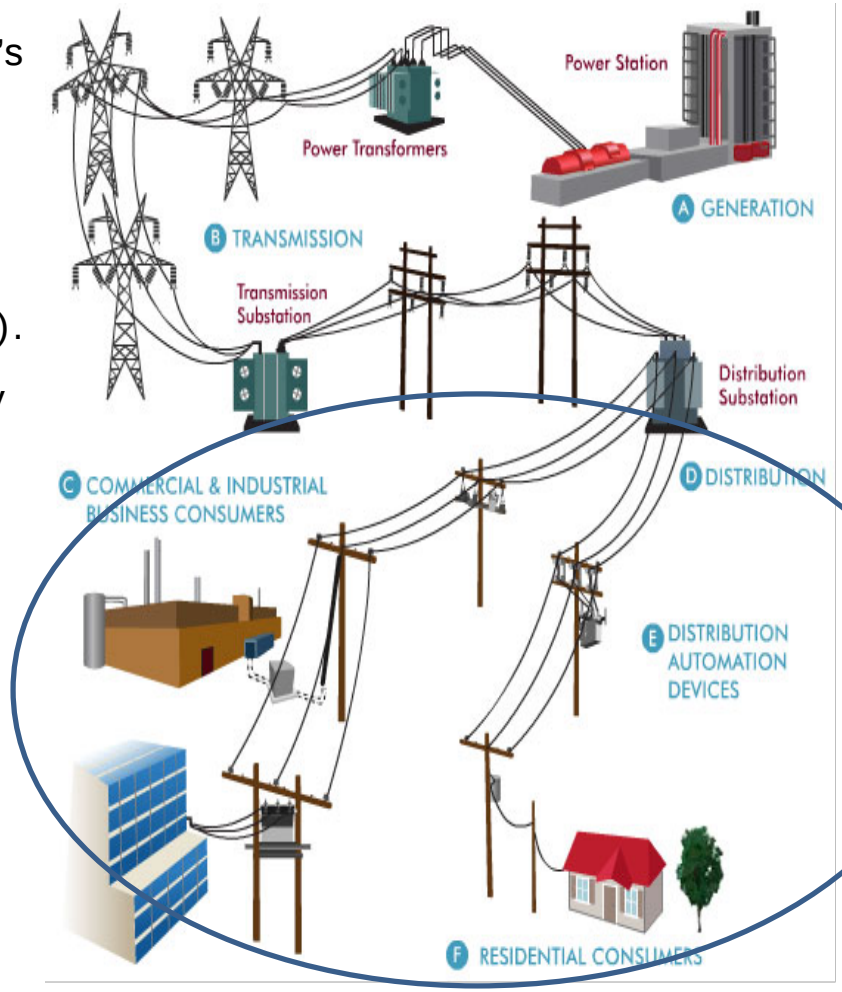
# Next Steps

- Complete fiscal and ratepayer impact analysis for delivery relief program
- Return with recommendation on a cap-setting mechanism and analysis of implementation considerations.
- Receive direction and prepare for Cabinet submission and legislation.

# Appendix A: General Information

# Ontario's Electricity Grid

- Ontario's transmission and distribution networks form the backbone of the province's electricity system, as they link electricity consumers with power generators.
- The **transmission system** is comprised of high voltage lines, towers, transformation and safety equipment used to transport electricity at voltages above 50 kilovolts (kV).
- The **distribution systems** deliver electricity to local consumers over the lower-voltage networks operating at 50 kV and below.
- Key elements in the distribution system:
  - Transformers to step power down from transmission to distribution voltage.
  - There are typically several voltage changes before the electricity reaches the consumer.
  - Overhead or underground lines.
- Electricity delivery to the customer is the responsibility of **Local Distribution Companies** (LDCs) e.g. Toronto Hydro.



# Sample Electricity Bill

**Electricity Charges:**
This is the cost of electricity supplied during the billing period and can be purchased either through a local distribution company or through a licensed electricity retailer.

**Regulatory Charge:**
This charge covers costs such as market regulation, management of the system, and rural and remote rate protection. It also includes the Standard Supply Service administration charge of $0.25 stated on a 30-day basis.

**8% Provincial Benefit:**
Effective January 1, 2017, customers receive a an 8% rebate equivalent to the provincial portion of the HST.

SAMPLE MONTHLY BILL STATEMENT

**Anytown Hydro-Electric Limited**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| HST | 18.07 |
| **8% Provincial Rebate** | (11.12) |
| **Total Amount** | **$145.95** |

**Delivery Charges:**
**Customer Service Charge**: A fixed charge for costs relating to meter reading, billing, customer service and account maintenance, and general utility operations.
**Distribution Charge**: A variable charge for costs of building and maintaining the distribution system, including overhead and underground power lines, poles, and transformer stations. .
**Transmission Charge**: A variable charge for the costs of transmitters to operate and maintain the high-voltage transmission system that carries electricity from generating stations to your utility.
**Loss Adjustment**
When electricity is delivered over a power line some is lost as heat. In calculating your electricity costs for the billing period, LDCs multiply the electricity cost by an OEB-approved adjustment factor to accounts for those losses.

# Local Distribution Companies – Key Facts

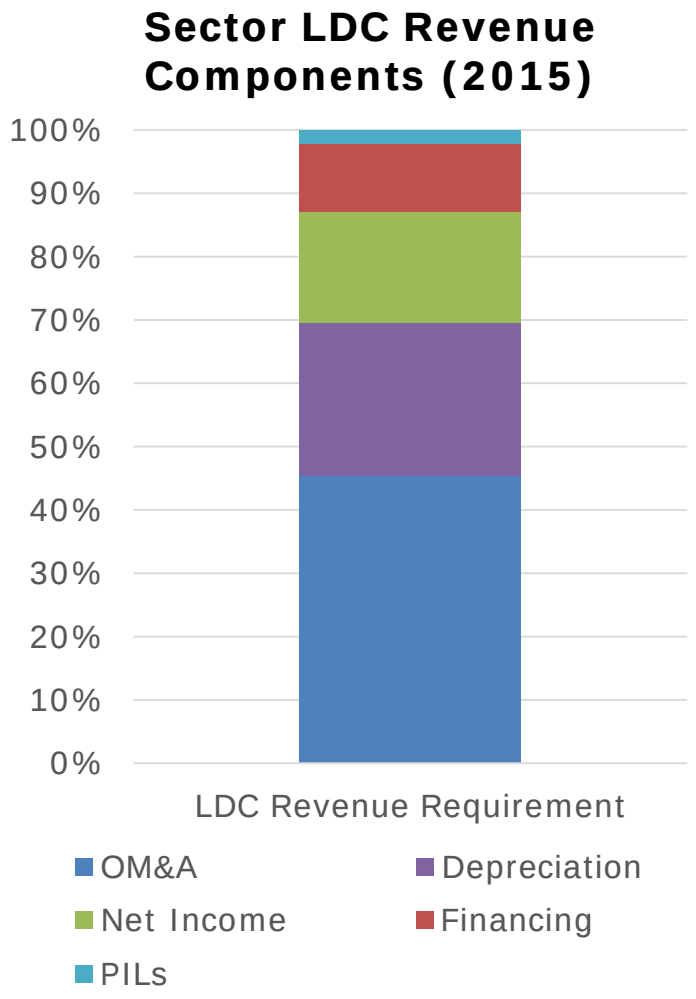
- There are currently 69 LDCs in Ontario that are rate-regulated by the OEB. 3 LDCs (Cat Lake Power, Dubreuil Lumber and Cornwall Street Railway Light) are licensed by the OEB, but are not rate-regulated.
- LDCs vary significantly in size:
  - Range from roughly 1,200 to 1.2 million customers (Hydro 2000 and Hydro One respectively)
  - The smallest 29 LDCs (36%) account for less than 4% of Ontario's customers (<13,000 customers).
- The distribution sector:
  - Serves 5 million customers (residential, industry, commercial / MUSH),
  - Has $48.7 billion in assets, and
  - Generates $3.6 billion in revenues.
- In addition to distributing electricity to customers through their 199,456 km of distribution lines, LDCs provide services such as: billing, outage management, overall customer contact, and conservation programs.

# Distribution Sector Cost & Performance Trends

- Like other components of Ontario's electricity system, distribution sector costs have risen as investments have been made to update and modernize system infrastructure.
    - Overall distribution sector revenues collected from customers have risen from $577.66 per customer annually in 2006 to $703.36 per customer annually in 2015 (21.8% increase).
    - For the typical residential customer* (750kwh/month), monthly distribution costs have risen from $24.49 in 2006 to $30.75 in 2016. Distribution costs represent 23% of the total average pre-tax residential bill.
- Over the same time period, distribution sector productivity and cost efficiency have decreased. This trend raises concern that customers are not realizing a net benefit from sector cost increases, as customers receive less value from the distribution portion of their bill.
    - OM&A costs per customer have increased on average from $235 in 2006 to $319 in 2015.
    - For the period 2002-2012, sector productivity has decreased by an annual average of -0.93% when including Hydro One and Toronto Hydro, the worst performers.
    - When compared to other utility services and neighbouring jurisdictional studies, Ontario's electricity distribution sector is the only one to realize a negative productivity rate.
- Over this time period, LDC consolidation has been the driving force behind sector restructuring and the search for efficiencies. However, the historical consolidation process has not appeared to deliver cost savings/efficiencies for consumers.
    - Customers of LDCs acquired by Hydro One in the first wave of consolidation (1999-2003) have seen distribution costs rise by up to 268% (Arkona, Ontario) when comparing 2006 rates to 2016.
- Policy direction on investments, including smart meters, have also contributed to increasing sector costs while driving broader system and social benefits.

*Simple average of monthly 750 kWh distribution bill, exclusive of taxes using OEB rates database, including H1 residential classes, but excluding 88 acquired LDCs.

# LDC Revenue Breakdown




- While there is considerable variation in this breakdown, on average LDC revenue components can be explained as follows:
  - **OM&A (46%):** Includes system operation & maintenance, customer service, billing/collections, regulatory expenses, salaries.
  - **Depreciation (24%):** Reflects accounting treatment of investments in system infrastructure (property, plant and equipment) and other assets. In proposing new investment, LDCs must justify the need and usefulness to the OEB.
  - **Net Income (17%):** Reflects income after PILs/taxes.
  - **Financing (11%):** Reflects interest expense.
  - **PILs or income tax (2%):** PILs expense or income tax expense for privately owned utilities.
- These costs do not include costs associated with operating unregulated affiliates. Any OM&A service costs shared between LDC and affiliate are prorated for inclusion in the ratebase.

*Source: 2015 OEB Yearbook of Distributors*
*Reflects total revenue of 71 LDCs*
*Some subsequently consolidated*

# Previously Considered Cost Mitigation Options

- The Ministry has considered distribution sector cost reduction options in the past which stemmed from determinations that certain aspects of the sector status quo were not appropriate or in the public interest.

- Ministry staff recommend not pursuing these options due to their contentious nature and the availability of more comprehensive solutions that can drive both cost reductions and system performance improvements.

    1. **Direct Consolidation Policy:** The Ministry could mandate LDC consolidation or provide additional incentives for voluntary consolidation in an attempt to reduce OM&A costs, leading to rate reductions for consumers.

    o Historical analysis reveals that, in general, consolidation has not led to the expected efficiency gains or cost reductions for affected customers. Hydro One, which has led the bulk of consolidation activity, is recognized by the OEB as one of the most inefficient LDCs in the province. Without appropriate regulatory incentives, consolidation transactions may not result in OM&A reductions to the benefit of customers.

    2. **ROE Reduction:** The Ministry could instruct the OEB to review its ROE policy in light of LDCs monopoly position and fixed distribution rates.

    o ROE is an established requirement of utility regulation and has been upheld by judicial review. Attempts to reduce ROE could be challenged in court. As well, as ROE is used by municipal shareholders to fund municipal services, this could lead to broader communication and stakeholder management issues.

    3. **Payments-in-Lieu of Taxes Policy:** The Ministry of Finance could restructure or eliminate the PILs regime to reduce the tax burden on LDCs, which would lead to cost savings for ratepayers.

    o PILs are a vital component of OEFC's debt retirement outlook. With the departure of Hydro One from the PILs regime and the ending of the debt retirement charge on residential bills, restructuring the PILs regime would impact OEFC's ability to service the debt and could impact Ontario's credit outlook.

- Performance-based options have the potential to indirectly incent consolidation (in a manner that returns benefits to consumers) and potentially reduce ROE in an equitable manner in the event performance expectations are not met.

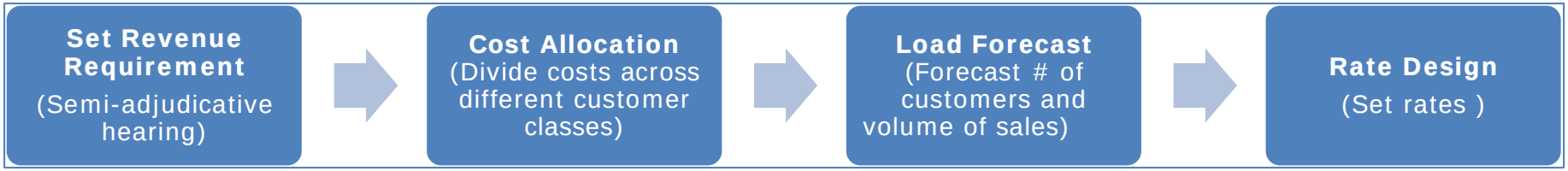
# RRRP Administrative Roles

| | |
|---|---|
| Ontario<br>**Ministry of Energy** | • The Province sets out the parameters of the program through legislation (s.79, OEB Act) and regulations (O. Reg 442/01, O. Reg. 445/07).<br>• These set out, among other things:<br>  • Eligible customers<br>  • Amounts available to Hydro One Networks and James Bay First Nations. |
| Ontario Energy Board | • The OEB determines annually the charge levied on all electricity consumption. |
| hydro one | • Hydro One Networks determines the monthly RRRP subsidy available to each of its customers based on amount of RRRP made available to it through Regulation, the number of R2 customers, and accounting for any surplus or deficit in its variance account. |
| ieso | • The IESO collects the charge from distributors across the Province and re-distributes to those distributors whose customers are eligible to receive the subsidy. |

# Appendix B: Distribution Rate-Setting

# Setting Distribution Rates

- Electricity distributors apply to the OEB to determine which costs they can pass on to their customers through rates (revenue requirement). The OEB has a mandate to set just and reasonable rates for LDCs that protect the interests of consumers while facilitating the maintenance of a financially-viable electricity industry.
- The OEB's "Renewed Regulatory Framework" is continuing to evolve how LDC's apply for rates to drive increased productivity. Principally there are two streams of electricity rate applications.
    - Cost-based applications (Cost of Service or Custom)– where the OEB sets rates based on an LDC's forecast of their costs and volumes, including a return on capital. Typically these are set for a 5 year term, with the 1st year establishing the base rates for the term.
    - Mechanistic Incentive Rates (IRM) that are based on the current approved rates plus inflation and any productivity improvement requirements. This methodology is used annually following a cost-based application until the end of the term.
- When establishing distribution rates, the OEB must evaluate a number of costs to establish the approved revenue requirement that is the basis for the rates charged by the LDC.
- Once the revenue requirement is established, the OEB must approve a fair allocation of those costs to the various customer classes (residential, commercial, industrial etc.)
- From that the OEB approves the specific rates charged to each customer class, which can include some fixed charges as well as ones based on volume.

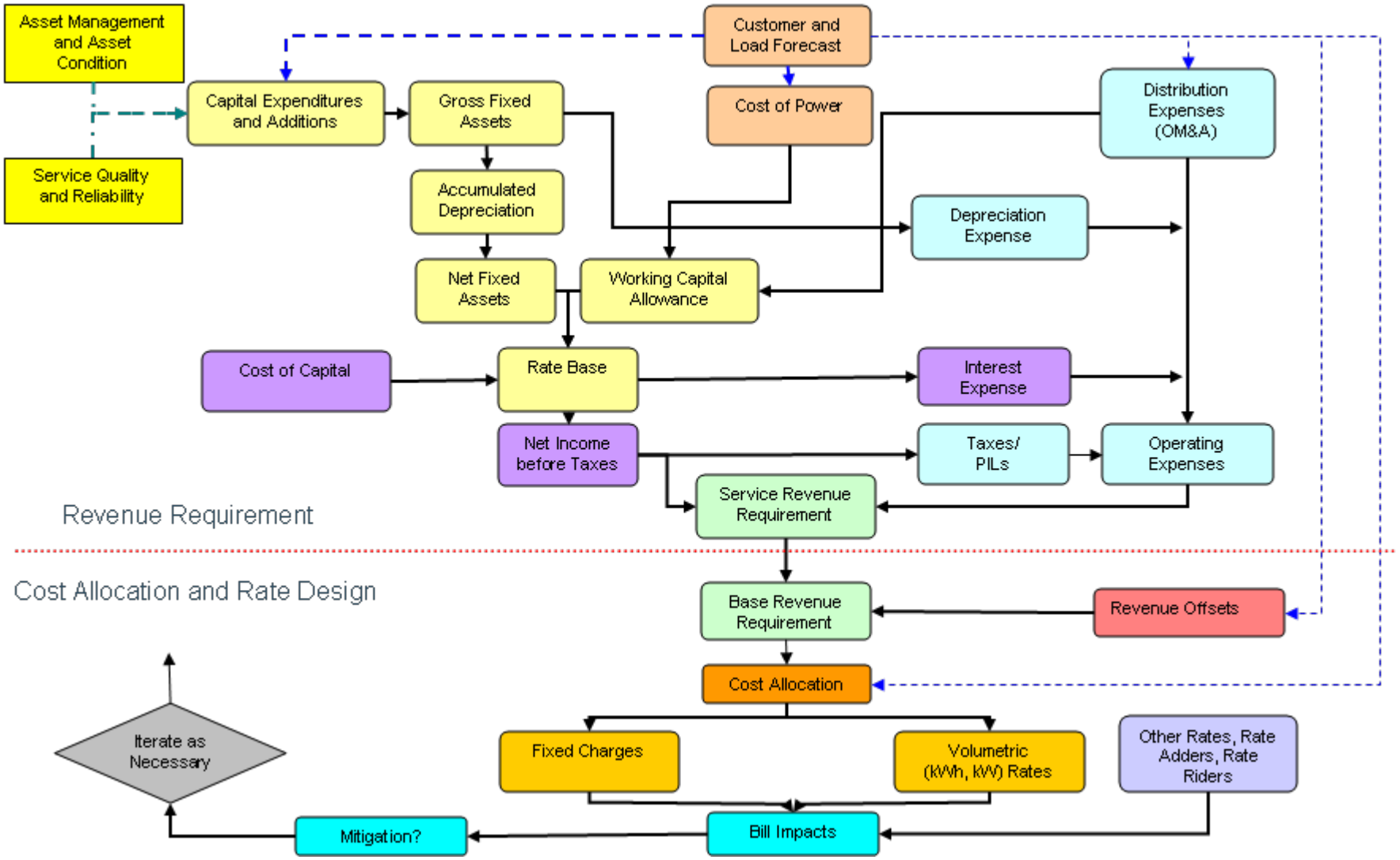


# Application Review Process

- The OEB reviews each rate application independently through a public process.
- The process begins with an LDC submitting an application and includes a number of activities at each stage.
- The process includes opportunities for various representatives (intervenors) to make arguments about the facts of the application.
- The application review process can vary from a few months to up to a year depending on complexity of the application.
    - Cost-based applications tend to take a longer review timeline than IRMs.
    - More complex applications will also typically have an oral hearing.

## LDC Rate Application Stages

# Cost of Service Rate Application Schematic



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# Rate Mitigation Plan Options

## Working Draft

January 2017

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity costs for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants) and suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings).

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Options

- In recognition of the costs borne by ratepayers related to decarbonizing and modernizing the province's electricity sector, options for further rate mitigation include:

  1. Global Adjustment (GA) Financing

  2. Delivery Rate Relief

  3. Other Electricity Support Programs Funded Through the Tax-base:
     - Ontario Electricity Support Program (OESP);
     - Low-Income Conservation; and
     - First Nations Rate.

- As an alternative to the GA financing, in addition to Delivery Rate Relief and Other Electricity Support Programs Funded Through the Tax-base, other mitigation measures could be pursued, including:

  1. Enhanced Tax-based RPP Rebate (5%)

  2. Contract Renegotiations
     - Contract Extensions – Wind and Solar; and
     - Clean Energy Supply (CES) Contracts.

  3. Amortization of Conservation Expenses

# Proposed Options – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|---|
| 1. Global Adjustment (GA) Financing (Moderate) | - | 17.49 | 15.01 | 12.49 | 14.91 | 6.32 | 4.03 | Immediate |
| 2.. Delivery Rate Relief | - | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 3. Electricity Support Programs Funded through the Tax-Base | | | | | | | | |
| a. Ontario Electricity Support Program (OESP)* | - | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | Immediate |
| b. Low-Income Conservation | - | - | - | - | - | - | - | N/A |
| c. First Nations Rate | - | - | - | - | - | - | - | N/A |

**Other Options to Consider:**

| *$/750kWh* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|---|
| 1. Enhanced Tax-based RPP Rebate (5%) | - | 7.04 | 7.17 | 7.31 | 7.77 | 7.61 | 7.83 | Immediate |
| 2. Contract Renegotiations | | | | | | | | |
| a. Contract Extensions – Wind and Solar | - | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| b. Clean Energy Supply Contract | - | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 3. Conservation Amortization | - | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |

***Note**: Savings based on currently approved OESP rate set by OEB.
**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Class B includes small-medium enterprises (SMEs).

# Proposed Options – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|---|
| 1. Global Adjustment (GA) Financing (Moderate) | - | 17.49 | 15.01 | 12.49 | 14.91 | 6.32 | 4.03 | Immediate |
| 2.. Delivery Rate Relief | - | - | - | - | - | - | - | N/A |
| 3. Electricity Support Programs | | | | | | | | |
| a. Ontario Electricity Support Program (OESP)* | - | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | Immediate |
| b. Low-Income Conservation | - | - | - | - | - | - | - | N/A |
| c. First Nations Rate | - | - | - | - | - | - | - | N/A |

**Other Options to Consider:**

| *$/750kWh* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|---|
| 1. Enhanced Tax-based RPP Rebate (5%) | - | - | - | - | - | - | - | N/A |
| 2. Contract Renegotiations | | | | | | | | |
| a. Contract Extensions – Wind and Solar | - | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| b. Clean Energy Supply Contract | - | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 3. Conservation Amortization | - | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |

***Note:** Savings based on current OESP charge as set by OEB.

# Fiscal Impacts

| *$M* | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| 1. Global Adjustment (GA) Financing (Moderate) | TBC | TBC | TBC | TBC | TBC |
| 2.. Delivery Rate Relief | TBD | TBD | TBD | TBD | TBD |
| 3. Electricity Support Programs | | | | | |
| a. Ontario Electricity Support Program (OESP)* | - | 162 | 225 | 279 | 323 |
| b. Low-Income Conservation | - | 60 | 60 | 60 | 60 |
| c. First Nations Rate | - | 18 | 18 | 18 | 18 |

**Other Options to Consider:**

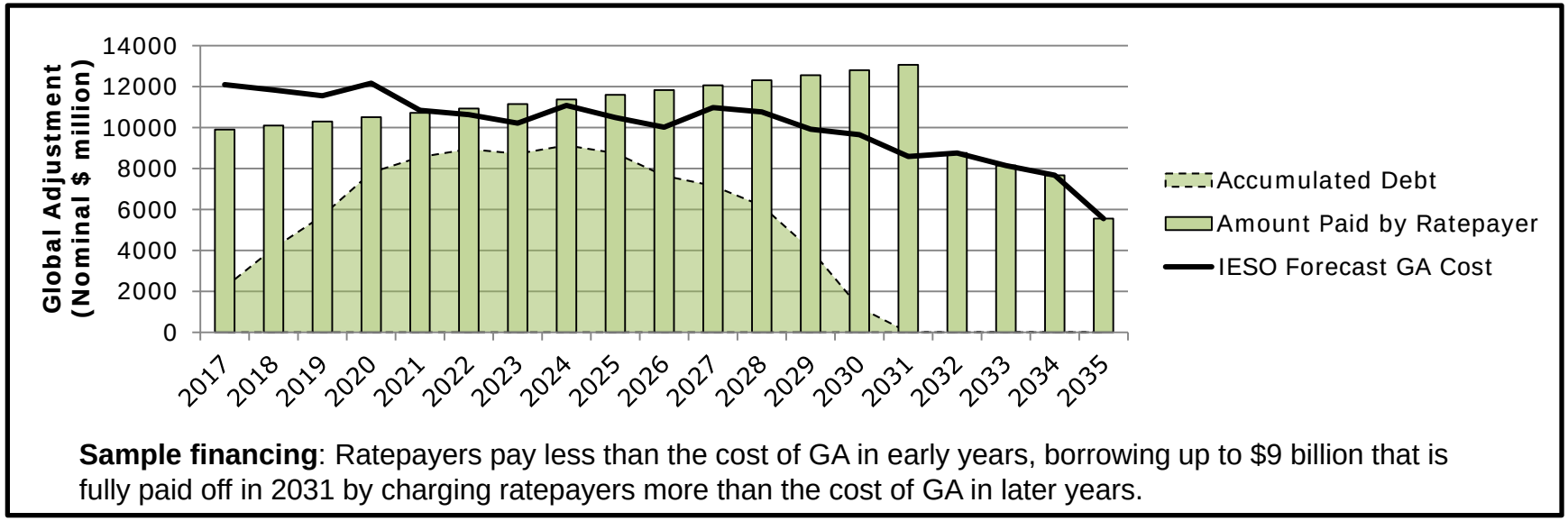
| *$M* | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| 1. Enhanced Tax-based RPP Rebate (5%) | 169 | 699 | 679 | 732 | 724 |
| 2. Alternative to GA Financing – Contract Renegotiations | | | | | |
| a. Contract Extensions – Wind and Solar | - | - | - | - | - |
| b. Clean Energy Supply Contract | - | - | - | - | - |
| 3. Conservation Amortization | - | - | - | - | - |

***Note:** Includes costs of program expansion and various assumptions as detailed on relevant slides.
****Note:** Risk to fiscal plan of up to $240 million annually (foregone net income) if OPG is unable to reach more aggressive operational efficiency targets.

**Source:** Ministry of Finance, Energy

# 1. Global Adjustment (GA) Financing

- It is proposed that the amount of global adjustment (GA) paid by ratepayers in each year over the forecast period is set at a fixed amount and money is borrowed to make up the remainder of the GA cost in each year.
- Starting on January 1, 2017, the amount of GA paid by ratepayers is set at a value lower than the true cost of GA in 2017 and is increased according to a pre-defined schedule until the debt has been paid off.
- GA costs will be “smoothed” over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected actual cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- All analysis is based on forecasts from Independent Electricity System Operator (IESO), assumes a 5% annual borrowing interest rate and an inflation rate of 2% per year.

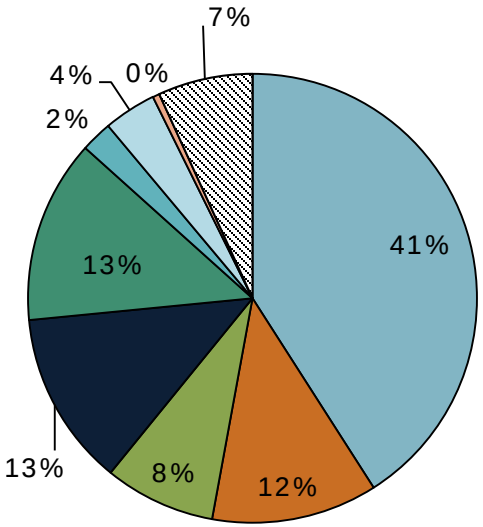



**Sample financing**: Ratepayers pay less than the cost of GA in early years, borrowing up to $9 billion that is fully paid off in 2031 by charging ratepayers more than the cost of GA in later years.

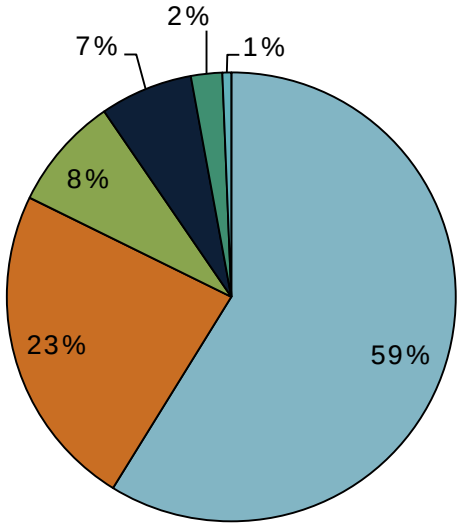
# 1. GA Financing – Cost Breakout

- The allocation of GA costs in 2016 is compared to the proportion of generation in the graph below.
- This cost breakdown will evolve over time as 2,181 MW of contracted generation comes online in the coming years.

**2016 GA Cost: $12.3 billion**




**2016 Generation: 155 TWh**




| | GA ($M) | Gen. (TWh) |
|---|---|---|
| Nuclear | 5,053 | 91 |
| Hydro | 1,473 | 36 |
| Natural Gas | 985 | 13 |
| Wind | 1,552 | 10 |
| Solar | 1,630 | 3 |
| Biomass, Landfill and Byproduct | 278 | 1 |
| Conservation | 467 | |
| IEI Program | 60 | |
| OEFC* | 842 | |

*OEFC indicates the cost of generator contracts managed by the OEFC which include contracts for natural gas, hydro and biomass generators.
** Conservation measures, not quantified here, serve to reduce Ontario energy demand. Actual electricity generation would be larger than 155 TWh in the absence of conservation programs.

# 1. GA Financing – Options

1a. Moderate / GA Financing

- The amount of GA paid by ratepayers in 2017 is lowered by $3.1 and $3.3 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively.
- Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

1b. Moderate / GA Financing with Delayed Increase

- The starting GA payment from all ratepayers in 2017 is lowered by $1.1 and $1.4 billion, ratepayer payments *decrease* in the short term to keep residential bills relatively flat, then increases at 3% each year – up to a maximum of $2 billion above the true cost of GA – until the borrowed money is paid back over a 25 and 30 year financing period respectively.

Low / GA Financing (see in Appendix)

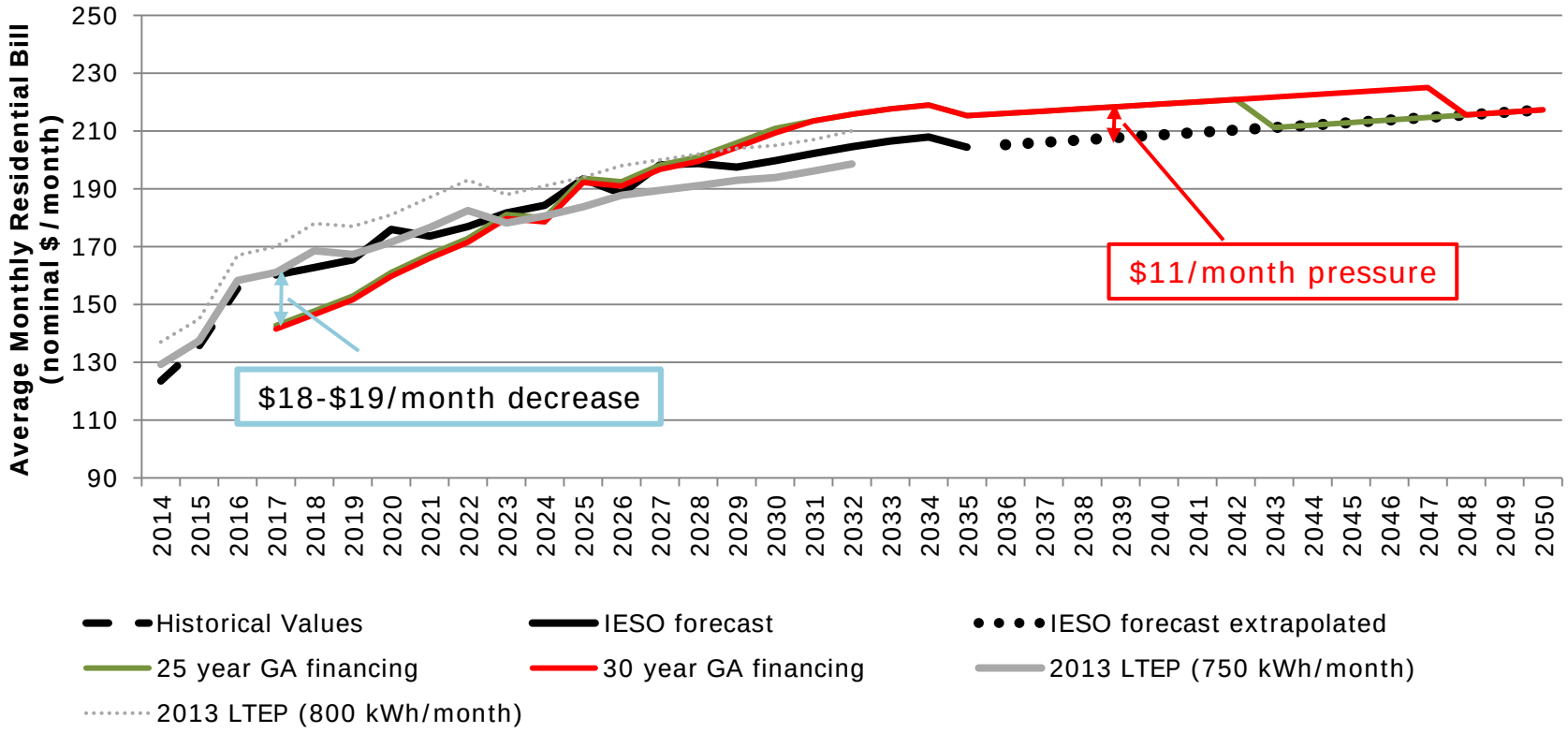
- The amount of GA paid by ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off.
- Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

High / GA Financing (see in Appendix)

- The amount of GA paid by ratepayers in 2017 is lowered by $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively.
- No limit is placed on the amount charged to ratepayers above the true cost of GA.

# 1a. Moderate / GA Financing – Impact on Residential Electricity Bills

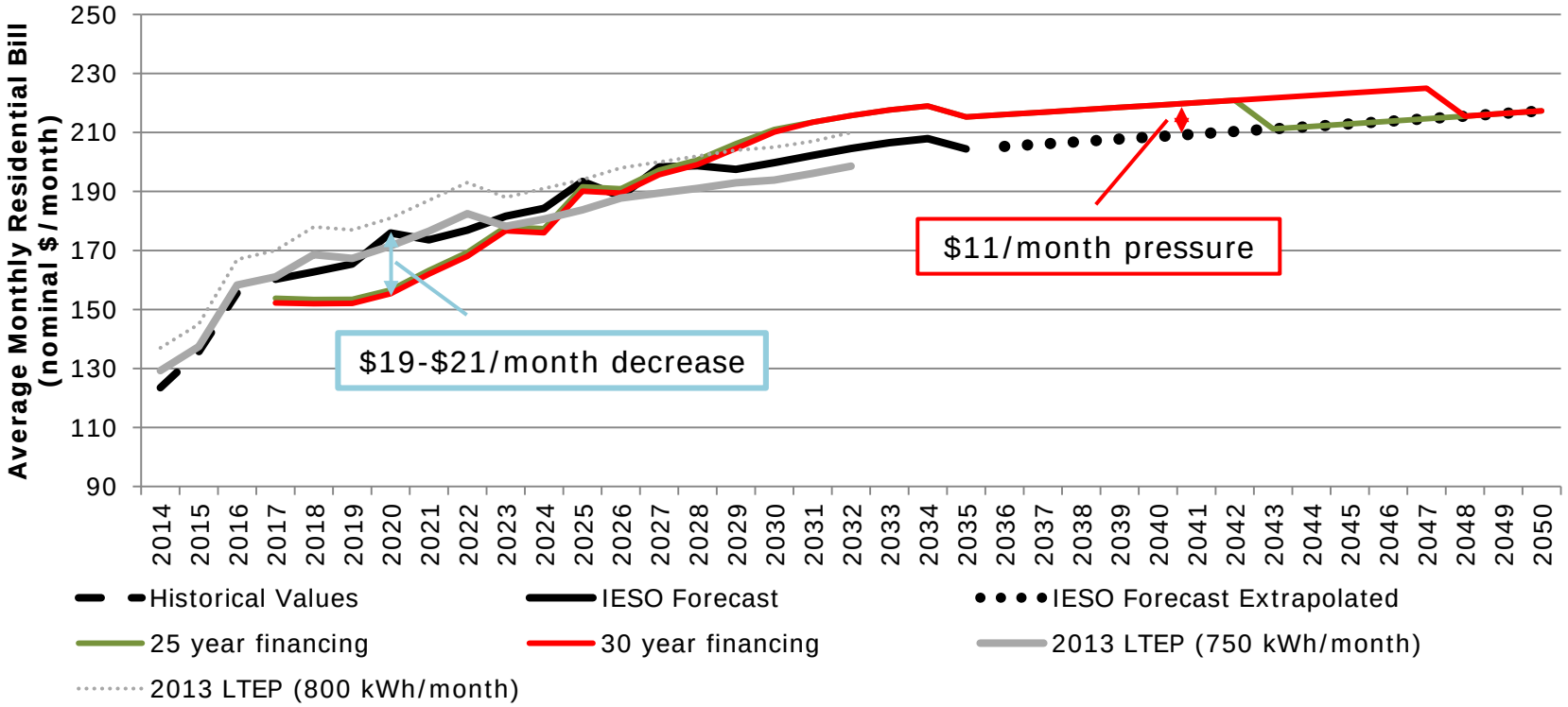
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered by $3.1 billion (green line) and $3.3 billion (red line) and increases at 2% each year – up to a cap of no more than $2 billion more than the true cost of GA in any year – until the borrowed money is paid back in 25 and 30 years respectively.




- By **borrowing up to $19-$23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $17-$19/month** at the cost of **increased future electricity bills over 14-19 years of up to $11/month** above the true cost of electricity production.

# 1b. Moderate / GA Financing with Delayed Increase in Payments – Impact on Residential Electricity Bills

- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $1.1 billion (green line) and $1.4 billion (red line), ratepayer payments *decrease* in the short term to keep residential bills relatively flat, then increases at 3% each year – up to a maximum of $2 billion above the true cost of GA – until the borrowed money is paid back over a 25 and 30 year financing period respectively.




- By **borrowing up to $19-$23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $19-$21/month** at the cost of **increased future electricity bills over 14-19 years of up to $11/month** above the true cost of electricity production.

# 1. GA Financing – Accounting (cont'd)

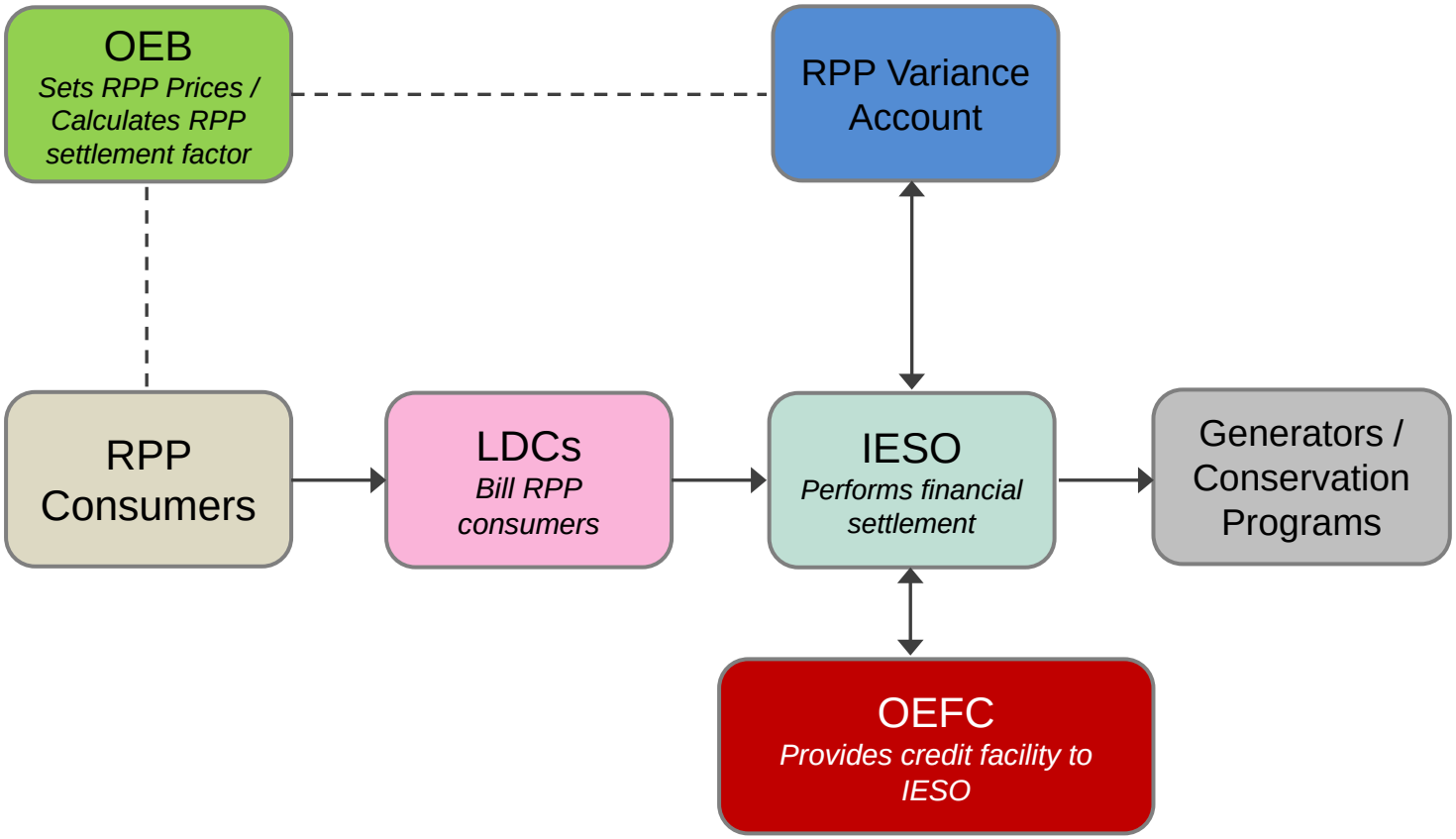
**Considerations**

- ENERGY continues to work with LSB, IESO, MOF/OFA, TBS and external accountants to identify legislative, regulatory, borrowing and accounting requirements associated with GA financing option.
  - Ongoing analysis on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk (i.e., consolidation).
  - Historically electricity sector financing has been conducted by the Ontario Financing Authority (i.e., managing OEFC's stranded debt and borrowing on behalf of IESO).
  - The significant amount of additional Provincial borrowing needed to finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating and overall borrowing capacity.
  - The Auditor General (AG) may comment on the appropriateness of financing the Global Adjustment and/or on the need to consolidate any financing on the Province's books.

- Discussions have broadly focused on:
  - Consolidation risks;
  - Creating an "asset" (and confirm that it meets accounting requirements);
  - Identifying who will hold the asset(s), this could include:
    - Province (e.g., OEFC, etc);
    - IESO;
    - LDCs; or
    - New entity.
  - Determine the source of the financing (e.g., third party, OFA, IO, etc)
  - Exploring different recovery / administrative options (e.g., DRC, RPP, etc)

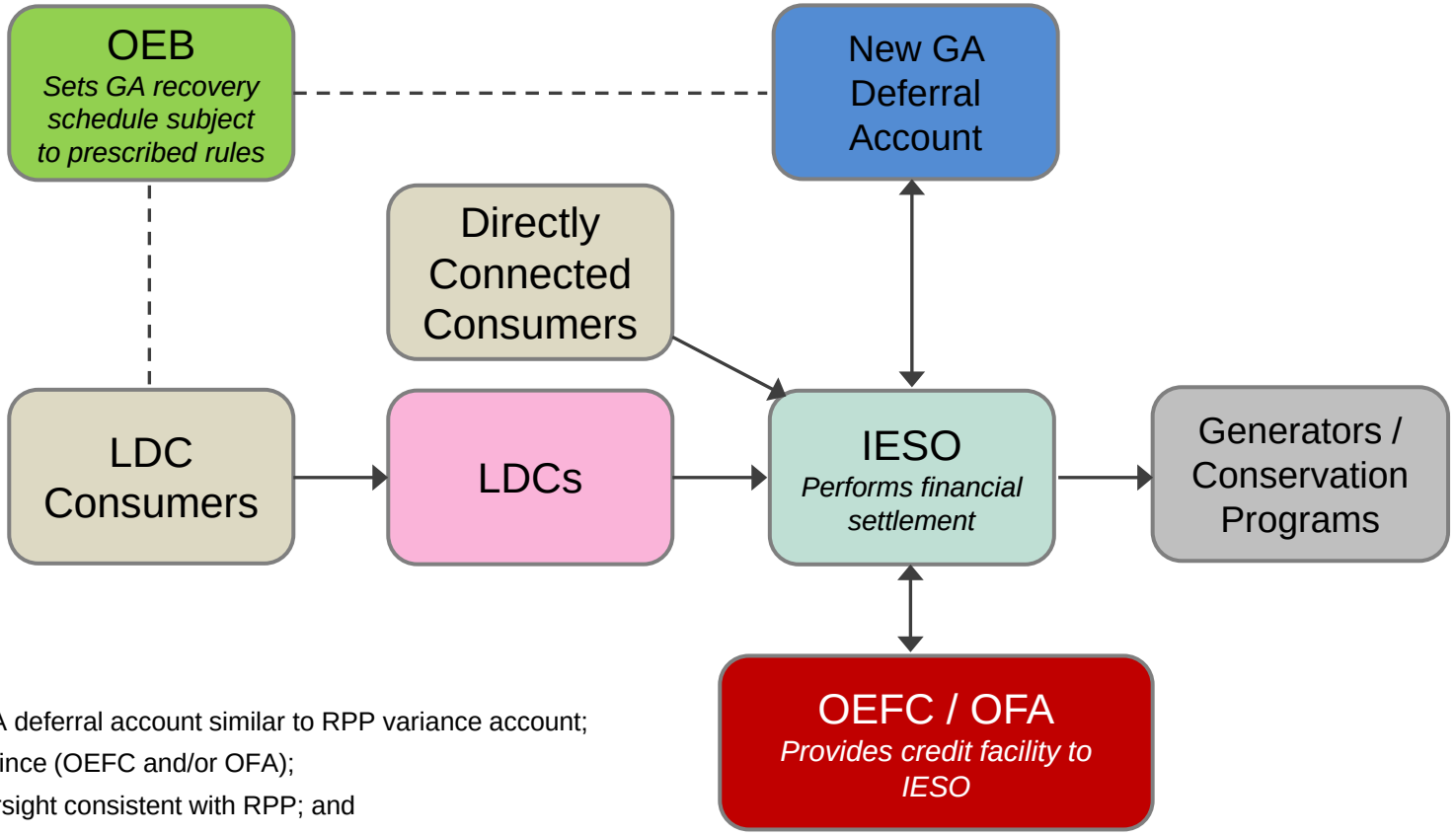
# 1. GA Financing – Current Regulated Price Plan (RPP) Variance Recovery

- The diagram outlines current Regulated Price Plan (RPP) structure and related flow of funds.



# 1. GA Financing – Recovery Approach (Option 1)

- The diagram outlines an option that is a variation on the current RPP approach.

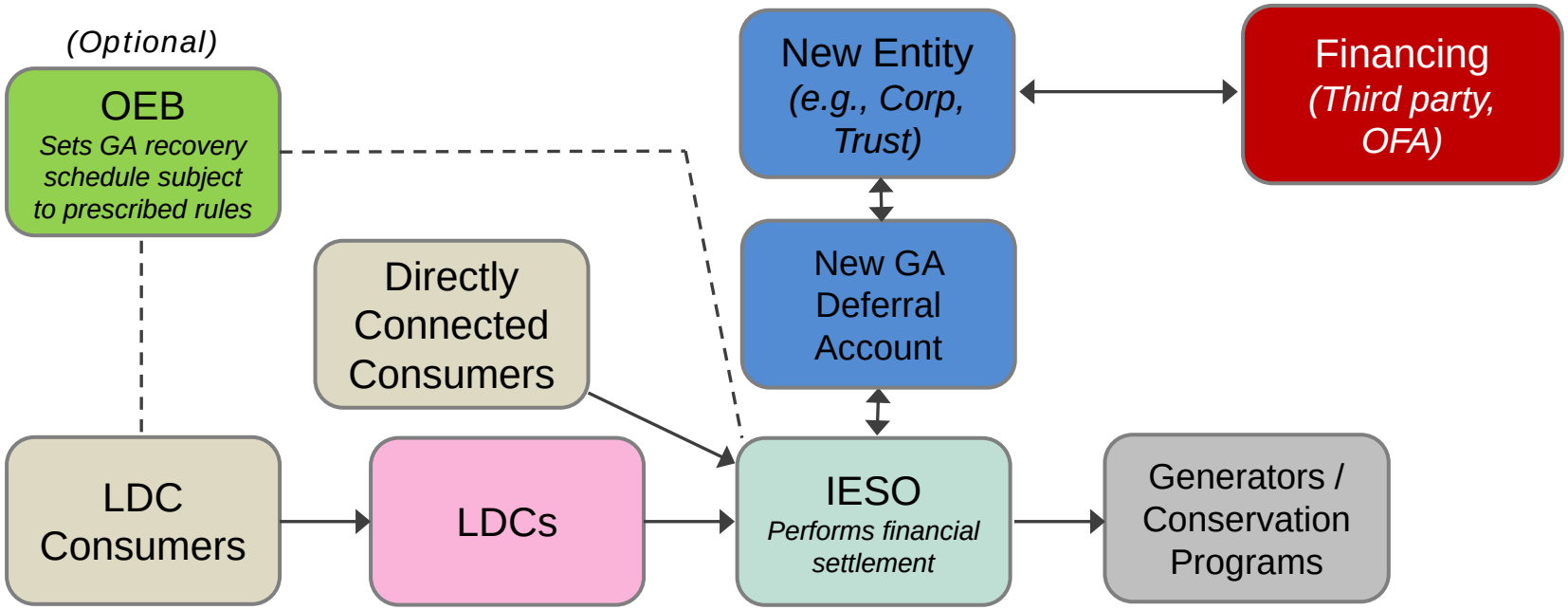



**Key Assumptions**

- Establish an new GA deferral account similar to RPP variance account;
- Financing from Province (OEFC and/or OFA);
- OEB regulatory oversight consistent with RPP; and
- GA Financing available to all consumers.

# 1. GA Financing – Recovery Approach (Option 2)

- The diagram outlines an alternative approach that introduces a new arms-length entity.




**Key Assumptions**

- GA Financing available to all consumers;
- Establish a new arms-length entity (e.g., corporation, trust, etc.) with trustees or a board of either public sector employees or stakeholders / bondholders;
- Purpose of the entity in legislation is to recover deferred GA amounts over 25-30 years from electricity consumers (i.e., ensure guaranteed repayment);
- Financing either through OFA or could be independent or from Province (TBD); and
- Set up outside of the OEB construct (i.e., not regulated). Alternatively, light touch regulatory oversight similar to RPP.

# 1. GA Financing – Considerations (cont'd)

**Considerations**

*Legal:*

- Legislation would be required to authorize the financing proposal.
  - Amendments to the *Electricity Act, 1998* (EA) could authorize the financing of certain costs within or part of the GA. However, whether any other legislation requires amendment is not known at this time.
  - The GA regime currently provides that "true costs" represent the true costs of making payments to generators or counter parties to contracts, not the incurring of discretionary financing or interest costs.
  - Considerations such as the need to analyze legal risks or the need to address costs retroactively (if the proposal requires a January 1, 2017 start) could add to the legal and drafting complexity. Further legal analysis is required.

# 2. Delivery Charge Relief – Background

- The **Delivery** line on a typical consumer bill accounts for roughly 25-35% of the total bill before taxes.
- Delivery covers the costs of getting electricity from generating stations across the province to homes and businesses and combines three cost components of the electricity sector into one line item charge:
  - **Transmission:** The costs of moving electricity across high voltage lines from generating stations to the distribution system. This cost is recovered through a variable charge that is approved by the OEB.
  - **Distribution:** The costs of moving electricity from the transmission system to homes and businesses. Depending on the LDC, distribution costs makes up about 60% to 80% of the Delivery line.
    - This cost is currently recovered through both a variable charge and fixed charge, approved by the OEB. Distribution rates are moving to a fully-fixed charge over next 5 years.
  - **Line Loss:** The costs to recover electricity that is lost as heat when its delivered over a power line, as well as power theft. Each LDC is assigned by the OEB a specific line-loss adjustment factor to reflect their loses particular to their assets. This factor is multiplied against the monthly electricity cost to determine the monthly cost.
- To help mitigate delivery costs, the Province has expanded the Rural or Remote Protection Program (RRRP) to further reduce distribution costs for rural customers across the province.
  - Starting on January 1 2017, 330,000 Hydro One low density (R2 class) customers will receive $60.50 per month in RRRP to bring their total Delivery line costs to roughly $95 for 1,000 kWh/month.

SAMPLE MONTHLY BILL STATEMENT

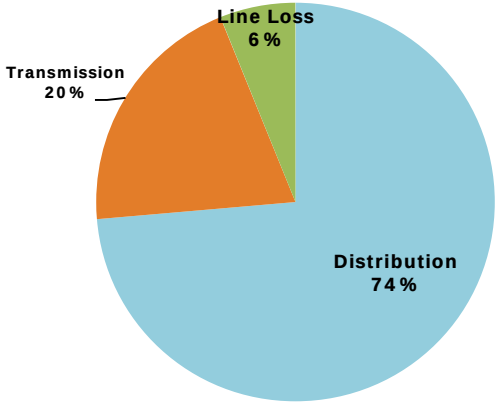
**Anytown Hydro-Electric Limited**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

| Your Electricity Charges | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| HST | 18.07 |
| **8% Provincial Rebate** | (11.12) |
| **Total Amount** | **$145.95** |

**Cost breakdown of Delivery Line for an Average Residential Bill***




* Toronto Hydro Bill @ 750Kwhs

# 2. Delivery Charge Relief – Proposed Program Overview

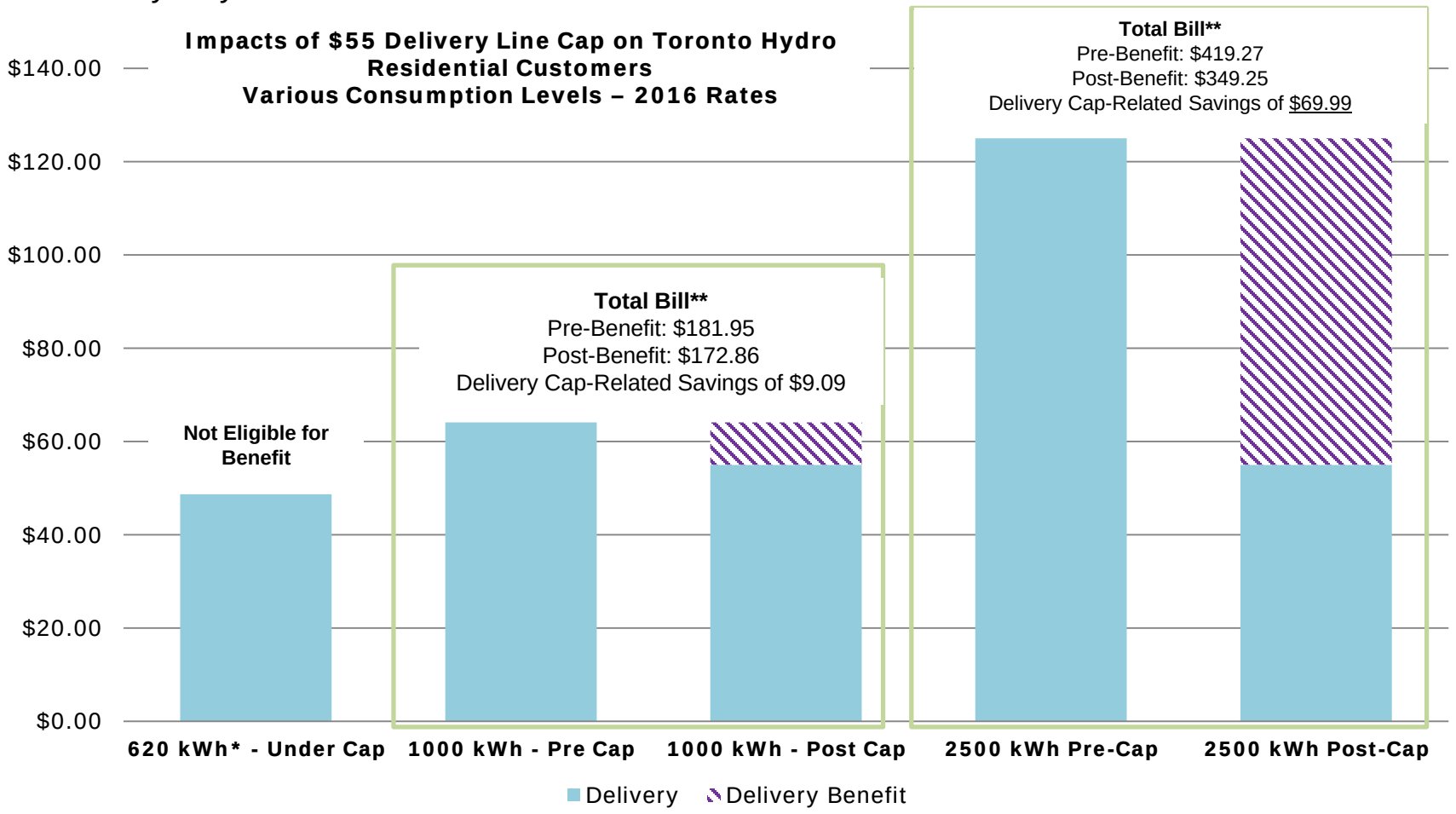
- To provide further relief for customers across the province, the province could create a ‘customer-specific’ program that would cap the delivery line cost.
- The proposed program would limit the amount an LDC can bill consumers for Delivery at a to-be-determined reasonable cost. Delivery costs that exceed the cap would be covered by support from the fiscal plan.
- The proposed program would target customers within the LDC territory based on their Delivery cost.
  - Delivery costs vary month to month and LDCs will need to keep track of the customers who will receive the receive the additional support.
- Eligibility for increased protection would be based solely on delivery charges above the established threshold and therefore would not be specific to any one LDC. All LDCs must be prepared to offer the program to some of their customers

**Considerations**

- Costs and ratepayer impacts depend on the number of customers within each LDC whose delivery charges exceed the cap.
  - Costs will fluctuate seasonally and will have year-over-year changes, creating uncertainty in forecasting. Ministry is preparing case study analysis.
- There may be implementation challenges for some LDCs and could take them up to 6 months to implement the program.
- Capping delivery charges may impact OEB rate-setting processes and create disincentives towards utility productivity and performance improvements.

# 2. Delivery Charge Relief – Proposed Program Overview (cont'd)

- Below is an example of a Toronto Hydro customer at different consumption levels and the level of subsidy they would receive.




*620kWh is the average Toronto Hydro residential consumption level. ENERGY estimates 17.5% of Toronto Hydro consumers average >1000kWh/month.

** Includes Electricity, Delivery, and Regulatory Charges. Excludes HST and 8% rebate.



Ontario

MINISTRY OF ENERGY

# 3a. Ontario Electricity Support Program (OESP) Expansion

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills.
- The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices.
- OESP funding is collected from a charge levied on all electricity ratepayers. Based on current level of program up-take and funding collection, OESP program benefits could be increased across the board by 50%. This would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year);
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year); and
  - Indigenous and Métis consumers would also see benefit increases at the same level as those with electric heat and medical devices.
    - The Ministry is also considering options to support a “Delivery” line credit for Indigenous consumers. This would cost ~$18 million/year (Option 2d on slide 8) and would save Indigenous consumers between $75 and $100/month.
- Greater focus and support can be placed on lower income Ontarians by funding OESP through the tax base. This would also reduce costs for all consumers as a result of eliminating the OESP charge.
  - Average residential customer savings: $0.83/month; and
  - Average industrial customer savings: $1.10/MWh.

# 3a. OESP Expansion – Fiscal Impacts

- Table below shows estimate of program costs up to 2022:

| Year | OESP Status Quo($M) | +50%($M) | TOTAL ($M) |
|---|---|---|---|
| 2017 | $108 | $54 | **$162** |
| 2018 | $150 | $75 | **$225** |
| 2019 | $186 | $93 | **$279** |
| 2020 | $215 | $108 | **$323** |
| 2021 | $243 | $122 | **$365** |
| 2022 | $272 | $136 | **$408** |

- 2017 program costs are based at current program sign-up rate – 30% of eligible consumers. Cost projections assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
- At the time of program design, it was estimated that 40-50% participation would be high for an application-based program delivered through electricity bills. However OESP can be enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).
- OEB is currently exploring options for simplifying the OESP process, including exploring options with MCSS on auto-enrollment options, discussing options to eliminate wet signature consent forms with the federal government, and working with partners to do open houses to better reach vulnerable consumers.

# 3a. OESP Expansion – Considerations

- **Framework:** New legislation would be required to establish and define the parameters of a tax-based OESP. This may reveal additional considerations, including possible assessment as a tax credit.
- **Implementation:** Financial flow-through mechanisms would need to be considered in consultation with IESO and LDCs. Likely to be modeled after processes used for the Ontario Rebate for Electricity Consumers (OREC).
- **Alternative Delivery:** If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible, and could expand coverage to the ~142,000 low-income households that do not receive an electricity bill.
- **Transition to Social Assistance:** Moving OESP to the taxbase can be a transitional step in folding this program into a reform of social and disability assistance programs and enhancement of MCSS' Social Assistance Management System moving forward.
- **Additional Enhancements:** The enhanced credit could be expanded to include additional eligibility categories of customers. For example, a new "Low Density Consumer" category could be introduced that provides Hydro One R2 and/or R1 customers (highest distribution rates) who are already OESP eligible with the enhanced credit.
- **Variance Account:** The OEB has been collecting program funding in excess of program costs and has accrued a positive balance. This balance must be addressed when moving to the tax base.

# 3b. Low Income Conservation Benefit Program

- Existing low income programs delivered by LDCs and IESO help qualified homeowners and social and/or assisted housing providers improve the energy efficiency of their homes.
  - Programs include the Home Assistance Program and the Retrofit Program (Social Housing Stream).
- A new Low Income Conservation Benefit Program would build on existing programs.
  - Participants could receive incentives for conservation measures not currently covered (e.g. air conditioning, heat pumps (electric heated homes)).
  - Increased incentive amounts (e.g., under the existing Retrofit Program, incentives cover up to 50% of the total cost of the energy efficiency upgrade).
  - Targeted education and awareness initiatives.
- The new program would be delivered through LDCs and/or IESO.
- The new program would coordinate with CCAP initiatives.
- The budget estimate below is illustrative and assumes annual program budgets three times the 2015 spending for the Home Assistance Program.

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| Proposed Budget ($ Million) | $60 | $60 | $60 | $60 | $60 | $60 |

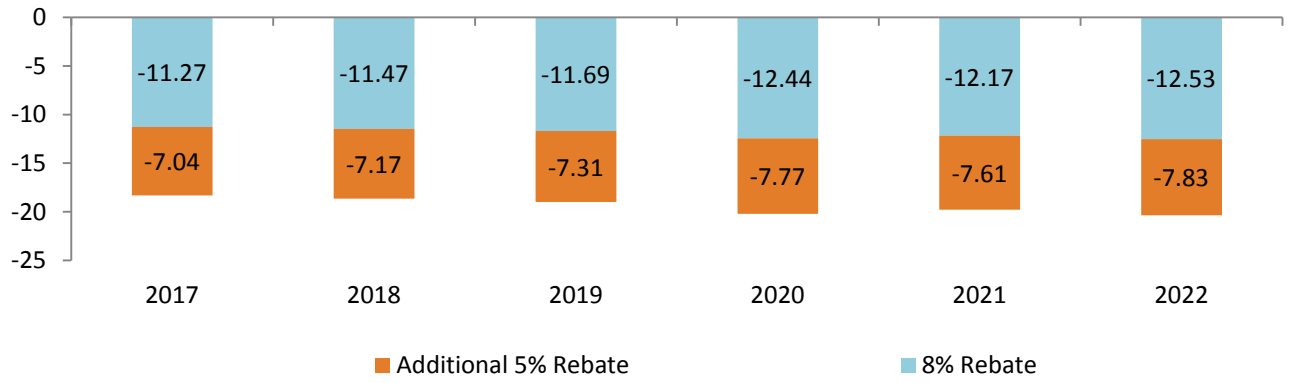
- Further analysis is required on costing and implementation details, including alignment with the Conservation First Framework.

# Other Options to Consider

# 1. Enhanced Tax-Base RPP Rebate (5%)

- Enhancing the rebate by a further 5% on the amount before tax provides an average savings of about $7 each month or $84 annually for a typical residential electricity consumer.
- As of January 1, 2017, electricity consumers eligible for the Regulated Price Plan (RPP) receive an 8% rebate equivalent to the provincial portion of HST on their pre-tax bill.
- The eligibility criteria for the 8% rebate is as follows:
  - Consumers with a demand of 50 kW or less;
  - Consumers with a demand of 250,000 kWh/year or less;
  - Farms;
  - Multi-unit residential buildings and other facilities used as residential rental units;
  - Dwellings;
  - Condominiums; and
  - Co-operatives with housing units.

**Benefit for a Typical Residential RPP Consumer**
*in $/750-kWh month*



# 1. Enhanced Tax-Base RPP Rebate (5%) (cont'd)

**Considerations**

- Amendments would be required related to the *Ontario Rebate for Electricity Consumers Act, 2016.*
- The Act authorizes the making of regulations to reimburse electricity vendors for amounts credited to consumers' accounts under the Act. The Act authorizes the making of other regulations to put in place mechanisms needed to implement the financial assistance.
- The rebate could be made retroactive to January 1, 2017. Similar to the current 8% rebate, electricity consumers would receive a retroactive payment once the local distributor begins issuing the rebates if the distributor needs more time to adjust its billing systems.

**Fiscal Cost of an Enhanced Rebate**
*in $millions*

| Cost ($M) | 2016-2017 | 2017-2018 | 2018-2019 | 2019-2020 | 2020-2021 | 2021-2022 |
|---|---|---|---|---|---|---|
| **Cost of 8% rebate** | 271 | 1,119 | 1,086 | 1,171 | 1,159 | 1,208 |
| **Cost of 13% rebate** | 440 | 1,818 | 1,764 | 1,903 | 1,884 | 1,963 |
| **Cost of incremental 5% rebate** | 169 | 699 | 679 | 732 | 724 | 755 |

# 2a. Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the contract holders agreeing to a lower price in the near term.
- Since extending the contracts would lock in an additional 10 years of GHG emissions free generation to support electrification of transportation and other sectors, consideration could be given to funding the contract extensions with future cap and trade proceeds.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period; discussions/consultation may be required in advance of this potential option moving forward.

# 2a. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- The Province is not a party to the contracts and has never been involved in the negotiation of the contracts themselves. IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is also required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

- Extending contract terms would reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

# 2a. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.
- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.
- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
- **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 Million | $582 Million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# 2a. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - **Illustrative Example:** New contract for 27 years at $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 Million | $632 Million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# 2a. Extend Length of Existing Wind / Solar Contracts (cont'd)

- Below are illustrative estimates of potential GA savings if all contracts for large FIT and GEIA wind and solar projects in commercial operation are renegotiated according to the approaches illustrated above.
- Estimates are for large (10 MW or greater) FIT 1 and GEIA wind and solar projects in commercial operation, totalling about 2,700 MW of wind and about 900 MW of solar capacity. A 10 year contract extension is assumed at a price of:
  - **For Wind:** LRP I low weighted wind price of $64.5/MWh
  - **For Solar:** LRP I low weighted solar price of $141.5/MWh

**Potential Approach 1:**

| | **Current Contracts*** | **New Extended Contracts** |
|---|---|---|
| Total Value (NPV 2017) | $23.3 Billion | $23.1 Billion |
| Average Annual Contract Value (First 5 Years) | $1.6 Billion | $1.4 Billion |
| *Figures assume projects remain operational after contract expiry at the LRP I low weighted price inflated to the year of contract expiry, as per OPO assumptions . | | |

**Potential Approach 2:**

| | **Current Contracts** | **New Extended Contracts** |
|---|---|---|
| Total Value (NPV 2017) | $23.3 Billion | $25.6 Billion |
| Average Annual Contract Value (First 5 Years) | $ 1.6 Billion | $0.8 Billion |

**Source**: Figures reflect IESO contract data current as of Sept 2016. Also includes two Phase III solar projects (100 MW combined) that came online in late 2016 not included in Sept 2016 IESO contract data.

# 2a. Extend Length of Existing Wind / Solar Contracts (cont'd)

- Contract re-negotiations could be piloted with large wind and solar contract holders.
- For example, the top 5 contract holders by portfolio value (online projects 10 MW and larger) include:

| Contract Holder | Technology | # of Contracts | Capacity (MW) | Estimated Value (NPV 2017) |
|---|---|---|---|---|
| Samsung* | Wind & Solar | 7 | 899 | $5.0 Billion |
| NextERA | Wind | 6 | 534 | $2.7 Billion |
| Northland Power | Wind & Solar | 15 | 290 | $1.8 ~~2~~ Billion |
| Pattern / Capital Power | Wind | 1 | 270 | $1.4 ~~5~~ Billion |
| ENGIE | Wind | 4 | 265 | $1.2 Billion |
| All Other | Wind & Solar | 76 | 1398 | $8.1 Billion |
| **Total** | **Wind & Solar** | **109** | **3654** | **$20.2 Billion** |

Source: IESO contract data current as of Sept 2016.
*Includes two Phase III solar projects (100 MW combined) that came online in late 2016 not included in Sept 2016 IESO contract data.

# 2b. Clean Energy Supply (CES) Contracts

- There are 13 natural gas facilities operating under Clean Energy Supply (CES) contracts. Given the current excess capacity, some of these facilities could be renegotiated to reduce output in the near term.

- In conjunction, OPG could seek to negotiate outright purchases of certain Ontario gas assets. Given the current excess capacity in electricity supply in Ontario, OPG can seek to negotiate outright purchases of certain Ontario gas assets and reposition them such that ratepayers would pay only for the "current need" component:
  - Contract terms would be renegotiated with the Province to temporarily idle the facilities;
  - Variable expenditures would be largely avoided with the facilities only incurring fixed costs; and
  - Plant life would be extended to a period post-2024 when additional power would be required.

- OPG has estimated monthly residential bill reductions of $2.37 to $4.00 from 2017 to 2019 if such an approach was taken for Ontario's gas portfolio.

- Natural targets would be assets that OPG either jointly owns (e.g., Portland, Brighton Beach) or operate on OPG's site with acquisition funding coming from Provincial borrowing.
  - Although OPG could also look beyond its facilities to the broader natural gas fleet in Ontario.

**Considerations**

- This proposal would reduce GHGs and provide some near-term cost benefits through lower staffing and maintenance costs:
  - Contract terms would be renegotiated with to temporarily idle the facilities;
  - Variable expenditures would be largely avoided with the facilities only incurring fixed costs; and
  - Plant life would be extended to a period post-2024 when additional power would be required.

- It will likely be challenging to find a willing seller and/or to negotiate a favourable price:
  - Sellers that are approached are in a strong position to extract value from OPG/the Province; and
  - Similarly, OPG's negotiating position would be weakened if this was viewed as part of the broader rate mitigation strategy.

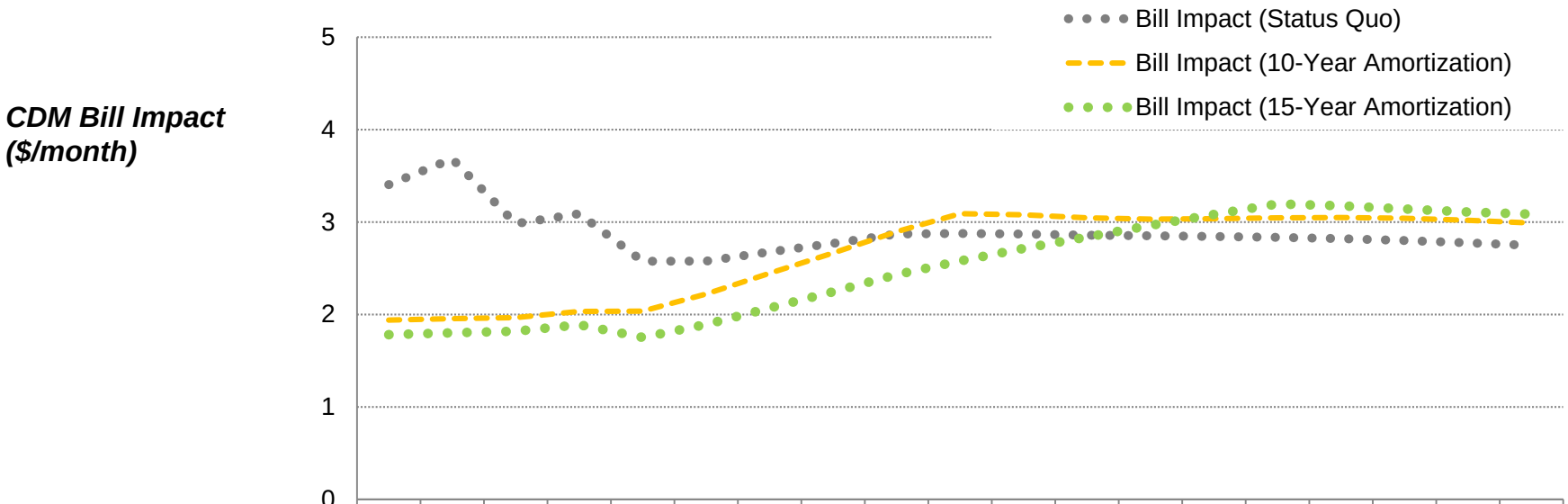
- In the past, OPG and IESO's contract renegotiations have been contentious and lengthy.

# 3. Amortize Conservation Program Costs

- This option would not be pursued if the Global Adjustment (GA) was financed (Option 1).
- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized. This would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs).
  - The time period over which costs could be amortized would be over the lifetime of funded CDM measures.
  - ENERGY would work with IESO to determine the appropriate lifetime period – the graph on the next slide, which illustrates residential bill impacts, presents two cases: **10-year and 15-year measure lifetimes**.
- In both cases, amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020. Over time the benefit would decrease and turn into a cost (higher electricity rates than would otherwise occur), as interest charges begin to grow. Estimated interest charges are as follows (a 3% interest rate is assumed; increases in interest rates could result in higher overall interest charges):
  - $712 million ($2016) – Amortizing eligible 2017-2035 CDM costs for 10-year period; and
  - $1.3 billion ($2016) – Amortizing eligible 2017-2035 CDM costs for 15-year period .
- Legislative changes would be needed to allow recovery of interest payments from ratepayers, or these costs could be recovered from the Consolidated Revenue Fund (CRF, or taxes).
- An alternative that could be explored would be to pay for CDM costs, or for a portion of these, from the tax-base (*see Appendix for more detail on tax funding option*).

# 3. Amortize Conservation Program Costs (cont'd)

## Conservation Residential Bill Impact – Status Quo, 10-Year and 15-Year Amortization




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bill Impact (Status Quo) | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | 2.68 | 2.77 | 2.87 | 2.88 | 2.87 | 2.86 | 2.85 | 2.84 | 2.83 | 2.82 | 2.80 | 2.78 | 2.75 |
| Bill Impact (10-Year Amortization) | 1.94 | 1.95 | 1.97 | 2.03 | 2.04 | 2.22 | 2.45 | 2.67 | 2.90 | 3.09 | 3.08 | 3.05 | 3.03 | 3.04 | 3.04 | 3.05 | 3.04 | 3.02 | 2.99 |
| Bill Impact (15-Year Amortization) | 1.78 | 1.80 | 1.82 | 1.89 | 1.75 | 1.89 | 2.07 | 2.25 | 2.43 | 2.58 | 2.71 | 2.84 | 2.96 | 3.08 | 3.20 | 3.18 | 3.14 | 3.11 | 3.09 |

Source: IESO; Ministry of Energy

**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10 of 15-year borrowing rate of 3.0%.

# 3. Amortize Conservation Program Costs (cont'd)

**Considerations**

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 3. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- ENERGY has received an opinion on the proposal to amortize CDM costs from IESO's external auditor.
  - Ernst and Young indicated that an argument could be made to support the recognition of the costs as an asset as the costs meet essential asset characteristics, as prescribed by PSAB.

- ENERGY staff have developed a note to seek an opinion from the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.

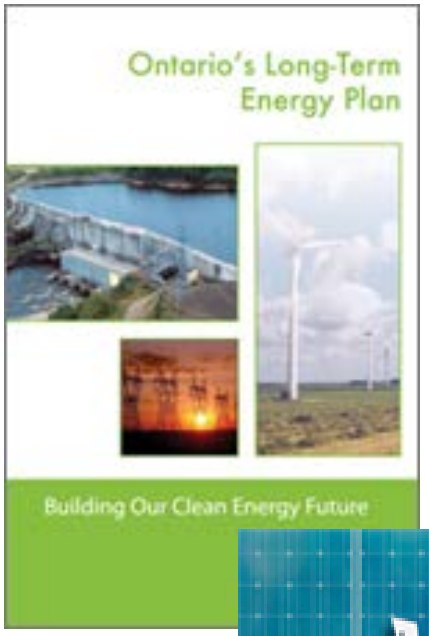
- If there is a desire to pursue this option, ENERGY would seek a formal opinion from the OPC on whether CDM costs could be amortized according to rate-regulated accounting standards, ENERGY would send its note along with IESO external auditor's opinion to OPC.
  - In 2013 when this option had been explored, staff at the OPC agreed with the view that amortized conservation costs can be considered as assets, but noted that the Auditor General may disagree with considering amortized conservation costs as assets.

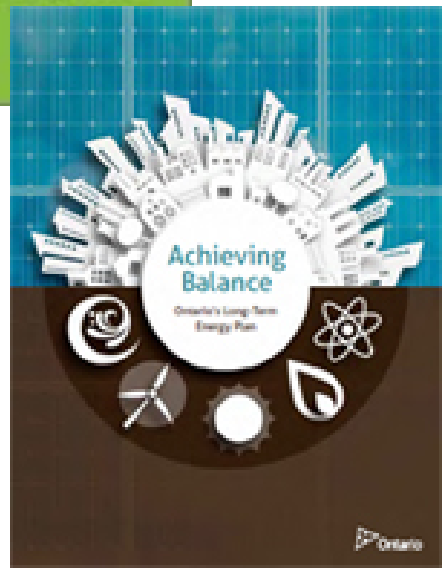
- Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# Long-Term Energy Plan

# Longer-Term Energy Plan – Overview

- The Long-Term Energy Plan (LTEP) is the energy sector's roadmap, with a focus on integrated policy and setting the direction for Ontario's energy future.
- The 2013 LTEP included content on both Ontario's electricity as well as fuels sub-sectors. The next LTEP will integrate the electricity and fuels sub-sectors to provide a complete picture of Ontario's energy system.
- Developing the LTEP is a highly collaborative process in which ENERGY and IESO directly engage with stakeholders, indigenous communities and the public.
- The Ministry sought stakeholder as well as public feedback through in-person engagement sessions, online tools, and an Environmental Registry posting.
- The Ministry is currently developing the next LTEP, and is targeting a tentative April 2017 release date.



# LTEP – Process and Timeline

**Jan - Feb**
Policy Development

- Ministry staff to review engagement feedback and to provide recommendations for DMO/ MO and Minister on LTEP policies and themes.

**Feb - March**
Modeling

- Additional modelling to inform potential initiatives and themes will be made to IESO/other modelers to update outlooks.
- Policy decisions may be adjusted based on modeling outcomes.

**March**
Plan development

- Ministry will prepare LTEP submission and IESO/OEB implementation directives for Cabinet Approval.

**Early April**
Cabinet Approval

- Cabinet approves LTEP document; as well as IESO/OEB implementation directives

*Writer to work alongside and participate in briefings and theme development.*

**Early – Mid April**
Finalize and produce document

- Layout/ graphics/ translation of final document
- Ministry staff provide final review

**End April**
Publish LTEP and implementation directives

- Final LTEP published on ENERGY website
- Minister issues Cabinet-approved implementation directives to IESO & OEB
- LTEP lockup

**May – July**
Implementation Plan Development

- IESO and OEB develop implementation plans based on directives

**Aug – Sept 2017**
Implementation Plan Approval

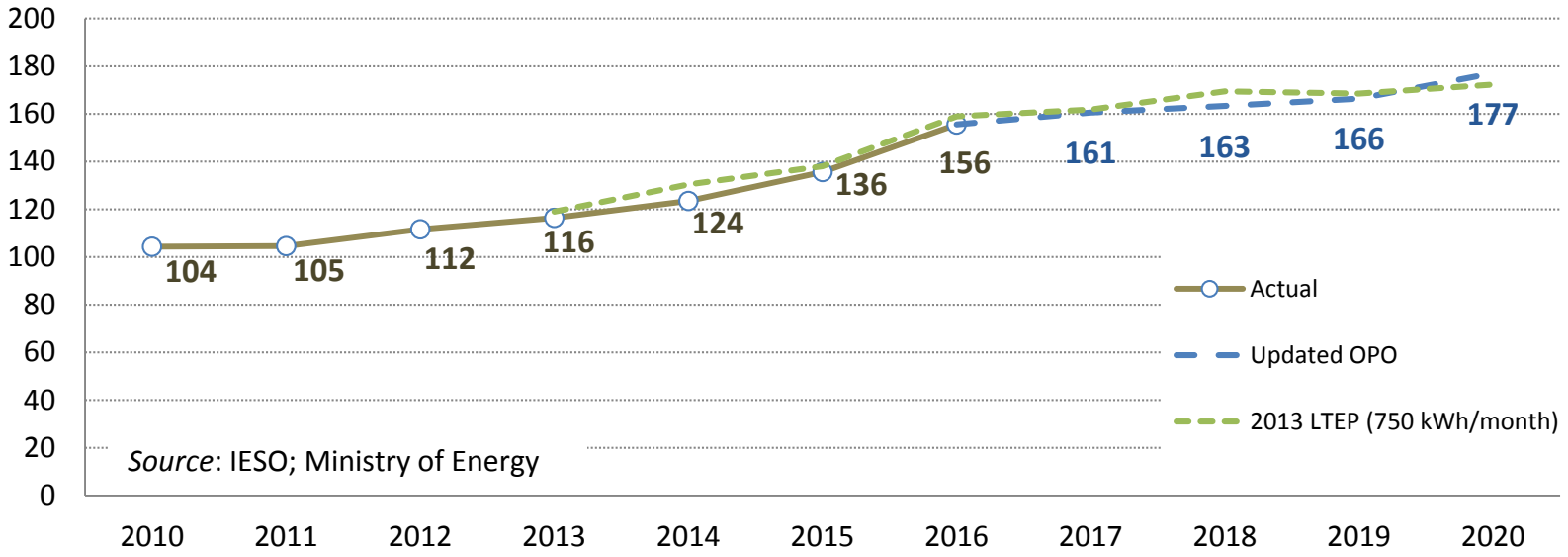
- Implementation plans submitted to Minister of Energy for approval

# Appendix

# Context – Residential Electricity Prices

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast in $/month*

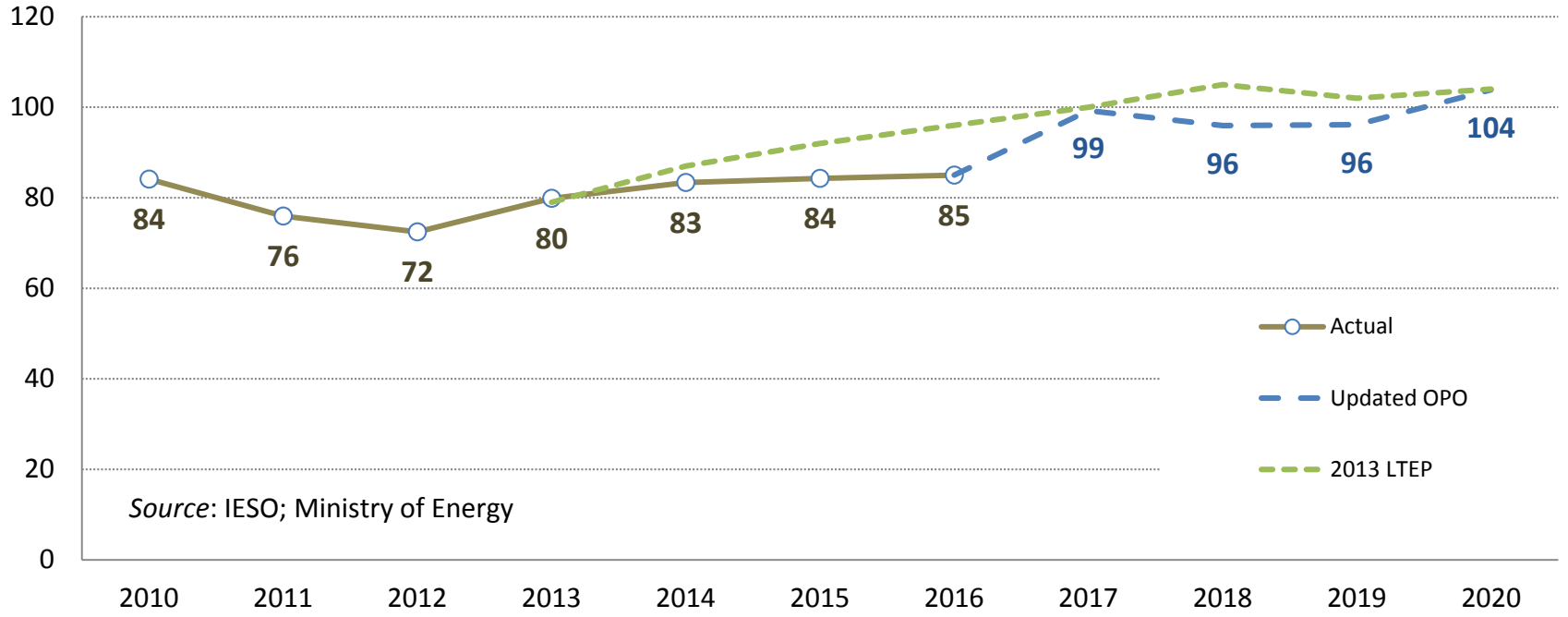



**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Context – Large Industrial Electricity Prices

- Industrial electricity prices continue to be a concern for many businesses.
  - **Note:** The typical industrial electricity price is currently below the 2013 LTEP forecast.

**Typical Class A Electricity Prices**
*Historical and Forecast in $/MWh*




**Note**: The 2013 LTEP forecast for industrial reflects a transmission connected Class A electricity consumer. The updated OPO forecast above includes ICI expansion and RRRP expansion.

# Global Adjustment (GA) Financing

- The global adjustment (GA) is comprised of costs for regulated and contracted generation, as well as conservation.
- Some contracted generation assets are expected to have a useful life that extends beyond the term of their current financial contracts (typically 20-years).
- Similarly, conservation costs are recovered through the GA on an annual basis while conservation initiatives provide benefits to the electricity system over the course of many years.
- Since the GA only includes costs related to the contractual life of these assets, there may be an opportunity to recognize the longer-term benefit of these assets to the electricity system and “bring forward” that benefit for ratepayers today, while deferring some of the current costs.
- An indicative GA financing proposal is presented that lowers ratepayers costs over the short term by borrowing money but increases costs over the long term when GA costs are forecast to be lower.
- **Note:** Not all generating assets will continue operations at the end of their contract term. Regulatory constraints (i.e., nuclear licences) or low demand conditions (i.e., as experienced with current expiring NUGs) would mean that some generators will shutdown at the expiry of their contract. Future ratepayers would be paying for these assets that are no longer producing power.

# GA Financing – Considerations

**Considerations**

- Borrowing money to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.
  - Deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" in the sector. **Note:** the Debt Retirement Charge (DRC) was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

- The GA financing proposal involves borrowing large amounts of money over a long period of time (16-30 years, depending on the scenario) to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on electricity rates. A long-term interest rate of 5% is assumed for this analysis.

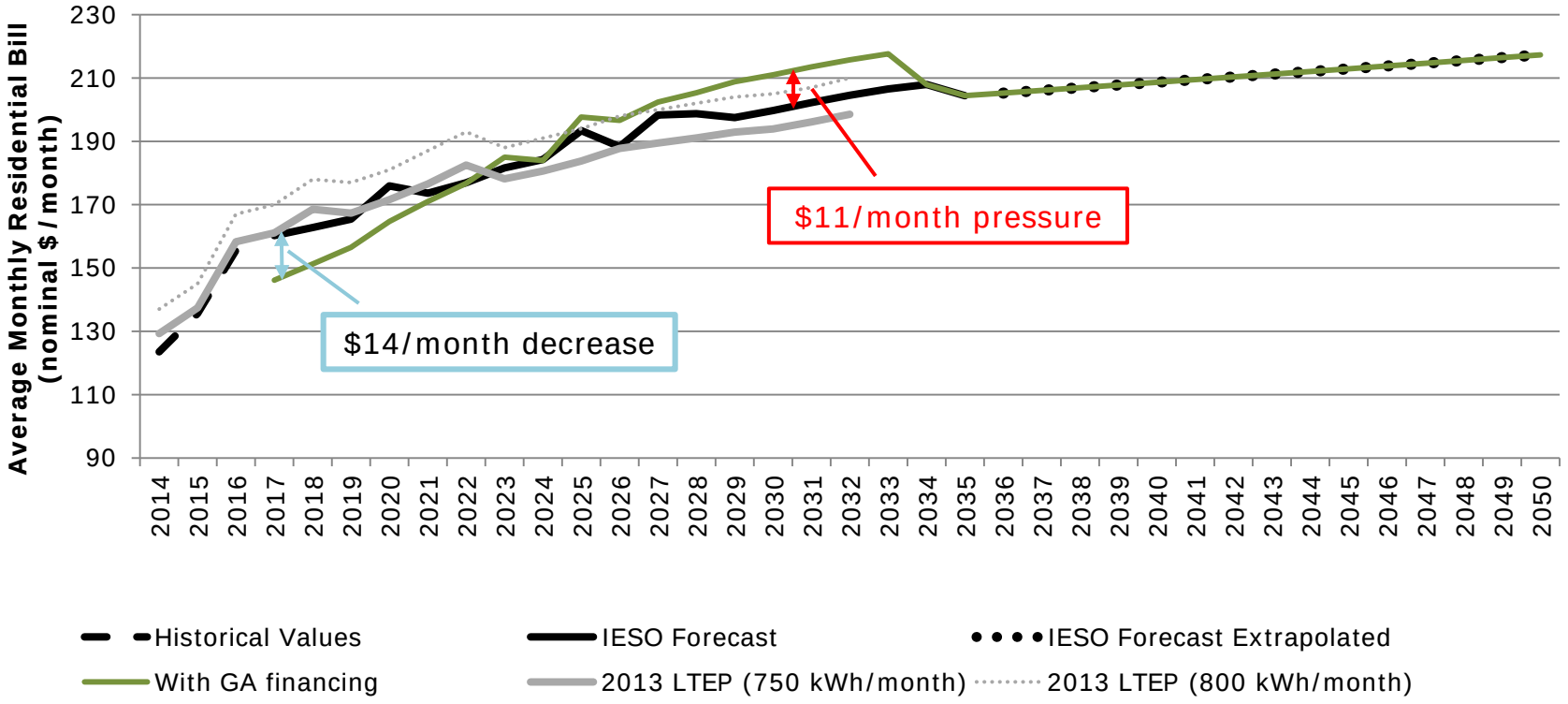
- GA and HOEP provide a natural hedge against each other – when one goes up, the other goes down – keeping total electricity costs relatively stable and predictable. Smoothing only the GA would lead to greater price volatility for consumers unless the schedule and amount of ratepayer payments was defined relative to the actual cost of GA.

- Some Class A consumers pay limited GA and would receive little benefit under the financing proposal. These consumers also currently pay very low rates. In addition, in recognition that Class B electricity consumers pay the majority of GA costs, could limit GA cost reductions through financing to Class B consumers only.

- Should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumption, further increasing future costs for individual ratepayers.

# Low / GA Financing – Impact on Residential Electricity Bills

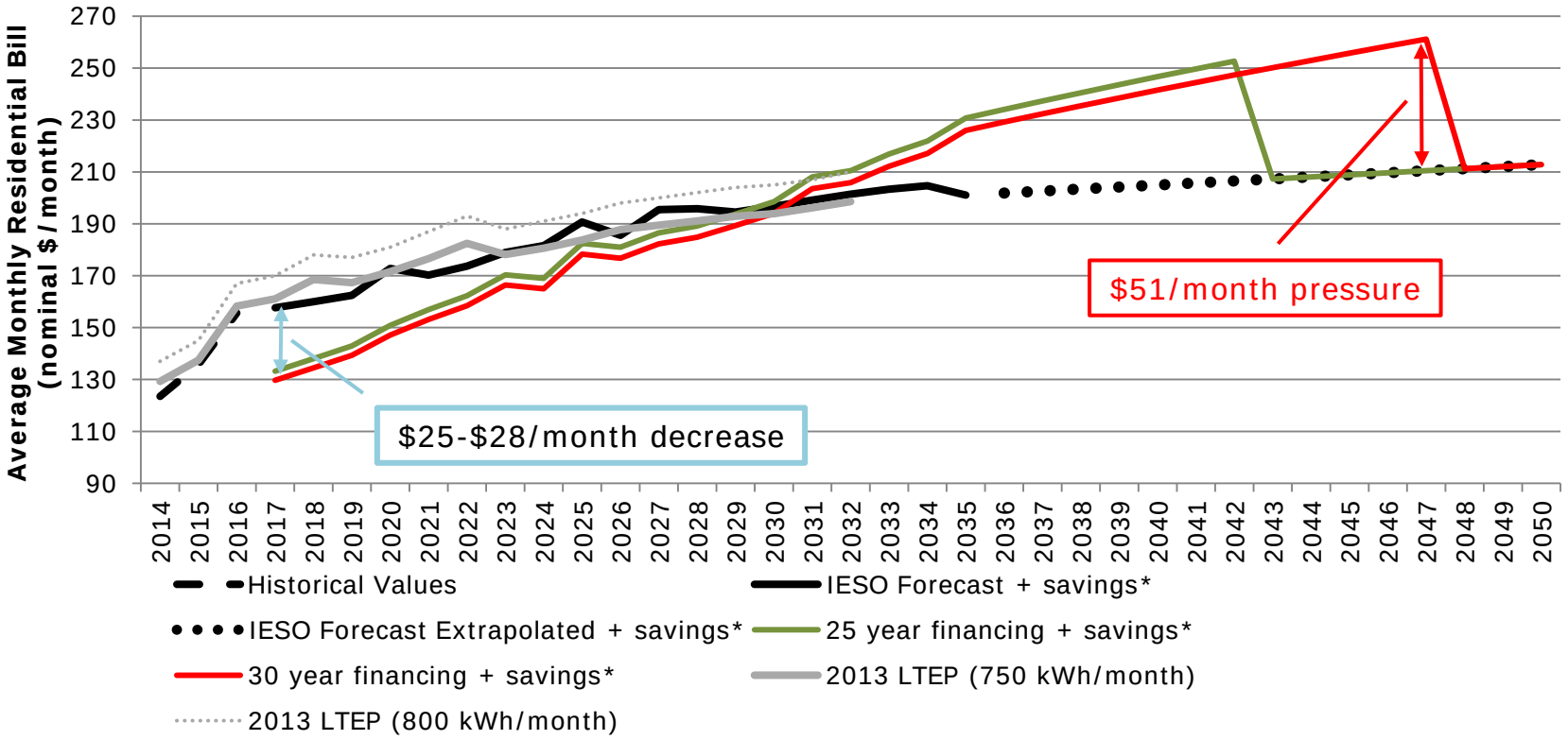
- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $2.5 billion and increases at 2% each year – up to a cap of no more than $2 billion more than the true cost of GA in any year – until the borrowed money is paid back in 2032.




- By **borrowing up to $9.3 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $14/month** at the cost of **increased future electricity bills over 10 years of up to $11/month** above the true cost of electricity production.

# High / GA Financing – Impact on Residential Electricity Bills

- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $4.4 and $5 billion and increases at 2% each year until the borrowed money is paid back over a 25 and 30 year financing period respectively.

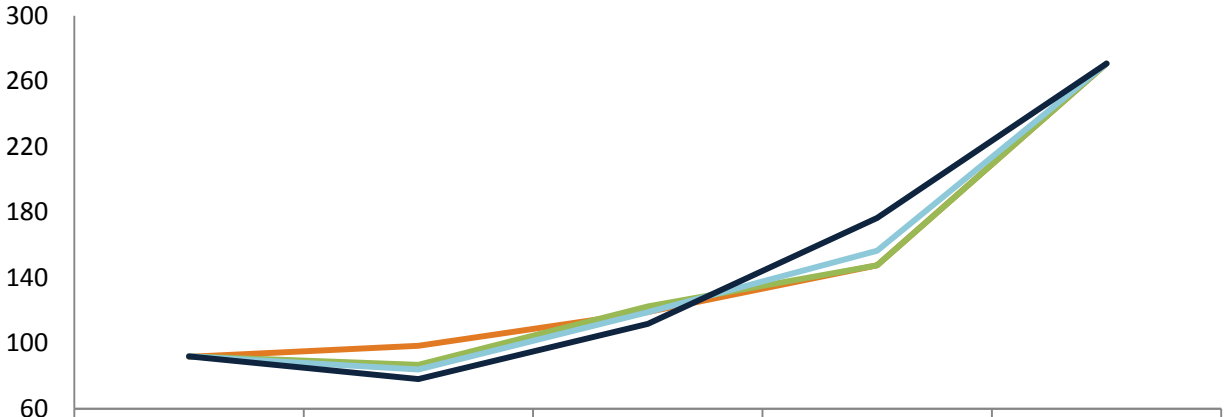



- By **borrowing up to $65 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $25-$28/month** at the cost of **increased future electricity bills over 12-17 years of up to $46-$51/month** above the true cost of electricity production.

# GA Financing – Impact of the Level of Financing on Large Industrial Electricity Consumers

- Below graph illustrates the estimated impact of the level of GA financing for an average Class A electricity consumer over a 25 year amortization period.

**Estimated All-In Electricity Price**
*for Average Class A in $/MWh*



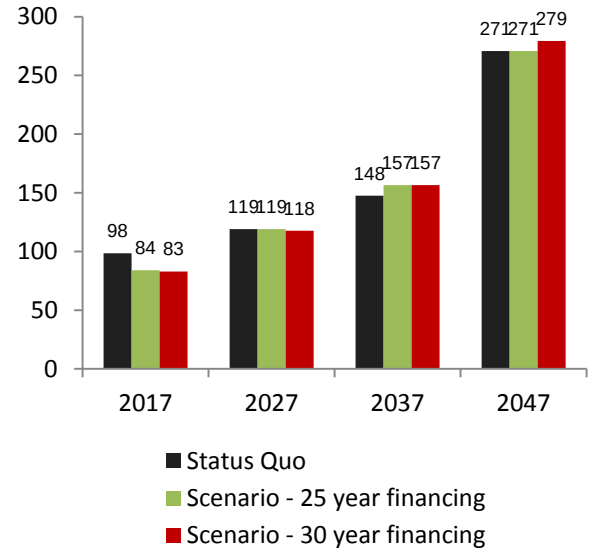

| | 2016 | 2017 | 2027 | 2037 | 2047 |
|---|---|---|---|---|---|
| Status Quo | 92 | 98 | 119 | 148 | 271 |
| Low Financing | - | 87 | 122 | 148 | 271 |
| Moderate Financing | | 84 | 119 | 157 | 271 |
| High Financing | | 78 | 112 | 177 | 271 |

**Note:** Assumes that demand by industrial sector continues at average 2011-2015 levels. Please see the Appendix or more information on the estimated impact on large industrial electricity consumers.

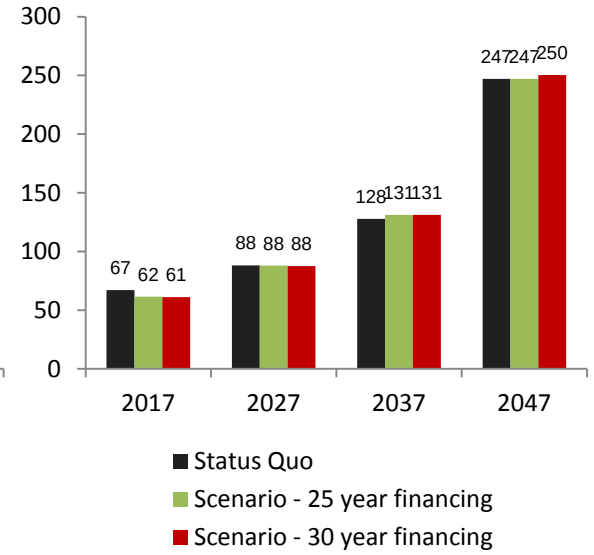
# GA Financing – Illustrative Impact for Large Industrial Electricity Consumers

- Below graphs illustrate the estimated impact under the moderate GA financing scenario for an average Class A electricity consumer, a consumer that pays low GA (i.e., pulp and paper) and high GA (i.e., refining and chemical manufacturing).

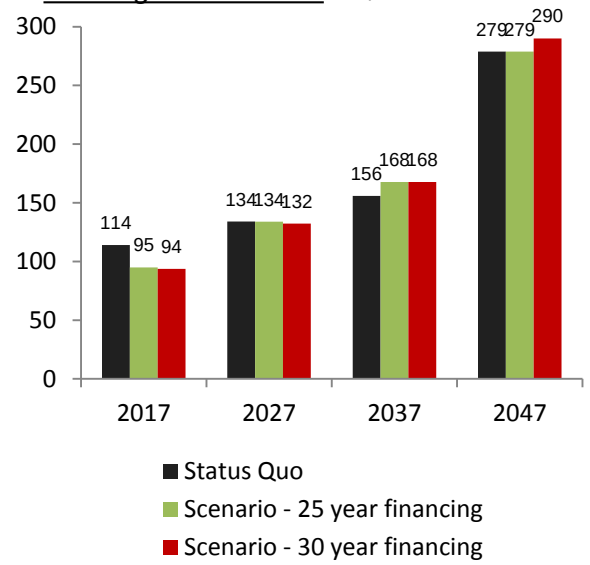
**Estimated All-In Electricity Price**
*for Average Class A in $/MWh*




**Estimated All-In Electricity Price**
*for Pulp & Paper in $/MWh*




**Estimated All-In Electricity Price**
*for Refining & Chemicals in $/MWh*




**Note:** Assumes that demand by industrial sector continues at average 2011-2015 levels.

# Other Options Considered – Typical Residential Electricity Consumer

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| b. Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |
| Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Options Considered – Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| b. Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |
| Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Adam Prokop |
| **Subject:** | FW: Decks |
| **Date:** | Wednesday, January 25, 2017 12:13:56 PM |
| **Attachments:** | Delivery Line Overview and Options v1.pptx<br>Rate Mitigation Plan Options 20170124__Clean1.pptx |

---

**From:** Ronald Kwan
**Sent:** Tuesday, January 24, 2017 10:36 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Subject:** FW: Decks

Hi,

See attached. Key comments are welcome.

Thanks,
Ron

---

**From:** Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
**Sent:** January-24-17 10:32 PM
**To:** Ghiassi, Ali (MOF) <Ali.Ghiassi@ontario.ca>; Elizabeth Mendes (MOF) <Elizabeth.Mendes@ontario.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>; Ronald Jaikaran (MOF) <Ronald.Jaikaran@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
**Cc:** David McLean (MOF) <David.McLean@ontario.ca>
**Subject:** FW: Decks

FYI all. Attached are the two Energy decks for FPC tomorrow. Note a second attachment which provides background and analysis on distribution costs and pressures.

---

**From:** Imbrogno, Serge (ENERGY)
**Sent:** Tuesday, January 24, 2017 10:15:17 PM (UTC-05:00) Eastern Time (US & Canada)
**To:** Orsini, Steve (CAB); Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
**Cc:** Bromm, William (CAB)
**Subject:** Decks

Hi,

Decks for tomorrow's meeting. My MO is still reviewing and they may have some edits.

Serge

Ontario

MINISTRY OF
ENERGY

# Distribution Rates & Cost Mitigation

January 2017

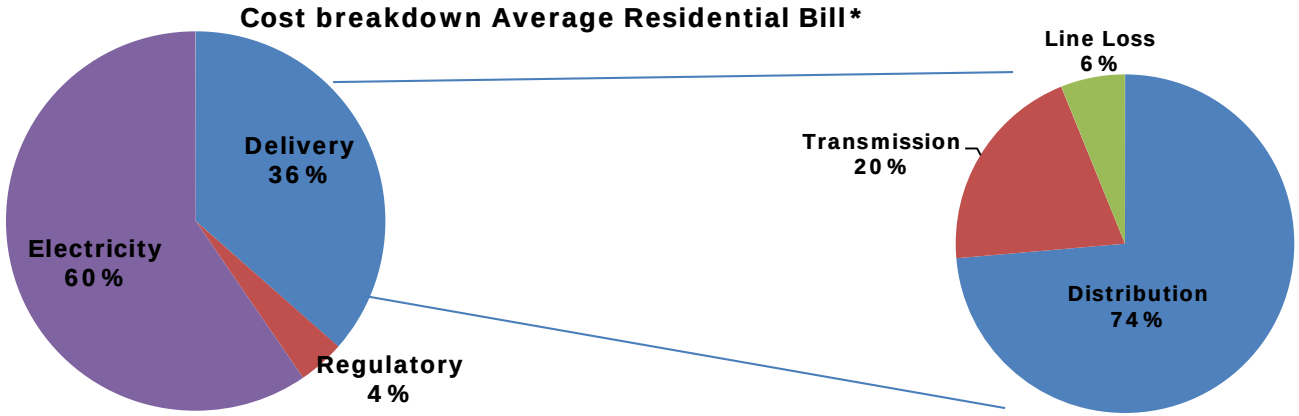
# Presentation Overview

- The delivery charge covers the cost of delivering electricity from generating stations across the province to end users.
  - It includes charges to allow Local Distribution Companies (LDCs) to recover the distribution costs associated with delivering electricity across low-voltage networks;
  - costs to cover transporting electricity over the high-voltage transmission network; and
  - costs to pay for any electricity that was lost during the delivery process.
- This presentation provides an overview of the delivery charge, including distribution & transmission rates; how distribution rates are set, who sets them and opportunities to contain those costs.
- The deck is divided into three main sections:
  1. Overview of Delivery Line Costs
  2. Existing Rate Mitigation Measures
  3. Further Rate Mitigation Options

# Overview of Delivery Line Costs

# Typical Consumer Bill – Delivery Line

- The "**Delivery"** line on a typical consumer bill accounts for roughly 25-35% of the total bill before taxes.
- Delivery covers the costs of getting electricity from generating stations across the province to homes and businesses and encompasses the sum** of three cost components of the electricity sector into one line item charge:
  - **Transmission:** The costs of moving electricity across high voltage lines from generating stations to the distribution system.
    - This cost is recovered through a variable charge that is approved by the OEB.
  - **Distribution:** The costs of moving electricity from the transmission system to homes and businesses.
    - This cost is currently recovered through both a variable charge and fixed charge, approved by the OEB. Distribution rates are moving to a fully-fixed charge over next 5 years.
  - **Line Loss:** The costs to recover electricity that is lost as heat when it is delivered over a power line.
    - Each LDC is assigned by the OEB a specific line-loss adjustment factor to reflect their loses particular to their assets. This factor is multiplied against the monthly electricity cost to determine the monthly cost.




** The combination of these charges into "Delivery" and their appearance on the bill are prescribed by O. Reg 275/04

* Toronto Hydro Bill @ 750Kwhs

# Delivery Line: Distribution Costs

- **Distribution costs** are the costs needed for LDCs to deliver electricity to local consumers over the lower-voltage networks operating at below 50 kV. Costs cover activities such as
  - Designing, building and maintaining overhead and underground distribution lines, poles, stations and local transformers,
  - Operating local systems (including reading meters, providing customer service, and emergency response)
  - Delivering electricity from the transmission system to homes and businesses, and
  - Regulated profit
- The cost to deliver electricity is not uniform and varies from LDC to LDC depending on a number of different cost drivers including:
  - Differences in business conditions and service territory among LDCs e.g. costs to service an urban service territory vs a rural service territory, ratio of overhead vs. underground wires, expanding customer base vs. stagnating or declining customers, relative age of assets; i.e. new system vs. old system;
  - Short-term rate impacts (both up and down) due to temporary additional charges known as “rate riders”; and
  - Management decisions with respect to investment and expenditure.
- In order to recover the costs to deliver electricity to its customer base LDCs charge customers distribution rates for the services that they provide.
  - These rates are regulated by the Ontario Energy Board.
  - As a result of investment requirements and other planning/policy decisions, distribution rates have been rising in recent years (see appendix).

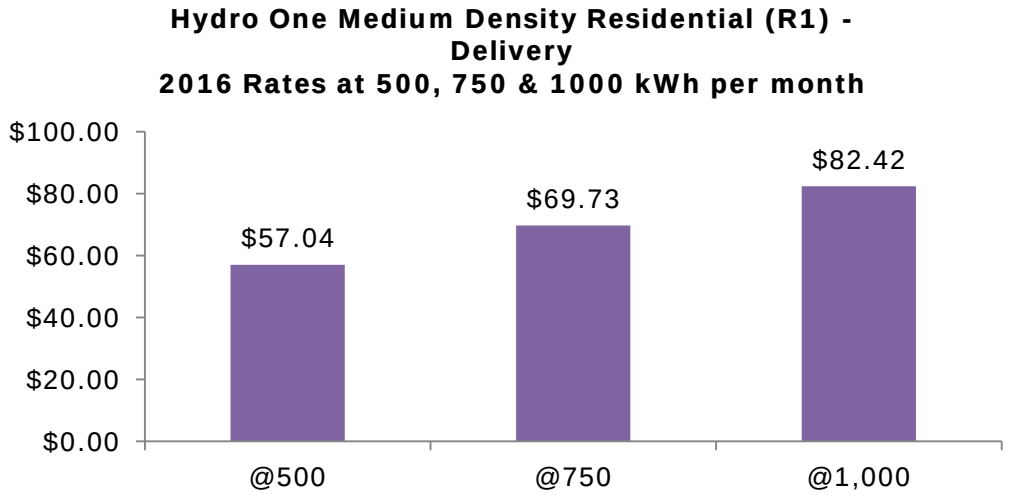
# Delivery Line: Transmission & Line Loss Costs

- **Transmission Costs** represent the costs associated with delivering electricity to LDCs through the high voltage transmission networks operating at 50 kV and above. Costs cover activities such as:
  - Designing, building and maintaining the high voltage transmission lines and towers, transformer stations, transmission corridors, and vegetation management,
  - Providing services and emergency response to maintain transmission system reliability,
  - Delivering electricity at high voltages to LDCs from generation sources,
  - Regulated profit.
  - Transmission rates charged to recover transmission costs from LDC residential customers are not uniform across the province. The vary based on how individual LDCs use the transmission system.
  - LDCs do not earn any profit or markup on transmission costs. These costs are simply passed through to customers distribution customers
- **Line Loss Costs** represent costs associated with distribution system losses. These losses occur during the distribution of energy through conductors and transformers. Losses can also occur through theft and metering errors, etc.
  - Distribution systems that operate at lower voltages and lower customer density have higher distribution losses. Therefore, line losses vary throughout the province.

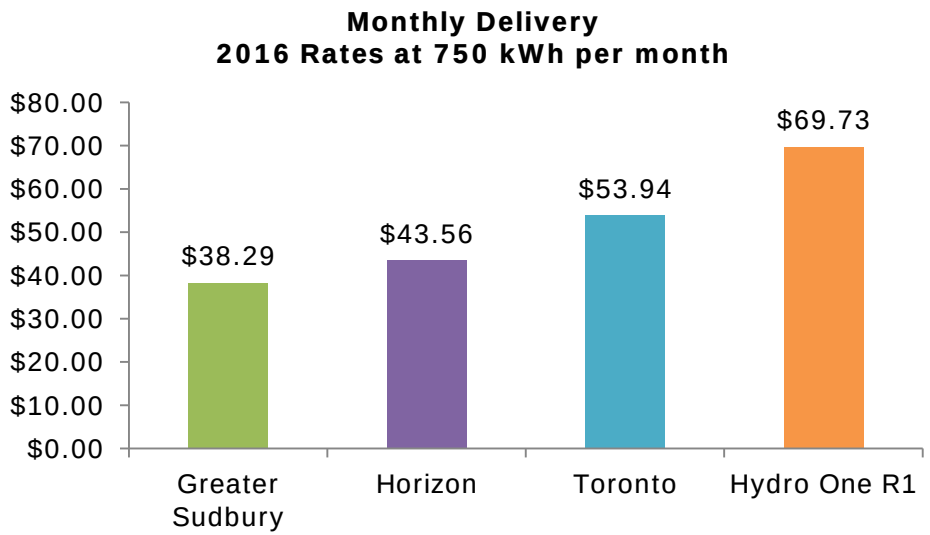
# Role of the Ontario Energy Board

- LDCs are licensed and regulated by the Ontario Energy Board (OEB), a quasi-judicial body responsible for regulating the electricity and natural gas sectors in the public interest.
- The OEB currently sets the rates for 69 LDCs across the province.
    - LDCs recover their costs (revenue requirement) through the distribution rates approved by the OEB.
- Costs to provide distribution services are unique to each LDC, which is why the OEB, through its rate-setting processes, undertakes comprehensive reviews of each utility's specific costs in order to set just and reasonable rates for each LDC.
- In addition to approving the amount of allowable costs LDCs can pass on to customers through rates, the OEB must also approve how those costs are allocated to the different customers of an LDC (i.e. residential, commercial, industrial), as well as the specific rates to recover those approved costs.
- The OEB uses an adjudicative process to set rates – see the slide "Setting Distribution Rates" in the appendix for more details on the process.

# Variation of Delivery Costs Across and Within LDCs

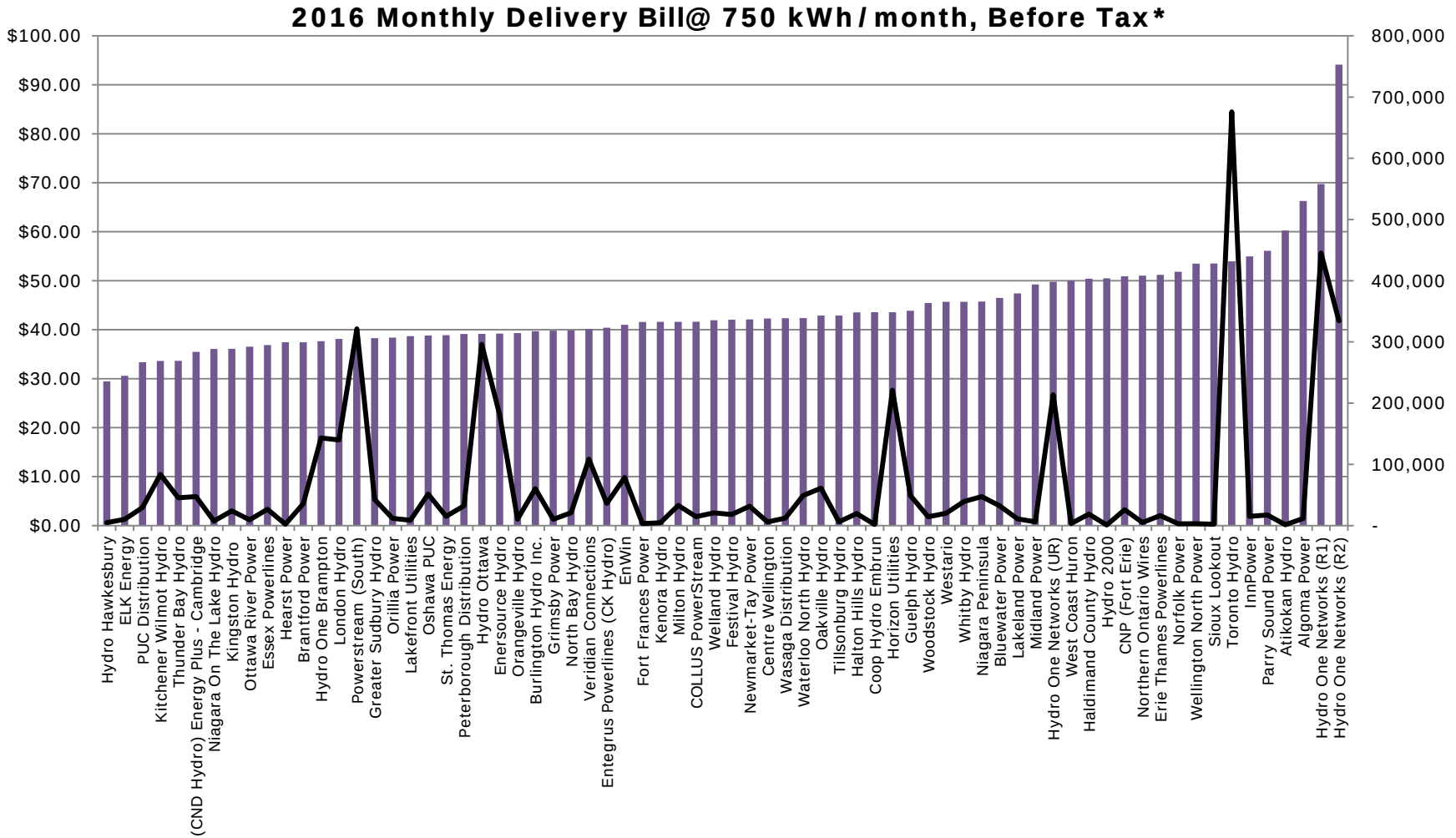



- Consumers within same LDC pay different monthly delivery charges:
  - The delivery charge includes costs that are both fixed and volumetric.
  - Delivery will vary for different customers depending on the total amount of kWhs consumed in a billing period.



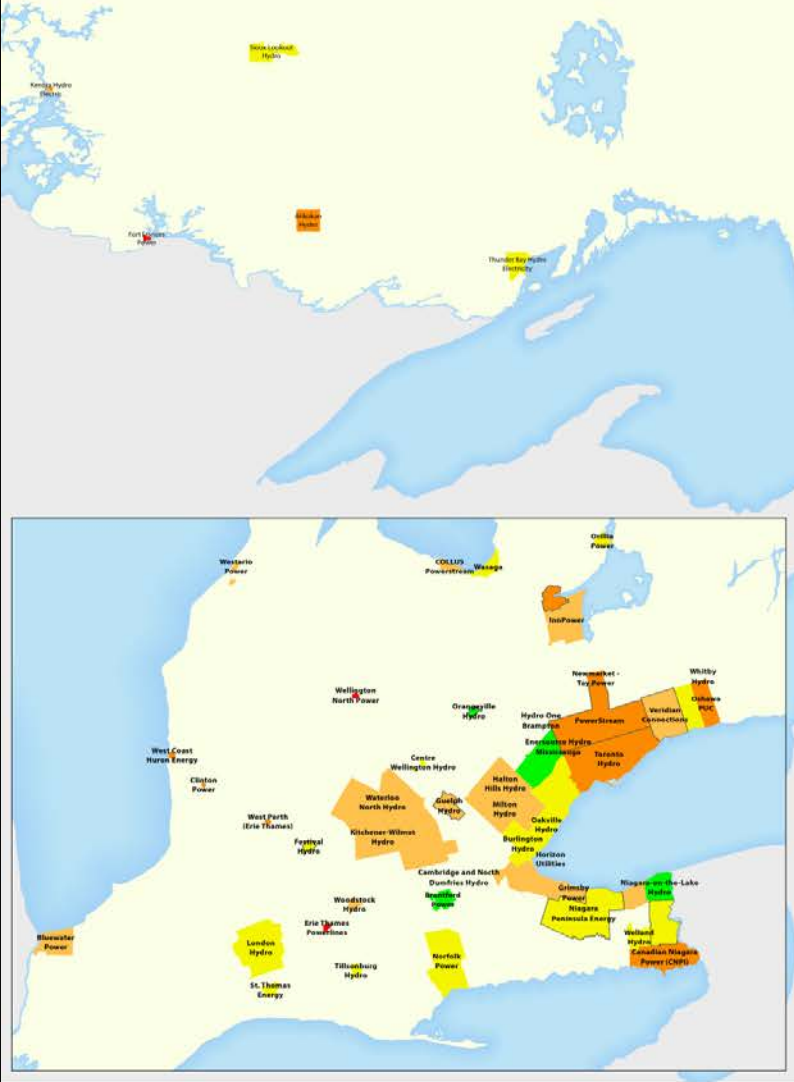

- Consumers with the same monthly consumption but served by different LDCs pay different delivery charges
  - The delivery charge can vary substantively for different LDCs, mostly due to the distribution cost component.
  - Approved revenue requirement for distribution rates, transmission rates and line loss factors are unique to each LDC.

# Wide Variation in Delivery Rates Across the Province




* Hydro One customer numbers are for 2016 and divided by rate class. Reflects RRRP as set for 2016 ($31.50)

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

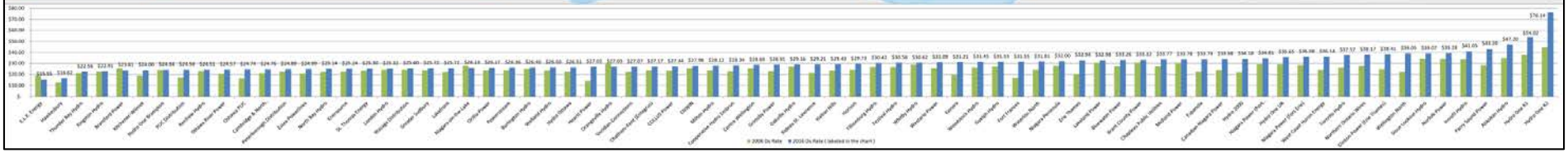
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# OEB Mandating Move to Fixed Distribution Rates

- By 2019, the variation of delivery costs across customers within the same LDC will level off, as the distribution charge (which makes up ~3/4 of the delivery charge) is moving to a fully fixed charge.
    - Currently, electricity distributors recover their costs through a combination of a fixed monthly charge and a volumetric charge based on kilowatt hours used, but the OEB is phasing in fully-fixed distribution rates. Most LDCs will have fully fixed rates within four years, with some variation to mitigate significant rate impacts for some customers.
- According to the OEB, fully fixed distribution rates will help achieve three main objectives:
    - It will enable residential customers to leverage new technologies, manage costs through conservation, and better understand the value of distribution services.
    - It is a fairer way to recover the costs of providing distribution service.
    - It will provide greater revenue stability for distributors, which will position them for technological change in the sector, remove any disincentive to promote conservation, and help with their investment planning.
- As LDCs transition to a single fixed charge to access the system, customers with the lowest consumption will pay more for distribution, while customers with high consumption will pay less.
- For customers of Hydro One Networks, the OEB approved a five-year transition to fixed distribution rates for its high density urban residential rate class (UR), and an eight-year transition for medium- and low-density residential (R1 and R2) and seasonal residential rate class customers.
    - This is to allow the impact of the change to be held at less than 10% for low volume customers at the $10^{th}$ percentile of consumption.
- The OEB is currently working on an initiative to look at the rate design of Commercial and Industrial Customers as well.

# Existing rate mitigation measures

# Rural or Remote Electricity Rate Protection (RRRP)

- There are existing rate-payer funded mechanisms in place to provide delivery charge protection to consumers who live in areas that are very costly to serve.
- The Rural or Remote Electricity Rate Protection (RRRP) is a rate subsidy intended to moderate charges for electricity distribution in lower density rural and remote areas where costs to serve customers are higher than for urban/more densely populated areas.
    - RRRP is provided to rural grid-connected residential customers served by Hydro One (R2 rate class) and to customers of Algoma Power.
    - RRRP also supports costs to provide electricity service to off-grid remote communities served by Hydro One Remote Communities, and three James bay communities connected to the grid (Fort Albany, Attawapiskat and Kashechewan).
- RRRP is governed by S.79 (2) of the Ontario Energy Board Act, 1998 (OEBA) which requires rate protection for prescribed rural and remote customers.
    - It also allows the government to determine cost protection, recovery, and rate classes through regulation (O.Reg 442/01).
- In the September 2016 Speech from the Throne*, the government announced an enhancement to RRRP to increase the amount of rate protection for Hydro One R2 customers. The cost of RRRP, including this enhancement, is expected to be about $290M annually.
    - As of January 1 2017, the RRRP subsidy supporting approximately 330,000 Hydro One R2 customers increased from $31.50/month to $60.50/month.
    - Hydro One customers classified as R2 have the highest distribution costs across the province.
- Costs to support the program are recovered through a regulated charge on all customers approved by the OEB and collected by the Independent Electricity System Operator (IESO) on all electricity used in the Province.
    - For 2017, an average residential consumer (750kWh/month) pays $1.58/month to contribute to RRRP.

# Other Rate Mitigation Programs

**Ontario Electricity Support Program (OESP)**

- The Ontario Energy Board (OEB) has developed the OESP, which provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements.
    - The OESP credit amount qualified customers receive is based on household income and household size.
    - OESP monthly credits range from $30-$50.

**The Low-Income Energy Assistance Program (LEAP)**

- LEAP, introduced by the OEB in January 2011, is a comprehensive province-wide strategy designed to help qualifying low-income consumers. The program includes:
    - Emergency financial assistance: A one-time grant towards your electricity or natural gas bill if you are temporarily unable to make ends meet in an emergency situation.
    - Special rules – Utilities have to follow special rules when dealing with customers with limited finances; for example, waiving security deposits, allowing longer payment times and more.

**Ontario Energy and Property Tax Credit (OEPTC)**

- OETPC provides low- to moderate-income individuals and families with relief on the sales tax they pay on energy and with their property taxes. Since July 2012, the OEPTC is paid monthly as part of the Ontario Trillium Benefit delivered through the income tax system. For the 2016 benefit year, qualifying individuals and families could receive a maximum benefit of $1,008 per year, and qualifying seniors could receive a maximum benefit of up to $1,148.

**Northern Ontario Energy Credit (NOEC)**

- NOEC provides targeted assistance to low- to moderate- income individuals and families living in northern Ontario who can be exposed to higher energy costs due to more severe winters and heavier reliance on more expensive home heating fuels. NOEC is paid monthly as part of the Ontario Trillium Benefit and is delivered through the income tax system. For the 2016 benefit year, qualifying individuals received up to $146 annually and families (including single parents), received up to $224 annually.

# Further Rate Mitigation Options

# Program Proposal: Delivery Charge Relief

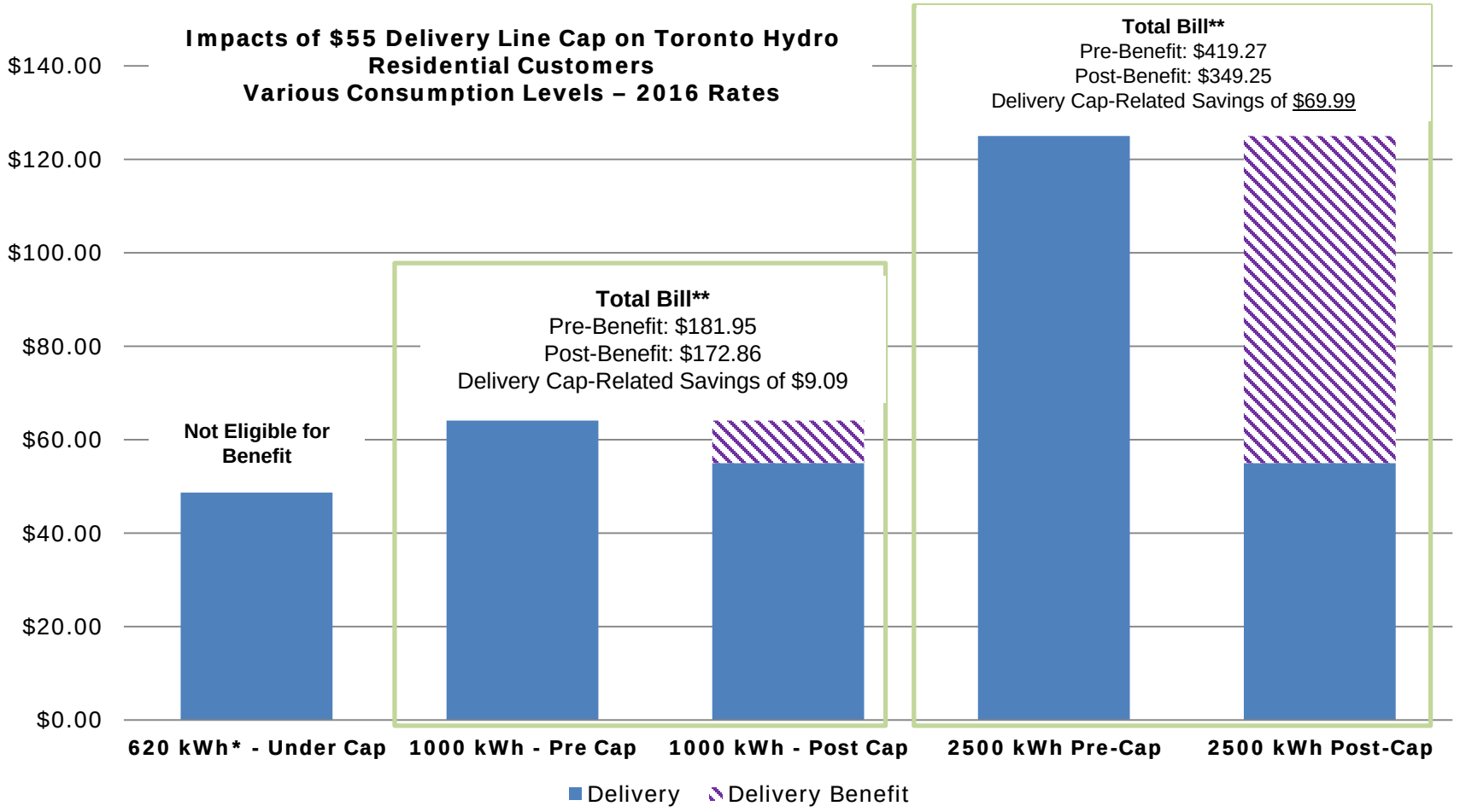
- To provide further relief for customers across the province, the province could create a 'customer-specific' program that would cap the delivery line cost.
- The proposed program would limit the amount an LDC can bill consumers for Delivery at a to-be-determined reasonable cost. Delivery costs that exceed the cap would be covered by support from the fiscal plan.
- The proposed program would target customers within the LDC territory based on their Delivery cost.
    - Delivery costs vary month to month and LDCs will need to keep track of the customers who will receive the receive the additional support.
- Eligibility for increased protection would be based solely on delivery charges above the established threshold and therefore would not be specific to any one LDC. All LDCs must be prepared to offer the program to some of their customers

o A delivery line item cap of **$55-$60** would align with what a Toronto Hydro customer consuming between 750-1000kWhs would pay in delivery costs (2016 rates).

- Additional information on fiscal projections and ratepayer impacts to be provided.

# Delivery Charge Relief: Ratepayer Impacts

- Below is an example of a Toronto Hydro customer at different consumption levels and the level of subsidy they would receive.




*620kWh is the average Toronto Hydro residential consumption level. ENERGY estimates 17.5% of Toronto Hydro consumers average >1000kWh/month.

** Includes Electricity, Delivery, and Regulatory Charges. Excludes HST and 8% rebate.



Ontario

MINISTRY OF ENERGY

# Delivery Charge Relief: Fiscal Considerations

- Setting a cap or threshold for maximum delivery charges is a more equitable approach to providing increased rate relief, as it is not specific to any one LDC and it targets rate protection for those with the highest delivery costs.
    - Eligibility for increased protection would be based solely on delivery charges above the established threshold and therefore would not be specific to any one LDC. All LDCs must be prepared to offer the program to some of their customers.
    - This program would be in addition to the existing RRRP program, which should remain as rate-payer funded protection for costs specifically driven by low-density.

**Risks**

- Costs and ratepayer impacts depend on the number of customers within each LDC whose delivery charges exceed the cap.
    - Costs to the tax base will fluctuate seasonally and will have year-over-year changes, creating uncertainty in forecasting. Ministry is preparing case study analysis.
    - Costs for LDCs to implement is likely material for many distributors to upgrade customer billing systems. Those costs would ultimately be passed back to the customers of those LDCs.
- There is a high risk of entrenching external subsidies, as there is no clear path to transition away from subsidies and toward a more sustainable, cost-based rate framework.

# Delivery Charge Relief: Implementation Considerations

- LDCs would track credit variances in a variance account and settle amounts with the IESO, which receives taxpayer funding from ENERGY/MoF in the same manner as the 8% rebate happens today.
    - While this new program would build on exiting transfer payment protocols in use under the ORECA, it would be complex for LDCs to implement, as CIS upgrades are likely needed.
    - OEB estimates that the implementation would take at least 6 months or more, following finalized regulations, given need to change customer billing systems and determine settlement procedures.
- This program structure could be temporary until the completion of the OEB-mandated move to completely fixed distribution costs, scheduled for 2019 (2020-2022 for Hydro One), as there would no longer be distribution cost variance between customers of the same LDC.

**Risks**

- New legislation would be required to establish this program. Legal and regulatory risks (particularly with regards to legal authority and to the Ontario Energy Board's role in setting rates and incenting efficiencies) require further analysis.
    - Capping delivery charges may impact OEB rate-setting processes and create disincentives towards utility productivity and performance improvements.
- Carrying costs for LDCs may also be a challenge for some LDCs with cash-flow constraints, and may affect debt-to-equity ratios.
- Providing a tax-based subsidy outside of exiting rate setting mechanism reduces incentives for customers and distributors to engage on operating costs and capital planning.

# Delivery Charge Relief: Options for Setting a Cap

- When implementing the program, setting the cap by linking with a specific LDC's delivery costs may be viewed as arbitrary.
- It could also create difficulties over time as the chosen LDC's rates (ex: Toronto Hydro) may change in unpredictable ways due to cost pressures unique to that LDC.
- A more robust effort to set a cap would be to link it to a specific rate level, relative to the spread of other rates in the province. Option include:
    - Setting the cap at the average of approved delivery charges for 1000kWh: **$53.46**
    - Setting the cap at a level where 75% of all approved delivery charges fall below for 1000kWh: **$58.17**
    - Setting the cap at a level equal to the lowest service territory currently receiving RRRP support for 750kWh: **$66.29**
- Various options and methods can be designed using simple or weighted rate averages and consumption thresholds.
- Selecting a level similar to Toronto Hydro's rates could satisfy the near-term policy intent while providing a reliable measure for adjusting the cap moving forward.
    - The OEB could be given authority to adjust the cap year-over-year based on the desired marker.

# Additional Option: Move RRRP to Tax-base

- RRRP is targeted at all customers who face the highest delivery costs in the province. Given that this program attempts to address a perceived inequity between rural and urban consumers, it could be funded by the tax-base rather than the rate-base.
- Bringing the current RRRP program to the taxbase would represent ~$290M/year in costs, with the OEB authorized to increase funding year-over-year in relation to the average distribution rate increase in Ontario.

| Year | RRRP($M) (Assuming 2.6% annual increase) |
|---|---|
| 2017 | $292 |
| 2018 | $300 |
| 2019 | $306 |
| 2020 | $315 |
| 2021 | $322 |
| 2022 | $329 |

- Doing so would save the average residential consumer (750kWh) $1.58/month in Regulatory charges.
- ENERGY recommends that the RRRP program *remain on the rate-base* to address the specific costs related to low density, with additional support coming from the tax-base through the proposed Delivery Charge Relief program.
    - RRRP provides funding to support off-grid communities serviced by Hydro One Remotes. Placing these costs on the tax-base may lead to an extensive re-evaluation of the funding framework for these communities, as well as other remote communities not serviced by Hydro One Remotes.

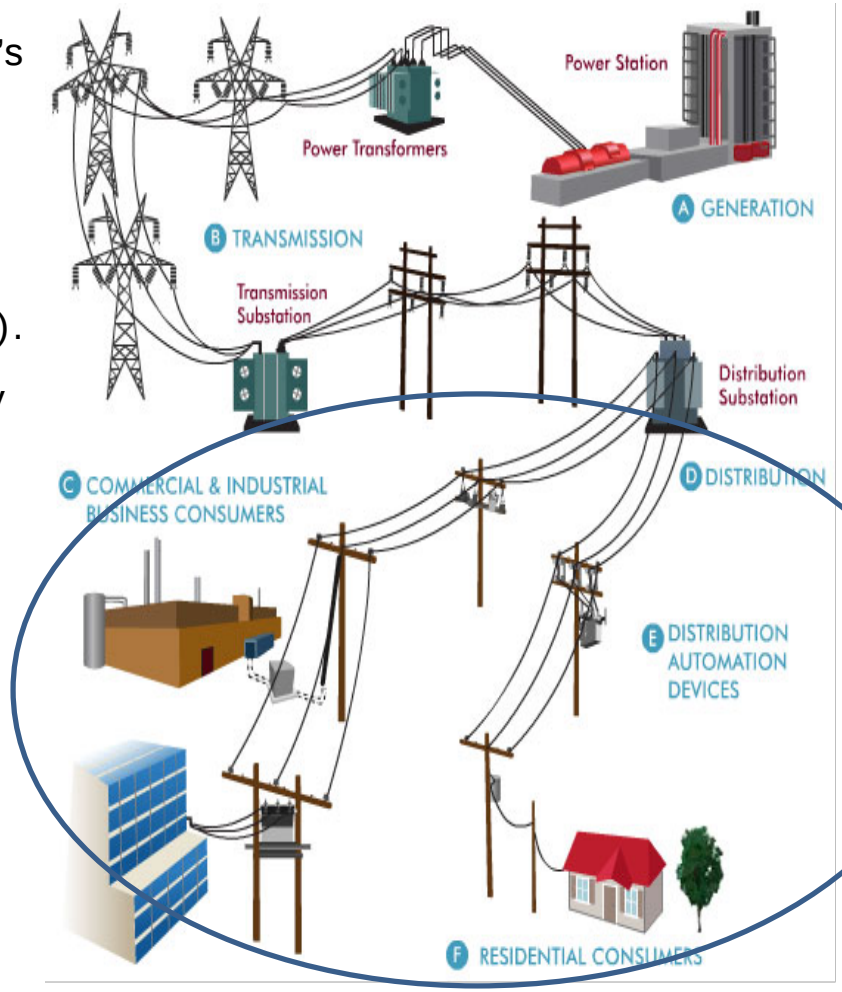
# Next Steps

- Complete fiscal and ratepayer impact analysis for delivery relief program
- Return with recommendation on a cap-setting mechanism and analysis of implementation considerations.
- Receive direction and prepare for Cabinet submission and legislation.

# Appendix A: General Information

# Ontario's Electricity Grid

- Ontario's transmission and distribution networks form the backbone of the province's electricity system, as they link electricity consumers with power generators.
- The **transmission system** is comprised of high voltage lines, towers, transformation and safety equipment used to transport electricity at voltages above 50 kilovolts (kV).
- The **distribution systems** deliver electricity to local consumers over the lower-voltage networks operating at 50 kV and below.
- Key elements in the distribution system:
  - Transformers to step power down from transmission to distribution voltage.
  - There are typically several voltage changes before the electricity reaches the consumer.
  - Overhead or underground lines.
- Electricity delivery to the customer is the responsibility of **Local Distribution Companies** (LDCs) e.g. Toronto Hydro.



# Sample Electricity Bill

**Electricity Charges:**
This is the cost of electricity supplied during the billing period and can be purchased either through a local distribution company or through a licensed electricity retailer.

**Regulatory Charge:**
This charge covers costs such as market regulation, management of the system, and rural and remote rate protection. It also includes the Standard Supply Service administration charge of $0.25 stated on a 30-day basis.

**8% Provincial Benefit:**
Effective January 1, 2017, customers receive a an 8% rebate equivalent to the provincial portion of the HST.

SAMPLE MONTHLY BILL STATEMENT

**Anytown Hydro-Electric Limited**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| HST | 18.07 |
| **8% Provincial Rebate** | (11.12) |
| **Total Amount** | **$145.95** |

**Delivery Charges:**
**Customer Service Charge**: A fixed charge for costs relating to meter reading, billing, customer service and account maintenance, and general utility operations.
**Distribution Charge**: A variable charge for costs of building and maintaining the distribution system, including overhead and underground power lines, poles, and transformer stations. .
**Transmission Charge**: A variable charge for the costs of transmitters to operate and maintain the high-voltage transmission system that carries electricity from generating stations to your utility.
**Loss Adjustment**
When electricity is delivered over a power line some is lost as heat. In calculating your electricity costs for the billing period, LDCs multiply the electricity cost by an OEB-approved adjustment factor to accounts for those losses.

# Local Distribution Companies – Key Facts

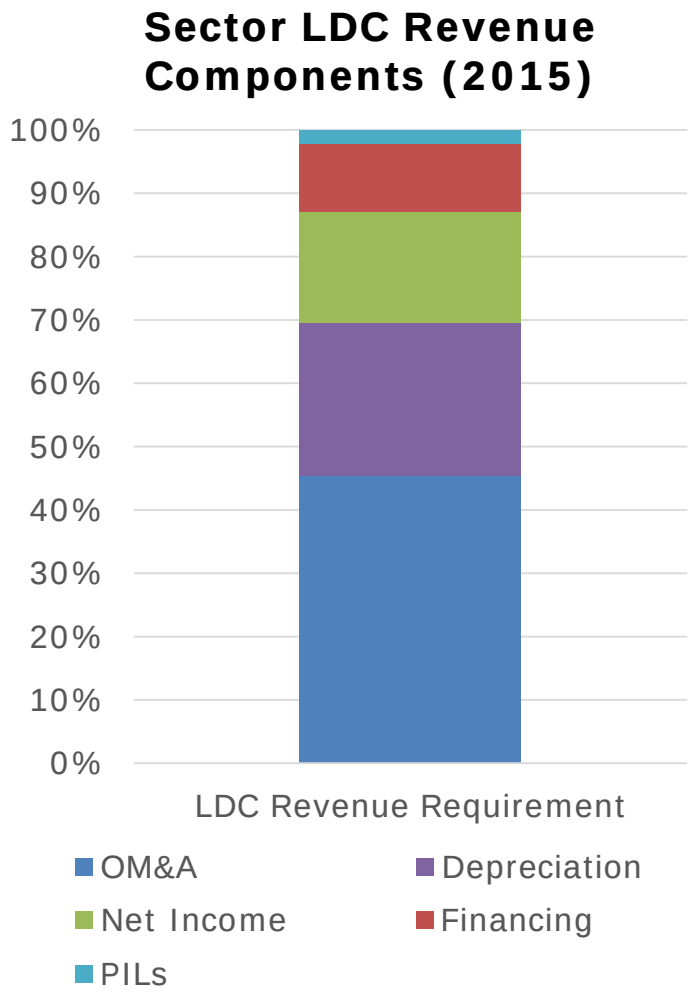
- There are currently 69 LDCs in Ontario that are rate-regulated by the OEB. 3 LDCs (Cat Lake Power, Dubreuil Lumber and Cornwall Street Railway Light) are licensed by the OEB, but are not rate-regulated.
- LDCs vary significantly in size:
  - Range from roughly 1,200 to 1.2 million customers (Hydro 2000 and Hydro One respectively)
  - The smallest 29 LDCs (36%) account for less than 4% of Ontario's customers (<13,000 customers).
- The distribution sector:
  - Serves 5 million customers (residential, industry, commercial / MUSH),
  - Has $48.7 billion in assets, and
  - Generates $3.6 billion in revenues.
- In addition to distributing electricity to customers through their 199,456 km of distribution lines, LDCs provide services such as: billing, outage management, overall customer contact, and conservation programs.

# Distribution Sector Cost & Performance Trends

- Like other components of Ontario's electricity system, distribution sector costs have risen as investments have been made to update and modernize system infrastructure.
    - Overall distribution sector revenues collected from customers have risen from $577.66 per customer annually in 2006 to $703.36 per customer annually in 2015 (21.8% increase).
    - For the typical residential customer* (750kwh/month), monthly distribution costs have risen from $24.49 in 2006 to $30.75 in 2016. Distribution costs represent 23% of the total average pre-tax residential bill.
- Over the same time period, distribution sector productivity and cost efficiency have decreased. This trend raises concern that customers are not realizing a net benefit from sector cost increases, as customers receive less value from the distribution portion of their bill.
    - OM&A costs per customer have increased on average from $235 in 2006 to $319 in 2015.
    - For the period 2002-2012, sector productivity has decreased by an annual average of -0.93% when including Hydro One and Toronto Hydro, the worst performers.
    - When compared to other utility services and neighbouring jurisdictional studies, Ontario's electricity distribution sector is the only one to realize a negative productivity rate.
- Over this time period, LDC consolidation has been the driving force behind sector restructuring and the search for efficiencies. However, the historical consolidation process has not appeared to deliver cost savings/efficiencies for consumers.
    - Customers of LDCs acquired by Hydro One in the first wave of consolidation (1999-2003) have seen distribution costs rise by up to 268% (Arkona, Ontario) when comparing 2006 rates to 2016.
- Policy direction on investments, including smart meters, have also contributed to increasing sector costs while driving broader system and social benefits.

*Simple average of monthly 750 kWh distribution bill, exclusive of taxes using OEB rates database, including H1 residential classes, but excluding 88 acquired LDCs.

# LDC Revenue Breakdown




- While there is considerable variation in this breakdown, on average LDC revenue components can be explained as follows:
  - **OM&A (46%):** Includes system operation & maintenance, customer service, billing/collections, regulatory expenses, salaries.
  - **Depreciation (24%):** Reflects accounting treatment of investments in system infrastructure (property, plant and equipment) and other assets. In proposing new investment, LDCs must justify the need and usefulness to the OEB.
  - **Net Income (17%):** Reflects income after PILs/taxes.
  - **Financing (11%):** Reflects interest expense.
  - **PILs or income tax (2%):** PILs expense or income tax expense for privately owned utilities.
- These costs do not include costs associated with operating unregulated affiliates. Any OM&A service costs shared between LDC and affiliate are prorated for inclusion in the ratebase.

*Source: 2015 OEB Yearbook of Distributors*
*Reflects total revenue of 71 LDCs*
*Some subsequently consolidated*

# Previously Considered Cost Mitigation Options

- The Ministry has considered distribution sector cost reduction options in the past which stemmed from determinations that certain aspects of the sector status quo were not appropriate or in the public interest.

- Ministry staff recommend not pursuing these options due to their contentious nature and the availability of more comprehensive solutions that can drive both cost reductions and system performance improvements.

    1. **Direct Consolidation Policy:** The Ministry could mandate LDC consolidation or provide additional incentives for voluntary consolidation in an attempt to reduce OM&A costs, leading to rate reductions for consumers.

    o Historical analysis reveals that, in general, consolidation has not led to the expected efficiency gains or cost reductions for affected customers. Hydro One, which has led the bulk of consolidation activity, is recognized by the OEB as one of the most inefficient LDCs in the province. Without appropriate regulatory incentives, consolidation transactions may not result in OM&A reductions to the benefit of customers.

    2. **ROE Reduction:** The Ministry could instruct the OEB to review its ROE policy in light of LDCs monopoly position and fixed distribution rates.

    o ROE is an established requirement of utility regulation and has been upheld by judicial review. Attempts to reduce ROE could be challenged in court. As well, as ROE is used by municipal shareholders to fund municipal services, this could lead to broader communication and stakeholder management issues.

    3. **Payments-in-Lieu of Taxes Policy:** The Ministry of Finance could restructure or eliminate the PILs regime to reduce the tax burden on LDCs, which would lead to cost savings for ratepayers.

    o PILs are a vital component of OEFC's debt retirement outlook. With the departure of Hydro One from the PILs regime and the ending of the debt retirement charge on residential bills, restructuring the PILs regime would impact OEFC's ability to service the debt and could impact Ontario's credit outlook.

- Performance-based options have the potential to indirectly incent consolidation (in a manner that returns benefits to consumers) and potentially reduce ROE in an equitable manner in the event performance expectations are not met.

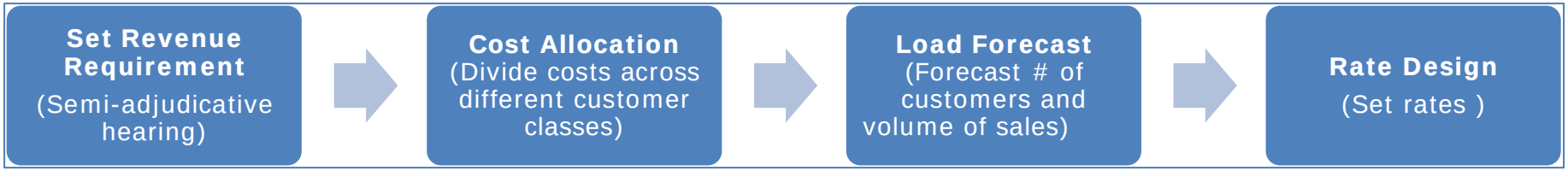
# RRRP Administrative Roles

| | |
|---|---|
| Ontario<br>**Ministry of Energy** | • The Province sets out the parameters of the program through legislation (s.79, OEB Act) and regulations (O. Reg 442/01, O. Reg. 445/07).<br>• These set out, among other things:<br>  • Eligible customers<br>  • Amounts available to Hydro One Networks and James Bay First Nations. |
| Ontario Energy Board | • The OEB determines annually the charge levied on all electricity consumption. |
| hydro one | • Hydro One Networks determines the monthly RRRP subsidy available to each of its customers based on amount of RRRP made available to it through Regulation, the number of R2 customers, and accounting for any surplus or deficit in its variance account. |
| ieso | • The IESO collects the charge from distributors across the Province and re-distributes to those distributors whose customers are eligible to receive the subsidy. |

# Appendix B: Distribution Rate-Setting

# Setting Distribution Rates

- Electricity distributors apply to the OEB to determine which costs they can pass on to their customers through rates (revenue requirement). The OEB has a mandate to set just and reasonable rates for LDCs that protect the interests of consumers while facilitating the maintenance of a financially-viable electricity industry.
- The OEB's "Renewed Regulatory Framework" is continuing to evolve how LDC's apply for rates to drive increased productivity. Principally there are two streams of electricity rate applications.
    - Cost-based applications (Cost of Service or Custom)– where the OEB sets rates based on an LDC's forecast of their costs and volumes, including a return on capital. Typically these are set for a 5 year term, with the 1st year establishing the base rates for the term.
    - Mechanistic Incentive Rates (IRM) that are based on the current approved rates plus inflation and any productivity improvement requirements. This methodology is used annually following a cost-based application until the end of the term.
- When establishing distribution rates, the OEB must evaluate a number of costs to establish the approved revenue requirement that is the basis for the rates charged by the LDC.
- Once the revenue requirement is established, the OEB must approve a fair allocation of those costs to the various customer classes (residential, commercial, industrial etc.)
- From that the OEB approves the specific rates charged to each customer class, which can include some fixed charges as well as ones based on volume.

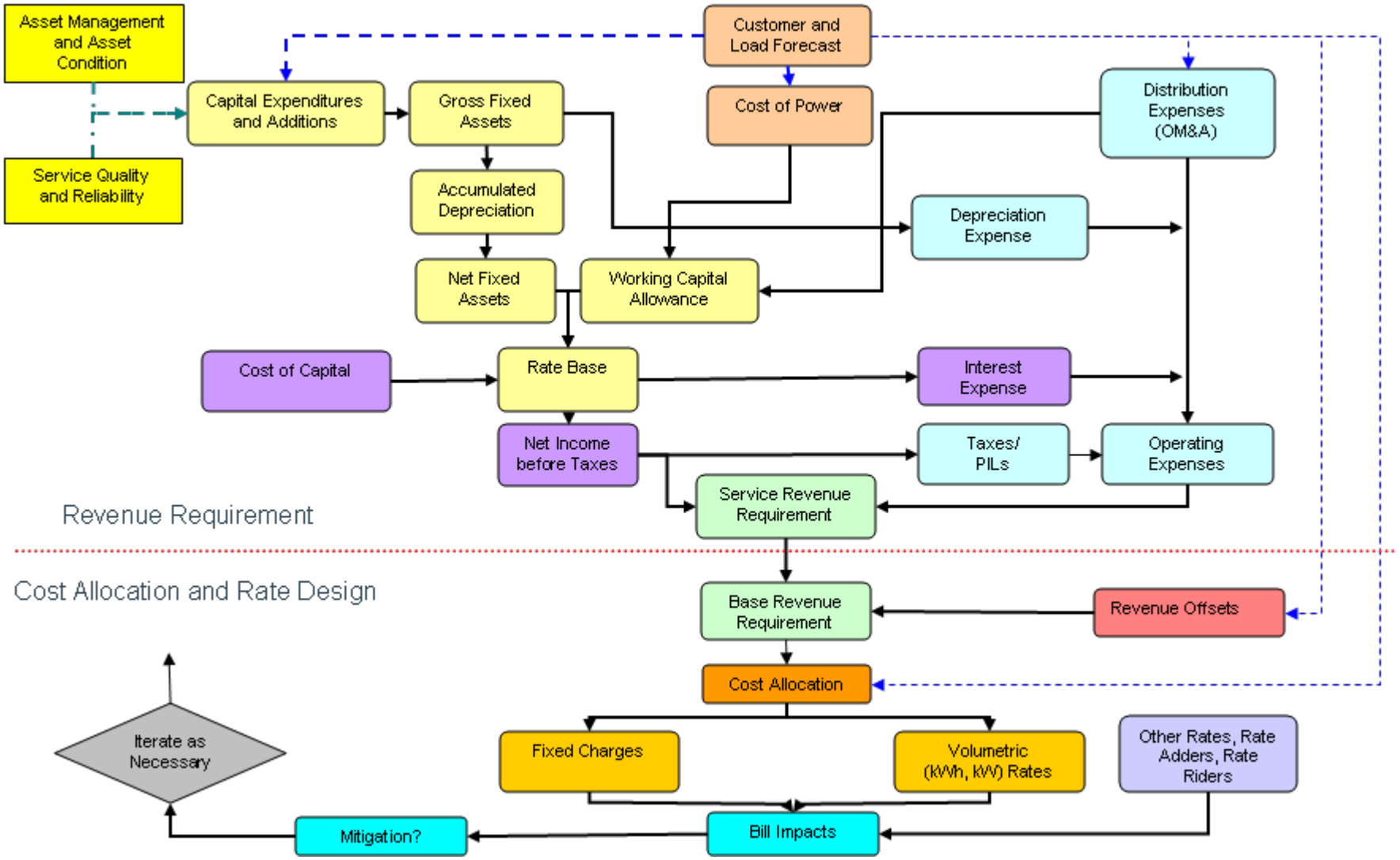


# Application Review Process

- The OEB reviews each rate application independently through a public process.
- The process begins with an LDC submitting an application and includes a number of activities at each stage.
- The process includes opportunities for various representatives (intervenors) to make arguments about the facts of the application.
- The application review process can vary from a few months to up to a year depending on complexity of the application.
    - Cost-based applications tend to take a longer review timeline than IRMs.
    - More complex applications will also typically have an oral hearing.

## LDC Rate Application Stages

# Cost of Service Rate Application Schematic



Ontario

MINISTRY OF
ENERGY

# Rate Mitigation Plan Options

## Working Draft

January 2017

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity costs for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants) and suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings).

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Options

- In recognition of the costs borne by ratepayers related to decarbonizing and modernizing the province's electricity sector, options for further rate mitigation include:

  1. Global Adjustment (GA) Financing

  2. Delivery Rate Relief

  3. Other Electricity Support Programs Funded Through the Tax-base:
     - Ontario Electricity Support Program (OESP);
     - Low-Income Conservation; and
     - First Nations Rate.

- As an alternative to the GA financing, in addition to Delivery Rate Relief and Other Electricity Support Programs Funded Through the Tax-base, other mitigation measures could be pursued, including:

  1. Enhanced Tax-based RPP Rebate (5%)

  2. Contract Renegotiations
     - Contract Extensions – Wind and Solar; and
     - Clean Energy Supply (CES) Contracts.

  3. Amortization of Conservation Expenses

# Proposed Options – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|---|
| 1. Global Adjustment (GA) Financing (Moderate) | - | 17.49 | 15.01 | 12.49 | 14.91 | 6.32 | 4.03 | Immediate |
| 2.. Delivery Rate Relief | - | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 3. Electricity Support Programs Funded through the Tax-Base | | | | | | | | |
| a. Ontario Electricity Support Program (OESP)* | - | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | Immediate |
| b. Low-Income Conservation | - | - | - | - | - | - | - | N/A |
| c. First Nations Rate | - | - | - | - | - | - | - | N/A |

**Other Options to Consider:**

| *$/750kWh* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|---|
| 1. Enhanced Tax-based RPP Rebate (5%) | - | 7.04 | 7.17 | 7.31 | 7.77 | 7.61 | 7.83 | Immediate |
| 2. Contract Renegotiations | | | | | | | | |
| a. Contract Extensions – Wind and Solar | - | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| b. Clean Energy Supply Contract | - | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 3. Conservation Amortization | - | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |

***Note**: Savings based on currently approved OESP rate set by OEB.
**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Class B includes small-medium enterprises (SMEs).

# Proposed Options – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|---|
| 1. Global Adjustment (GA) Financing (Moderate) | - | 17.49 | 15.01 | 12.49 | 14.91 | 6.32 | 4.03 | Immediate |
| 2.. Delivery Rate Relief | - | - | - | - | - | - | - | N/A |
| 3. Electricity Support Programs | | | | | | | | |
| a. Ontario Electricity Support Program (OESP)* | - | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | Immediate |
| b. Low-Income Conservation | - | - | - | - | - | - | - | N/A |
| c. First Nations Rate | - | - | - | - | - | - | - | N/A |

**Other Options to Consider:**

| *$/750kWh* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|---|
| 1. Enhanced Tax-based RPP Rebate (5%) | - | - | - | - | - | - | - | N/A |
| 2. Contract Renegotiations | | | | | | | | |
| a. Contract Extensions – Wind and Solar | - | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| b. Clean Energy Supply Contract | - | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 3. Conservation Amortization | - | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |

***Note:** Savings based on current OESP charge as set by OEB.

# Fiscal Impacts

| *$M* | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| 1. Global Adjustment (GA) Financing (Moderate) | TBC | TBC | TBC | TBC | TBC |
| 2.. Delivery Rate Relief | TBD | TBD | TBD | TBD | TBD |
| 3. Electricity Support Programs | | | | | |
| a. Ontario Electricity Support Program (OESP)* | - | 162 | 225 | 279 | 323 |
| b. Low-Income Conservation | - | 60 | 60 | 60 | 60 |
| c. First Nations Rate | - | 18 | 18 | 18 | 18 |

**Other Options to Consider:**

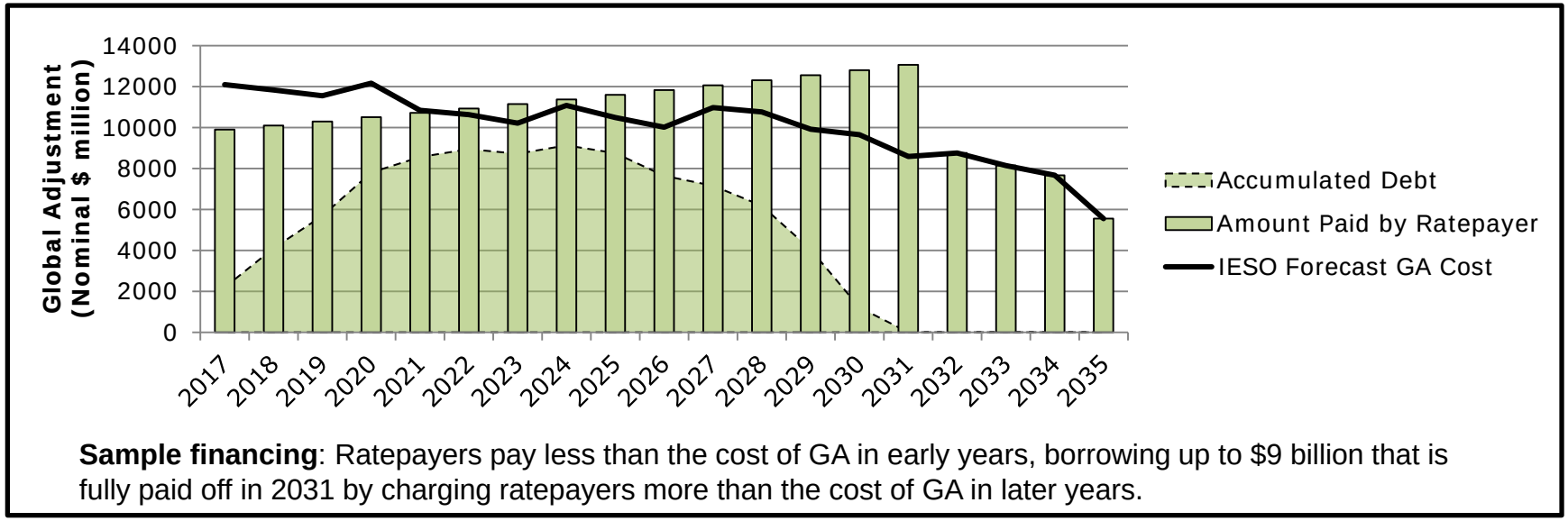
| *$M* | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| 1. Enhanced Tax-based RPP Rebate (5%) | 169 | 699 | 679 | 732 | 724 |
| 2. Alternative to GA Financing – Contract Renegotiations | | | | | |
| a. Contract Extensions – Wind and Solar | - | - | - | - | - |
| b. Clean Energy Supply Contract | - | - | - | - | - |
| 3. Conservation Amortization | - | - | - | - | - |

***Note:** Includes costs of program expansion and various assumptions as detailed on relevant slides.
****Note:** Risk to fiscal plan of up to $240 million annually (foregone net income) if OPG is unable to reach more aggressive operational efficiency targets.

**Source:** Ministry of Finance, Energy

# 1. Global Adjustment (GA) Financing

- It is proposed that the amount of global adjustment (GA) paid by ratepayers in each year over the forecast period is set at a fixed amount and money is borrowed to make up the remainder of the GA cost in each year.
- Starting on January 1, 2017, the amount of GA paid by ratepayers is set at a value lower than the true cost of GA in 2017 and is increased according to a pre-defined schedule until the debt has been paid off.
- GA costs will be “smoothed” over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected actual cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- All analysis is based on forecasts from Independent Electricity System Operator (IESO), assumes a 5% annual borrowing interest rate and an inflation rate of 2% per year.

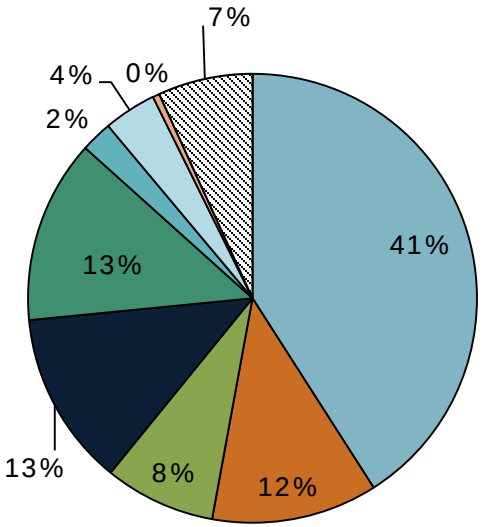



**Sample financing**: Ratepayers pay less than the cost of GA in early years, borrowing up to $9 billion that is fully paid off in 2031 by charging ratepayers more than the cost of GA in later years.

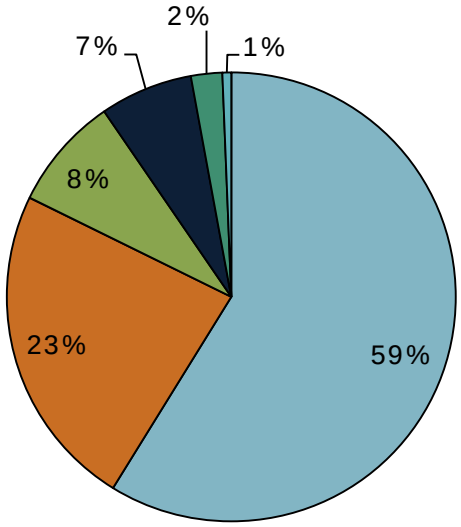
# 1. GA Financing – Cost Breakout

- The allocation of GA costs in 2016 is compared to the proportion of generation in the graph below.
- This cost breakdown will evolve over time as 2,181 MW of contracted generation comes online in the coming years.

**2016 GA Cost: $12.3 billion**




**2016 Generation: 155 TWh**




| | GA ($M) | Gen. (TWh) |
|---|---|---|
| Nuclear | 5,053 | 91 |
| Hydro | 1,473 | 36 |
| Natural Gas | 985 | 13 |
| Wind | 1,552 | 10 |
| Solar | 1,630 | 3 |
| Biomass, Landfill and Byproduct | 278 | 1 |
| Conservation | 467 | |
| IEI Program | 60 | |
| OEFC* | 842 | |

*OEFC indicates the cost of generator contracts managed by the OEFC which include contracts for natural gas, hydro and biomass generators.
** Conservation measures, not quantified here, serve to reduce Ontario energy demand. Actual electricity generation would be larger than 155 TWh in the absence of conservation programs.

# 1. GA Financing – Options

1a. Moderate / GA Financing

- The amount of GA paid by ratepayers in 2017 is lowered by $3.1 and $3.3 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively.
- Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

1b. Moderate / GA Financing with Delayed Increase

- The starting GA payment from all ratepayers in 2017 is lowered by $1.1 and $1.4 billion, ratepayer payments *decrease* in the short term to keep residential bills relatively flat, then increases at 3% each year – up to a maximum of $2 billion above the true cost of GA – until the borrowed money is paid back over a 25 and 30 year financing period respectively.

Low / GA Financing (see in Appendix)

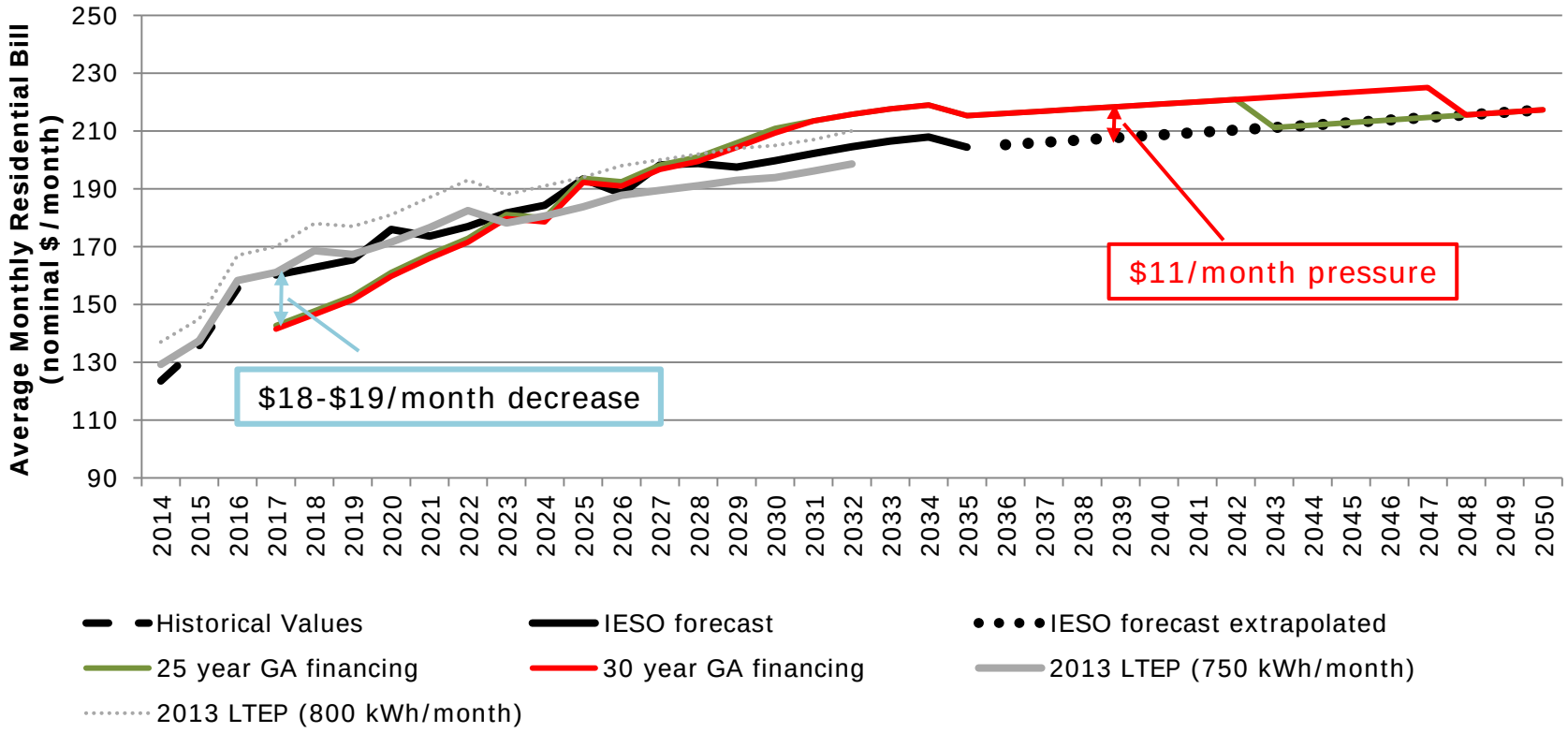
- The amount of GA paid by ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off.
- Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

High / GA Financing (see in Appendix)

- The amount of GA paid by ratepayers in 2017 is lowered by $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively.
- No limit is placed on the amount charged to ratepayers above the true cost of GA.

# 1a. Moderate / GA Financing – Impact on Residential Electricity Bills

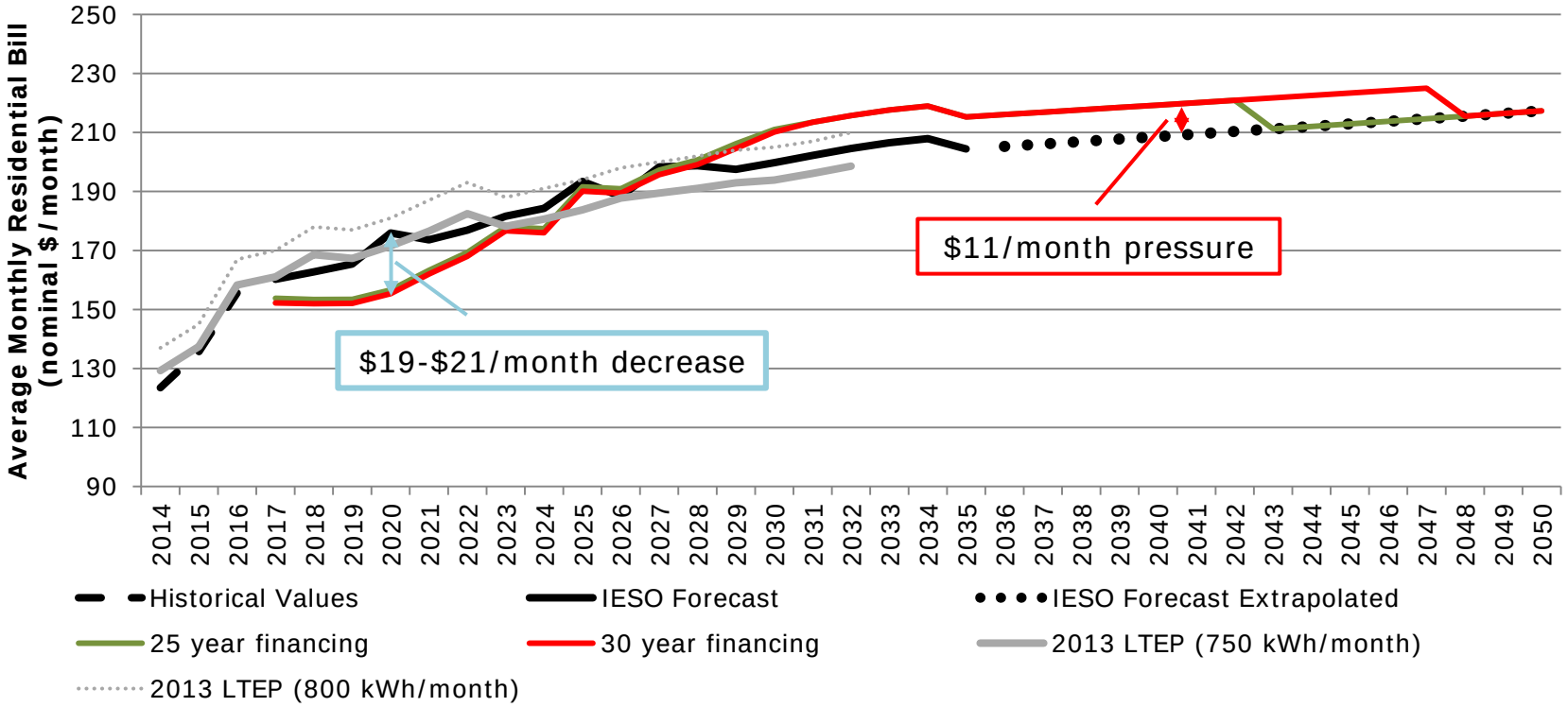
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered by $3.1 billion (green line) and $3.3 billion (red line) and increases at 2% each year – up to a cap of no more than $2 billion more than the true cost of GA in any year – until the borrowed money is paid back in 25 and 30 years respectively.




- By **borrowing up to $19-$23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $17-$19/month** at the cost of **increased future electricity bills over 14-19 years of up to $11/month** above the true cost of electricity production.

# 1b. Moderate / GA Financing with Delayed Increase in Payments – Impact on Residential Electricity Bills

- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $1.1 billion (green line) and $1.4 billion (red line), ratepayer payments *decrease* in the short term to keep residential bills relatively flat, then increases at 3% each year – up to a maximum of $2 billion above the true cost of GA – until the borrowed money is paid back over a 25 and 30 year financing period respectively.




- By **borrowing up to $19-$23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $19-$21/month** at the cost of **increased future electricity bills over 14-19 years of up to $11/month** above the true cost of electricity production.

# 1. GA Financing – Accounting (cont'd)

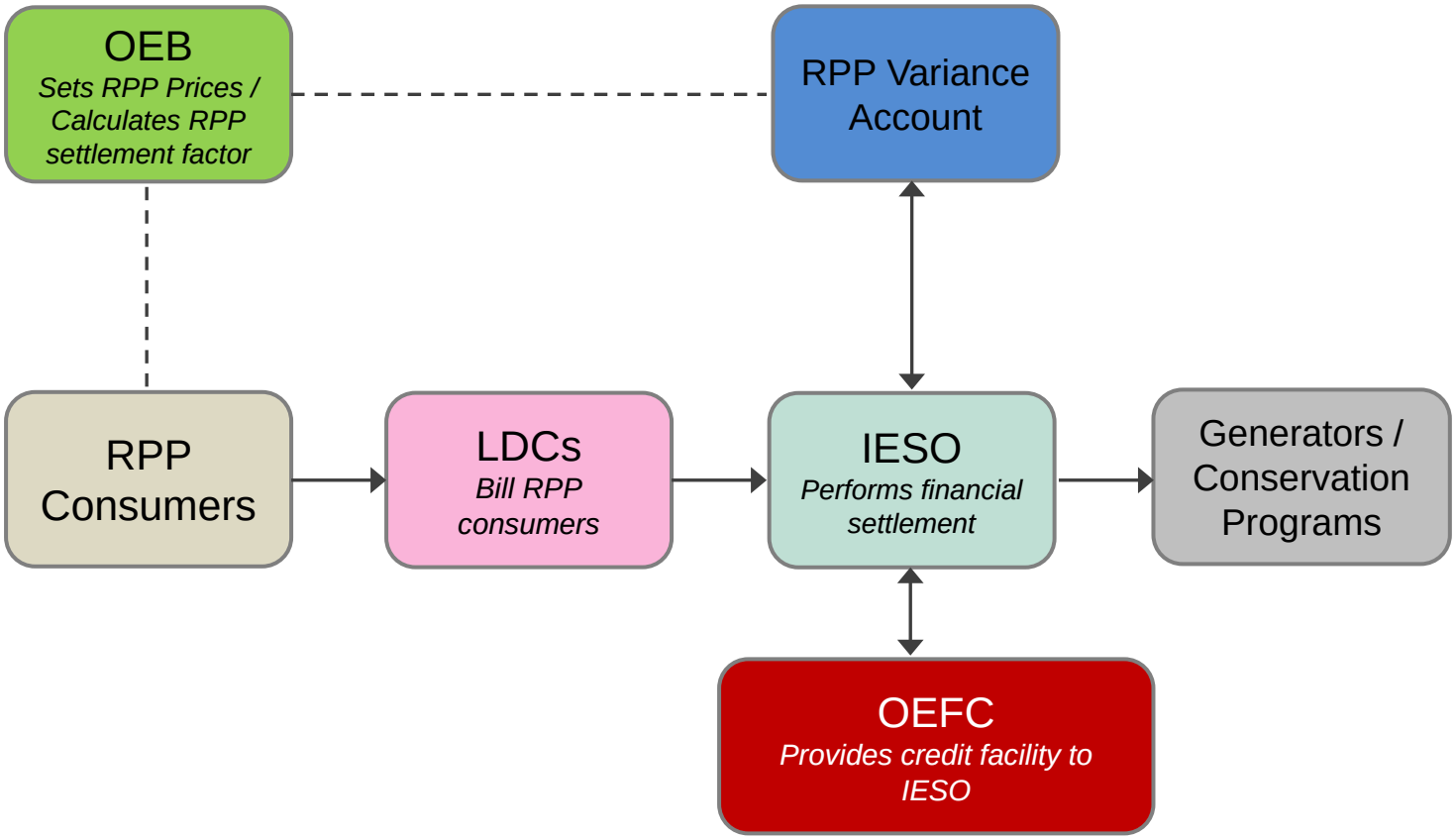
**Considerations**

- ENERGY continues to work with LSB, IESO, MOF/OFA, TBS and external accountants to identify legislative, regulatory, borrowing and accounting requirements associated with GA financing option.
  - Ongoing analysis on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk (i.e., consolidation).
  - Historically electricity sector financing has been conducted by the Ontario Financing Authority (i.e., managing OEFC's stranded debt and borrowing on behalf of IESO).
  - The significant amount of additional Provincial borrowing needed to finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating and overall borrowing capacity.
  - The Auditor General (AG) may comment on the appropriateness of financing the Global Adjustment and/or on the need to consolidate any financing on the Province's books.

- Discussions have broadly focused on:
  - Consolidation risks;
  - Creating an "asset" (and confirm that it meets accounting requirements);
  - Identifying who will hold the asset(s), this could include:
    - Province (e.g., OEFC, etc);
    - IESO;
    - LDCs; or
    - New entity.
  - Determine the source of the financing (e.g., third party, OFA, IO, etc)
  - Exploring different recovery / administrative options (e.g., DRC, RPP, etc)

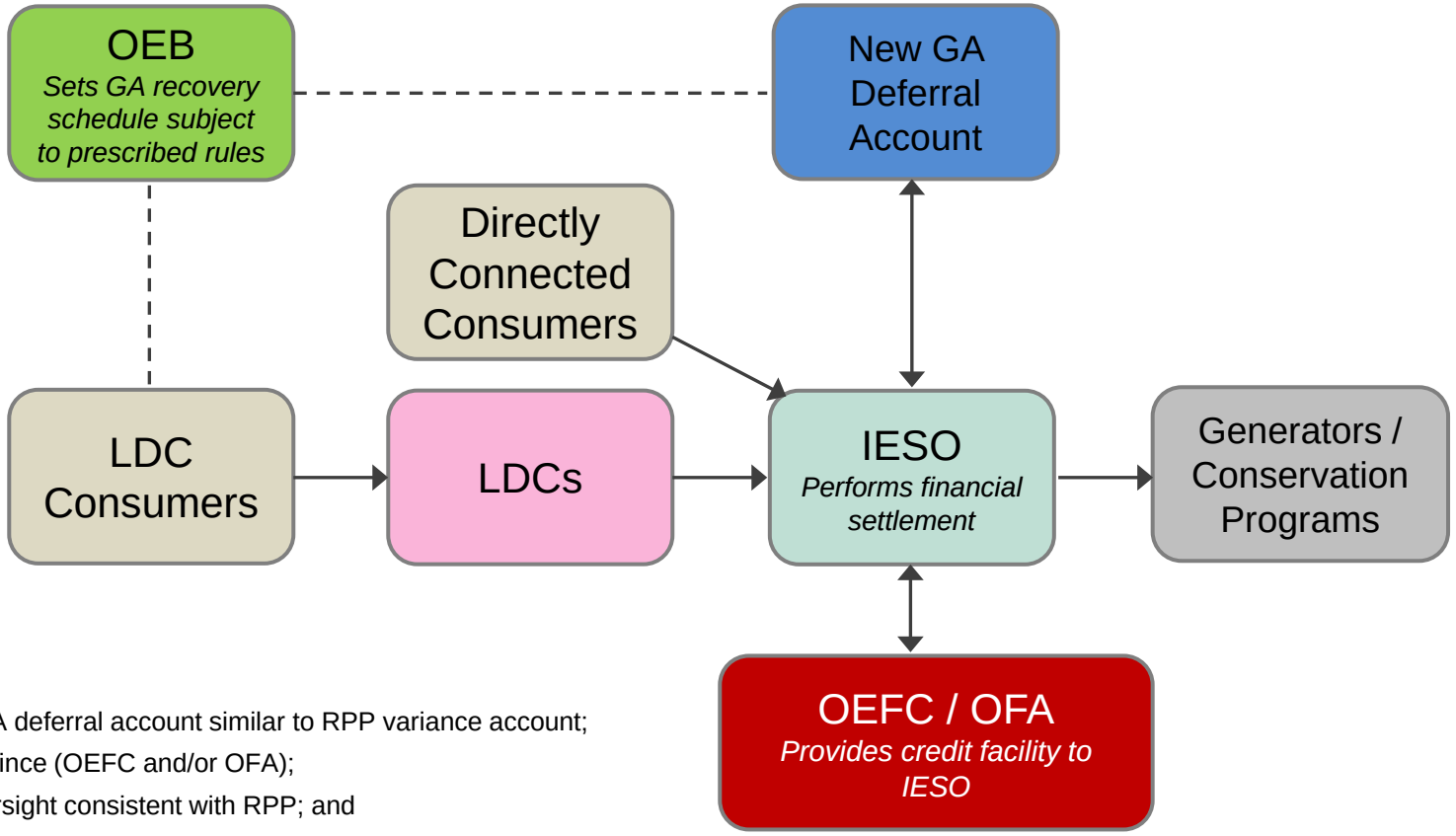
# 1. GA Financing – Current Regulated Price Plan (RPP) Variance Recovery

- The diagram outlines current Regulated Price Plan (RPP) structure and related flow of funds.



# 1. GA Financing – Recovery Approach (Option 1)

- The diagram outlines an option that is a variation on the current RPP approach.

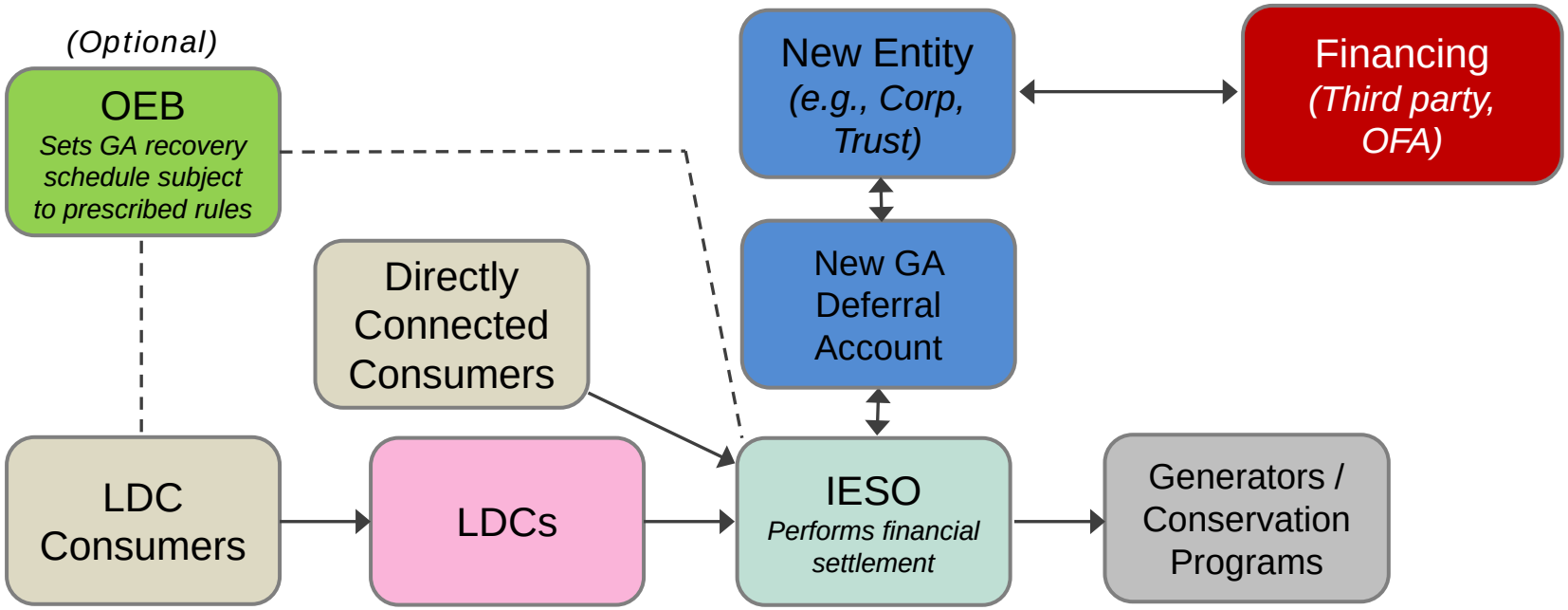



**Key Assumptions**

- Establish an new GA deferral account similar to RPP variance account;
- Financing from Province (OEFC and/or OFA);
- OEB regulatory oversight consistent with RPP; and
- GA Financing available to all consumers.

# 1. GA Financing – Recovery Approach (Option 2)

- The diagram outlines an alternative approach that introduces a new arms-length entity.




**Key Assumptions**

- GA Financing available to all consumers;
- Establish a new arms-length entity (e.g., corporation, trust, etc.) with trustees or a board of either public sector employees or stakeholders / bondholders;
- Purpose of the entity in legislation is to recover deferred GA amounts over 25-30 years from electricity consumers (i.e., ensure guaranteed repayment);
- Financing either through OFA or could be independent or from Province (TBD); and
- Set up outside of the OEB construct (i.e., not regulated). Alternatively, light touch regulatory oversight similar to RPP.

# 1. GA Financing – Considerations (cont'd)

**Considerations**

*Legal:*

- Legislation would be required to authorize the financing proposal.
  - Amendments to the *Electricity Act, 1998* (EA) could authorize the financing of certain costs within or part of the GA. However, whether any other legislation requires amendment is not known at this time.
  - The GA regime currently provides that "true costs" represent the true costs of making payments to generators or counter parties to contracts, not the incurring of discretionary financing or interest costs.
  - Considerations such as the need to analyze legal risks or the need to address costs retroactively (if the proposal requires a January 1, 2017 start) could add to the legal and drafting complexity. Further legal analysis is required.

# 2. Delivery Charge Relief – Background

- The **Delivery** line on a typical consumer bill accounts for roughly 25-35% of the total bill before taxes.
- Delivery covers the costs of getting electricity from generating stations across the province to homes and businesses and combines three cost components of the electricity sector into one line item charge:
  - **Transmission:** The costs of moving electricity across high voltage lines from generating stations to the distribution system. This cost is recovered through a variable charge that is approved by the OEB.
  - **Distribution:** The costs of moving electricity from the transmission system to homes and businesses. Depending on the LDC, distribution costs makes up about 60% to 80% of the Delivery line.
    - This cost is currently recovered through both a variable charge and fixed charge, approved by the OEB. Distribution rates are moving to a fully-fixed charge over next 5 years.
  - **Line Loss:** The costs to recover electricity that is lost as heat when its delivered over a power line, as well as power theft. Each LDC is assigned by the OEB a specific line-loss adjustment factor to reflect their loses particular to their assets. This factor is multiplied against the monthly electricity cost to determine the monthly cost.
- To help mitigate delivery costs, the Province has expanded the Rural or Remote Protection Program (RRRP) to further reduce distribution costs for rural customers across the province.
  - Starting on January 1 2017, 330,000 Hydro One low density (R2 class) customers will receive $60.50 per month in RRRP to bring their total Delivery line costs to roughly $95 for 1,000 kWh/month.

SAMPLE MONTHLY BILL STATEMENT

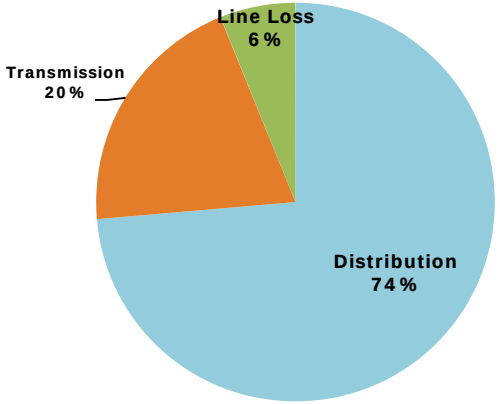
**Anytown Hydro-Electric Limited**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

| Your Electricity Charges | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| HST | 18.07 |
| **8% Provincial Rebate** | (11.12) |
| **Total Amount** | **$145.95** |

**Cost breakdown of Delivery Line for an Average Residential Bill***




* Toronto Hydro Bill @ 750Kwhs

# 2. Delivery Charge Relief – Proposed Program Overview

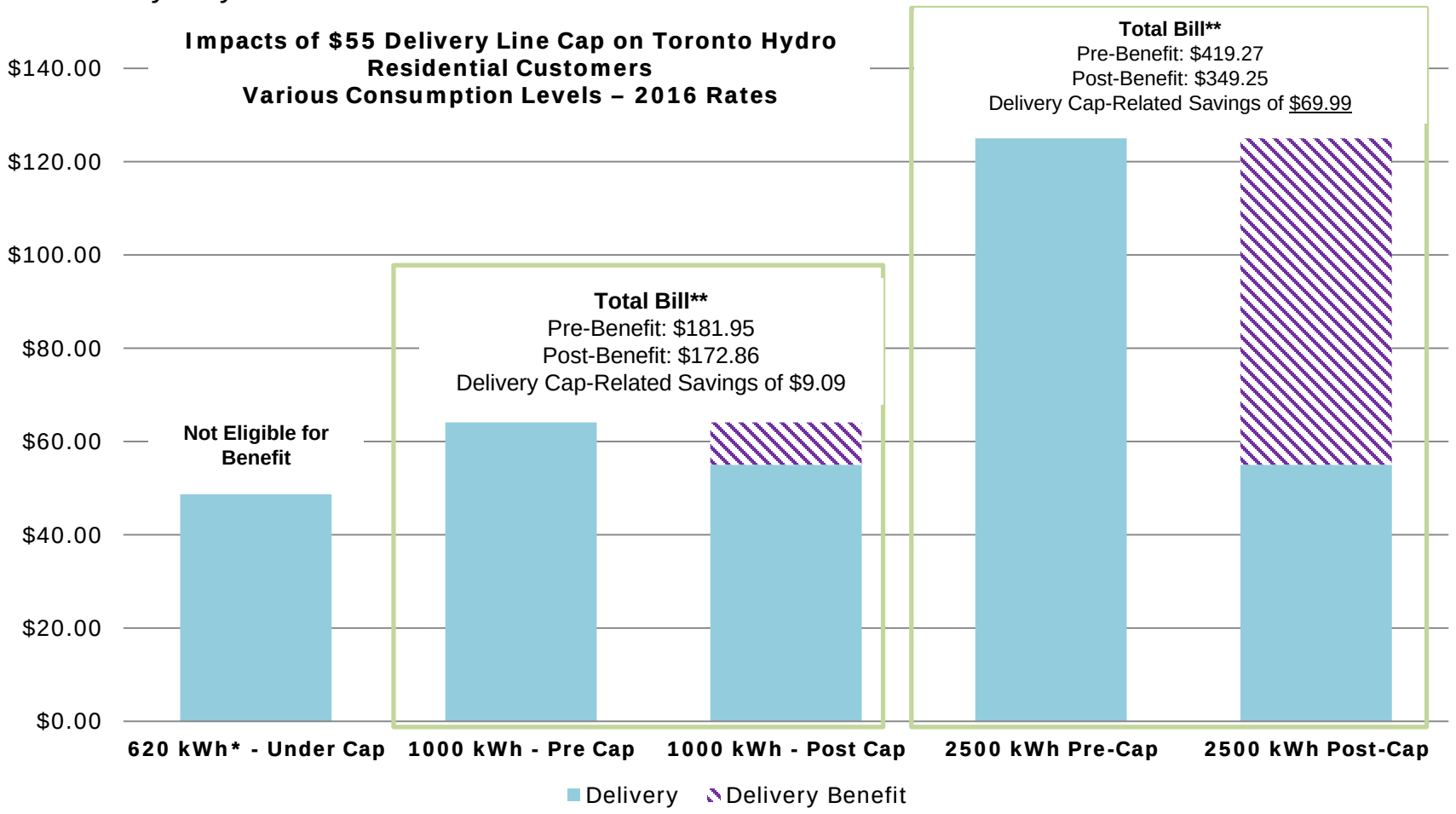
- To provide further relief for customers across the province, the province could create a ‘customer-specific’ program that would cap the delivery line cost.
- The proposed program would limit the amount an LDC can bill consumers for Delivery at a to-be-determined reasonable cost. Delivery costs that exceed the cap would be covered by support from the fiscal plan.
- The proposed program would target customers within the LDC territory based on their Delivery cost.
  - Delivery costs vary month to month and LDCs will need to keep track of the customers who will receive the receive the additional support.
- Eligibility for increased protection would be based solely on delivery charges above the established threshold and therefore would not be specific to any one LDC. All LDCs must be prepared to offer the program to some of their customers

**Considerations**

- Costs and ratepayer impacts depend on the number of customers within each LDC whose delivery charges exceed the cap.
  - Costs will fluctuate seasonally and will have year-over-year changes, creating uncertainty in forecasting. Ministry is preparing case study analysis.
- There may be implementation challenges for some LDCs and could take them up to 6 months to implement the program.
- Capping delivery charges may impact OEB rate-setting processes and create disincentives towards utility productivity and performance improvements.

# 2. Delivery Charge Relief – Proposed Program Overview (cont'd)

- Below is an example of a Toronto Hydro customer at different consumption levels and the level of subsidy they would receive.




*620kWh is the average Toronto Hydro residential consumption level. ENERGY estimates 17.5% of Toronto Hydro consumers average >1000kWh/month.

** Includes Electricity, Delivery, and Regulatory Charges. Excludes HST and 8% rebate.



Ontario

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# 3a. Ontario Electricity Support Program (OESP) Expansion

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills.
- The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices.
- OESP funding is collected from a charge levied on all electricity ratepayers. Based on current level of program up-take and funding collection, OESP program benefits could be increased across the board by 50%. This would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year);
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year); and
  - Indigenous and Métis consumers would also see benefit increases at the same level as those with electric heat and medical devices.
    - The Ministry is also considering options to support a “Delivery” line credit for Indigenous consumers. This would cost ~$18 million/year (Option 2d on slide 8) and would save Indigenous consumers between $75 and $100/month.
- Greater focus and support can be placed on lower income Ontarians by funding OESP through the tax base. This would also reduce costs for all consumers as a result of eliminating the OESP charge.
  - Average residential customer savings: $0.83/month; and
  - Average industrial customer savings: $1.10/MWh.

# 3a. OESP Expansion – Fiscal Impacts

- Table below shows estimate of program costs up to 2022:

| Year | OESP Status Quo($M) | +50%($M) | TOTAL ($M) |
|---|---|---|---|
| 2017 | $108 | $54 | **$162** |
| 2018 | $150 | $75 | **$225** |
| 2019 | $186 | $93 | **$279** |
| 2020 | $215 | $108 | **$323** |
| 2021 | $243 | $122 | **$365** |
| 2022 | $272 | $136 | **$408** |

- 2017 program costs are based at current program sign-up rate – 30% of eligible consumers. Cost projections assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
- At the time of program design, it was estimated that 40-50% participation would be high for an application-based program delivered through electricity bills. However OESP can be enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).
- OEB is currently exploring options for simplifying the OESP process, including exploring options with MCSS on auto-enrollment options, discussing options to eliminate wet signature consent forms with the federal government, and working with partners to do open houses to better reach vulnerable consumers.

# 3a. OESP Expansion – Considerations

- **Framework:** New legislation would be required to establish and define the parameters of a tax-based OESP. This may reveal additional considerations, including possible assessment as a tax credit.
- **Implementation:** Financial flow-through mechanisms would need to be considered in consultation with IESO and LDCs. Likely to be modeled after processes used for the Ontario Rebate for Electricity Consumers (OREC).
- **Alternative Delivery:** If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible, and could expand coverage to the ~142,000 low-income households that do not receive an electricity bill.
- **Transition to Social Assistance:** Moving OESP to the taxbase can be a transitional step in folding this program into a reform of social and disability assistance programs and enhancement of MCSS' Social Assistance Management System moving forward.
- **Additional Enhancements:** The enhanced credit could be expanded to include additional eligibility categories of customers. For example, a new "Low Density Consumer" category could be introduced that provides Hydro One R2 and/or R1 customers (highest distribution rates) who are already OESP eligible with the enhanced credit.
- **Variance Account:** The OEB has been collecting program funding in excess of program costs and has accrued a positive balance. This balance must be addressed when moving to the tax base.

# 3b. Low Income Conservation Benefit Program

- Existing low income programs delivered by LDCs and IESO help qualified homeowners and social and/or assisted housing providers improve the energy efficiency of their homes.
  - Programs include the Home Assistance Program and the Retrofit Program (Social Housing Stream).
- A new Low Income Conservation Benefit Program would build on existing programs.
  - Participants could receive incentives for conservation measures not currently covered (e.g. air conditioning, heat pumps (electric heated homes)).
  - Increased incentive amounts (e.g., under the existing Retrofit Program, incentives cover up to 50% of the total cost of the energy efficiency upgrade).
  - Targeted education and awareness initiatives.
- The new program would be delivered through LDCs and/or IESO.
- The new program would coordinate with CCAP initiatives.
- The budget estimate below is illustrative and assumes annual program budgets three times the 2015 spending for the Home Assistance Program.

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| Proposed Budget ($ Million) | $60 | $60 | $60 | $60 | $60 | $60 |

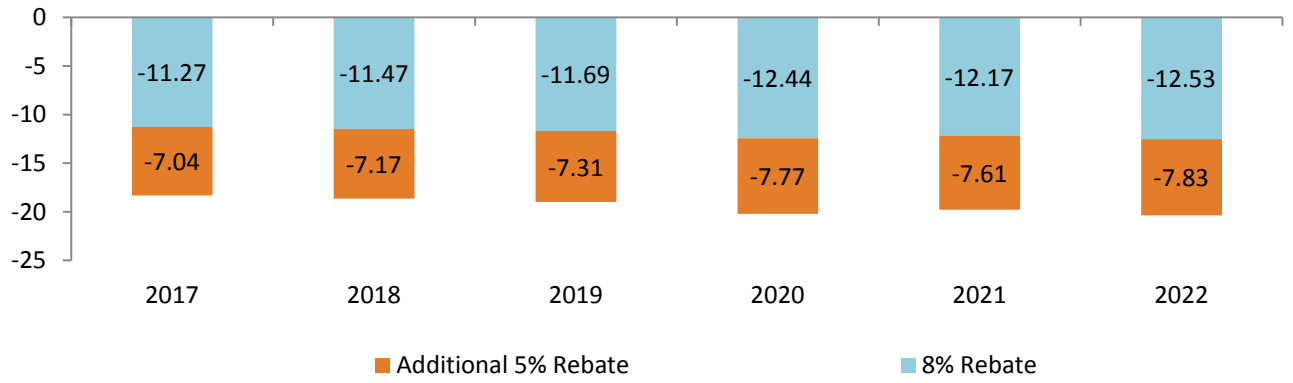
- Further analysis is required on costing and implementation details, including alignment with the Conservation First Framework.

# Other Options to Consider

# 1. Enhanced Tax-Base RPP Rebate (5%)

- Enhancing the rebate by a further 5% on the amount before tax provides an average savings of about $7 each month or $84 annually for a typical residential electricity consumer.
- As of January 1, 2017, electricity consumers eligible for the Regulated Price Plan (RPP) receive an 8% rebate equivalent to the provincial portion of HST on their pre-tax bill.
- The eligibility criteria for the 8% rebate is as follows:
  - Consumers with a demand of 50 kW or less;
  - Consumers with a demand of 250,000 kWh/year or less;
  - Farms;
  - Multi-unit residential buildings and other facilities used as residential rental units;
  - Dwellings;
  - Condominiums; and
  - Co-operatives with housing units.

**Benefit for a Typical Residential RPP Consumer**
*in $/750-kWh month*



# 1. Enhanced Tax-Base RPP Rebate (5%) (cont'd)

**Considerations**

- Amendments would be required related to the *Ontario Rebate for Electricity Consumers Act, 2016.*
- The Act authorizes the making of regulations to reimburse electricity vendors for amounts credited to consumers' accounts under the Act. The Act authorizes the making of other regulations to put in place mechanisms needed to implement the financial assistance.
- The rebate could be made retroactive to January 1, 2017. Similar to the current 8% rebate, electricity consumers would receive a retroactive payment once the local distributor begins issuing the rebates if the distributor needs more time to adjust its billing systems.

**Fiscal Cost of an Enhanced Rebate**
*in $millions*

| Cost ($M) | 2016-2017 | 2017-2018 | 2018-2019 | 2019-2020 | 2020-2021 | 2021-2022 |
|---|---|---|---|---|---|---|
| **Cost of 8% rebate** | 271 | 1,119 | 1,086 | 1,171 | 1,159 | 1,208 |
| **Cost of 13% rebate** | 440 | 1,818 | 1,764 | 1,903 | 1,884 | 1,963 |
| **Cost of incremental 5% rebate** | 169 | 699 | 679 | 732 | 724 | 755 |

# 2a. Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the contract holders agreeing to a lower price in the near term.
- Since extending the contracts would lock in an additional 10 years of GHG emissions free generation to support electrification of transportation and other sectors, consideration could be given to funding the contract extensions with future cap and trade proceeds.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period; discussions/consultation may be required in advance of this potential option moving forward.

# 2a. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- The Province is not a party to the contracts and has never been involved in the negotiation of the contracts themselves. IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is also required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

- Extending contract terms would reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

# 2a. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.
- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.
- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
- **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 Million | $582 Million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# 2a. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - **Illustrative Example:** New contract for 27 years at $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 Million | $632 Million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# 2a. Extend Length of Existing Wind / Solar Contracts (cont'd)

- Below are illustrative estimates of potential GA savings if all contracts for large FIT and GEIA wind and solar projects in commercial operation are renegotiated according to the approaches illustrated above.
- Estimates are for large (10 MW or greater) FIT 1 and GEIA wind and solar projects in commercial operation, totalling about 2,700 MW of wind and about 900 MW of solar capacity. A 10 year contract extension is assumed at a price of:
  - **For Wind:** LRP I low weighted wind price of $64.5/MWh
  - **For Solar:** LRP I low weighted solar price of $141.5/MWh

**Potential Approach 1:**

| | **Current Contracts*** | **New Extended Contracts** |
|---|---|---|
| Total Value (NPV 2017) | $23.3 Billion | $23.1 Billion |
| Average Annual Contract Value (First 5 Years) | $1.6 Billion | $1.4 Billion |
| *Figures assume projects remain operational after contract expiry at the LRP I low weighted price inflated to the year of contract expiry, as per OPO assumptions . | | |

**Potential Approach 2:**

| | **Current Contracts** | **New Extended Contracts** |
|---|---|---|
| Total Value (NPV 2017) | $23.3 Billion | $25.6 Billion |
| Average Annual Contract Value (First 5 Years) | $ 1.6 Billion | $0.8 Billion |

**Source**: Figures reflect IESO contract data current as of Sept 2016. Also includes two Phase III solar projects (100 MW combined) that came online in late 2016 not included in Sept 2016 IESO contract data.

# 2a. Extend Length of Existing Wind / Solar Contracts (cont'd)

- Contract re-negotiations could be piloted with large wind and solar contract holders.
- For example, the top 5 contract holders by portfolio value (online projects 10 MW and larger) include:

| Contract Holder | Technology | # of Contracts | Capacity (MW) | Estimated Value (NPV 2017) |
|---|---|---|---|---|
| Samsung* | Wind & Solar | 7 | 899 | $5.0 Billion |
| NextERA | Wind | 6 | 534 | $2.7 Billion |
| Northland Power | Wind & Solar | 15 | 290 | $1.8 ~~2~~ Billion |
| Pattern / Capital Power | Wind | 1 | 270 | $1.4 ~~5~~ Billion |
| ENGIE | Wind | 4 | 265 | $1.2 Billion |
| All Other | Wind & Solar | 76 | 1398 | $8.1 Billion |
| **Total** | **Wind & Solar** | **109** | **3654** | **$20.2 Billion** |

Source: IESO contract data current as of Sept 2016.
*Includes two Phase III solar projects (100 MW combined) that came online in late 2016 not included in Sept 2016 IESO contract data.

# 2b. Clean Energy Supply (CES) Contracts

- There are 13 natural gas facilities operating under Clean Energy Supply (CES) contracts. Given the current excess capacity, some of these facilities could be renegotiated to reduce output in the near term.

- In conjunction, OPG could seek to negotiate outright purchases of certain Ontario gas assets. Given the current excess capacity in electricity supply in Ontario, OPG can seek to negotiate outright purchases of certain Ontario gas assets and reposition them such that ratepayers would pay only for the "current need" component:
  - Contract terms would be renegotiated with the Province to temporarily idle the facilities;
  - Variable expenditures would be largely avoided with the facilities only incurring fixed costs; and
  - Plant life would be extended to a period post-2024 when additional power would be required.

- OPG has estimated monthly residential bill reductions of $2.37 to $4.00 from 2017 to 2019 if such an approach was taken for Ontario's gas portfolio.

- Natural targets would be assets that OPG either jointly owns (e.g., Portland, Brighton Beach) or operate on OPG's site with acquisition funding coming from Provincial borrowing.
  - Although OPG could also look beyond its facilities to the broader natural gas fleet in Ontario.

**Considerations**

- This proposal would reduce GHGs and provide some near-term cost benefits through lower staffing and maintenance costs:
  - Contract terms would be renegotiated with to temporarily idle the facilities;
  - Variable expenditures would be largely avoided with the facilities only incurring fixed costs; and
  - Plant life would be extended to a period post-2024 when additional power would be required.

- It will likely be challenging to find a willing seller and/or to negotiate a favourable price:
  - Sellers that are approached are in a strong position to extract value from OPG/the Province; and
  - Similarly, OPG's negotiating position would be weakened if this was viewed as part of the broader rate mitigation strategy.

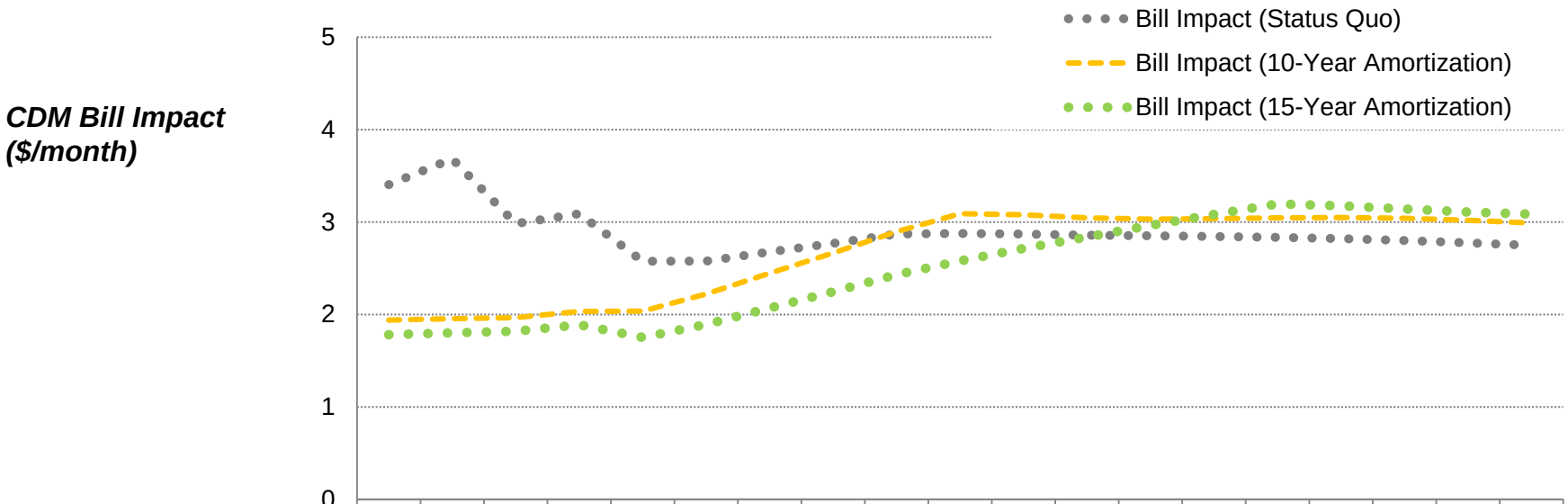
- In the past, OPG and IESO's contract renegotiations have been contentious and lengthy.

# 3. Amortize Conservation Program Costs

- This option would not be pursued if the Global Adjustment (GA) was financed (Option 1).
- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized. This would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs).
  - The time period over which costs could be amortized would be over the lifetime of funded CDM measures.
  - ENERGY would work with IESO to determine the appropriate lifetime period – the graph on the next slide, which illustrates residential bill impacts, presents two cases: **10-year and 15-year measure lifetimes**.
- In both cases, amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020. Over time the benefit would decrease and turn into a cost (higher electricity rates than would otherwise occur), as interest charges begin to grow. Estimated interest charges are as follows (a 3% interest rate is assumed; increases in interest rates could result in higher overall interest charges):
  - $712 million ($2016) – Amortizing eligible 2017-2035 CDM costs for 10-year period; and
  - $1.3 billion ($2016) – Amortizing eligible 2017-2035 CDM costs for 15-year period .
- Legislative changes would be needed to allow recovery of interest payments from ratepayers, or these costs could be recovered from the Consolidated Revenue Fund (CRF, or taxes).
- An alternative that could be explored would be to pay for CDM costs, or for a portion of these, from the tax-base (*see Appendix for more detail on tax funding option*).

# 3. Amortize Conservation Program Costs (cont'd)

## Conservation Residential Bill Impact – Status Quo, 10-Year and 15-Year Amortization




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bill Impact (Status Quo) | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | 2.68 | 2.77 | 2.87 | 2.88 | 2.87 | 2.86 | 2.85 | 2.84 | 2.83 | 2.82 | 2.80 | 2.78 | 2.75 |
| Bill Impact (10-Year Amortization) | 1.94 | 1.95 | 1.97 | 2.03 | 2.04 | 2.22 | 2.45 | 2.67 | 2.90 | 3.09 | 3.08 | 3.05 | 3.03 | 3.04 | 3.04 | 3.05 | 3.04 | 3.02 | 2.99 |
| Bill Impact (15-Year Amortization) | 1.78 | 1.80 | 1.82 | 1.89 | 1.75 | 1.89 | 2.07 | 2.25 | 2.43 | 2.58 | 2.71 | 2.84 | 2.96 | 3.08 | 3.20 | 3.18 | 3.14 | 3.11 | 3.09 |

Source: IESO; Ministry of Energy

**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10 of 15-year borrowing rate of 3.0%.

# 3. Amortize Conservation Program Costs (cont'd)

**Considerations**

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 3. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- ENERGY has received an opinion on the proposal to amortize CDM costs from IESO's external auditor.
  - Ernst and Young indicated that an argument could be made to support the recognition of the costs as an asset as the costs meet essential asset characteristics, as prescribed by PSAB.

- ENERGY staff have developed a note to seek an opinion from the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.

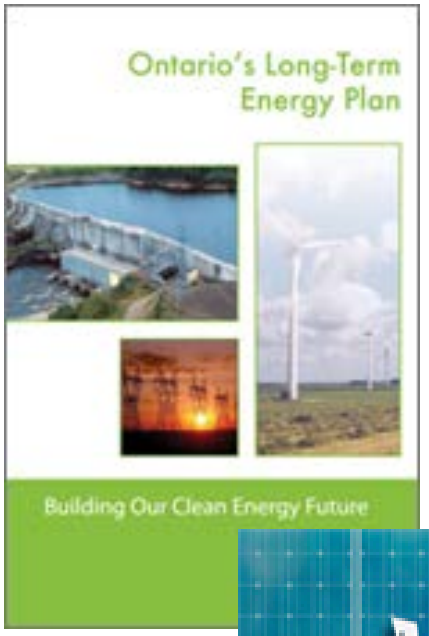
- If there is a desire to pursue this option, ENERGY would seek a formal opinion from the OPC on whether CDM costs could be amortized according to rate-regulated accounting standards, ENERGY would send its note along with IESO external auditor's opinion to OPC.
  - In 2013 when this option had been explored, staff at the OPC agreed with the view that amortized conservation costs can be considered as assets, but noted that the Auditor General may disagree with considering amortized conservation costs as assets.

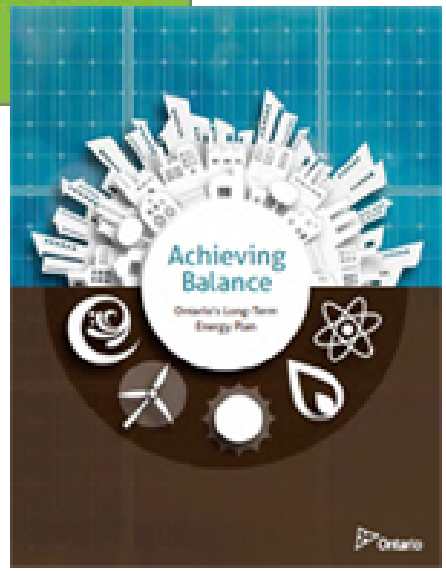
- Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# Long-Term Energy Plan

# Longer-Term Energy Plan – Overview

- The Long-Term Energy Plan (LTEP) is the energy sector's roadmap, with a focus on integrated policy and setting the direction for Ontario's energy future.
- The 2013 LTEP included content on both Ontario's electricity as well as fuels sub-sectors. The next LTEP will integrate the electricity and fuels sub-sectors to provide a complete picture of Ontario's energy system.
- Developing the LTEP is a highly collaborative process in which ENERGY and IESO directly engage with stakeholders, indigenous communities and the public.
- The Ministry sought stakeholder as well as public feedback through in-person engagement sessions, online tools, and an Environmental Registry posting.
- The Ministry is currently developing the next LTEP, and is targeting a tentative April 2017 release date.



# LTEP – Process and Timeline

**Jan - Feb**
Policy Development

- Ministry staff to review engagement feedback and to provide recommendations for DMO/ MO and Minister on LTEP policies and themes.

**Feb - March**
Modeling

- Additional modelling to inform potential initiatives and themes will be made to IESO/other modelers to update outlooks.
- Policy decisions may be adjusted based on modeling outcomes.

**March**
Plan development

- Ministry will prepare LTEP submission and IESO/OEB implementation directives for Cabinet Approval.

**Early April**
Cabinet Approval

- Cabinet approves LTEP document; as well as IESO/OEB implementation directives

*Writer to work alongside and participate in briefings and theme development.*

**Early – Mid April**
Finalize and produce document

- Layout/ graphics/ translation of final document
- Ministry staff provide final review

**End April**
Publish LTEP and implementation directives

- Final LTEP published on ENERGY website
- Minister issues Cabinet-approved implementation directives to IESO & OEB
- LTEP lockup

**May – July**
Implementation Plan Development

- IESO and OEB develop implementation plans based on directives

**Aug – Sept 2017**
Implementation Plan Approval

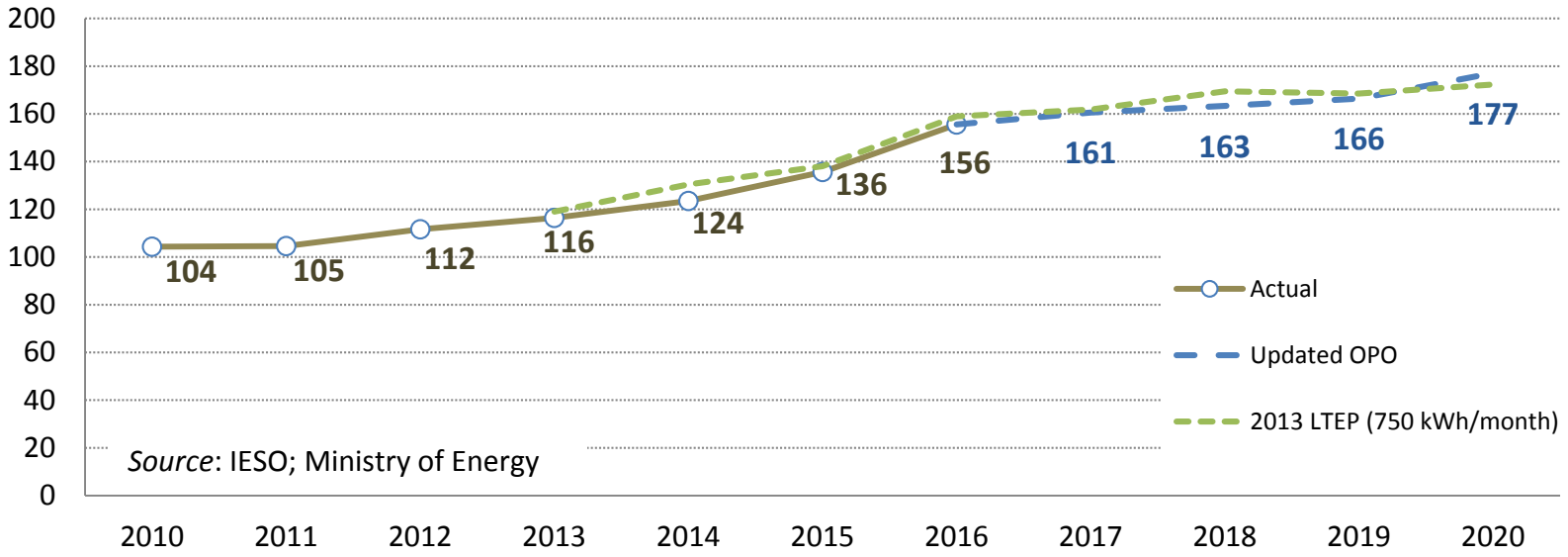
- Implementation plans submitted to Minister of Energy for approval

# Appendix

# Context – Residential Electricity Prices

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast in $/month*

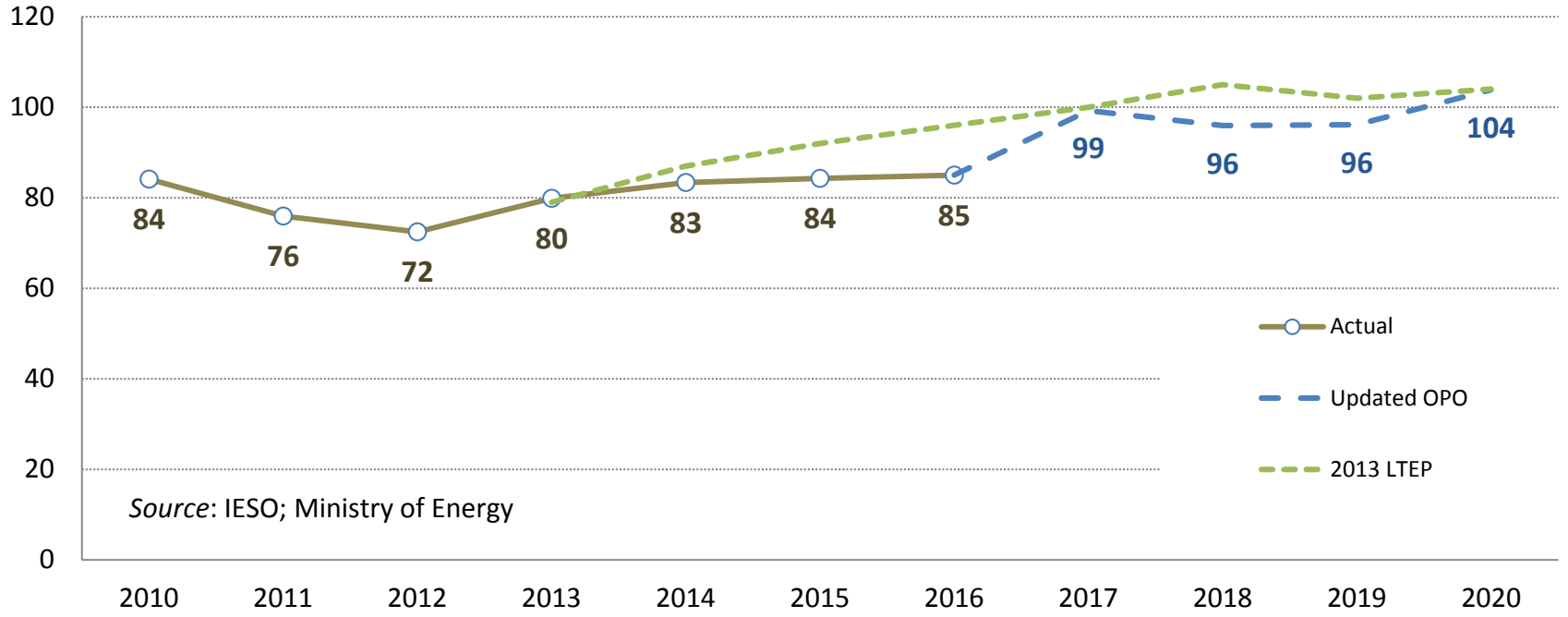



**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Context – Large Industrial Electricity Prices

- Industrial electricity prices continue to be a concern for many businesses.
  - **Note:** The typical industrial electricity price is currently below the 2013 LTEP forecast.

**Typical Class A Electricity Prices**
*Historical and Forecast in $/MWh*




**Note**: The 2013 LTEP forecast for industrial reflects a transmission connected Class A electricity consumer. The updated OPO forecast above includes ICI expansion and RRRP expansion.

# Global Adjustment (GA) Financing

- The global adjustment (GA) is comprised of costs for regulated and contracted generation, as well as conservation.
- Some contracted generation assets are expected to have a useful life that extends beyond the term of their current financial contracts (typically 20-years).
- Similarly, conservation costs are recovered through the GA on an annual basis while conservation initiatives provide benefits to the electricity system over the course of many years.
- Since the GA only includes costs related to the contractual life of these assets, there may be an opportunity to recognize the longer-term benefit of these assets to the electricity system and “bring forward” that benefit for ratepayers today, while deferring some of the current costs.
- An indicative GA financing proposal is presented that lowers ratepayers costs over the short term by borrowing money but increases costs over the long term when GA costs are forecast to be lower.
- **Note:** Not all generating assets will continue operations at the end of their contract term. Regulatory constraints (i.e., nuclear licences) or low demand conditions (i.e., as experienced with current expiring NUGs) would mean that some generators will shutdown at the expiry of their contract. Future ratepayers would be paying for these assets that are no longer producing power.

# GA Financing – Considerations

**Considerations**

- Borrowing money to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.
  - Deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" in the sector. **Note:** the Debt Retirement Charge (DRC) was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

- The GA financing proposal involves borrowing large amounts of money over a long period of time (16-30 years, depending on the scenario) to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on electricity rates. A long-term interest rate of 5% is assumed for this analysis.

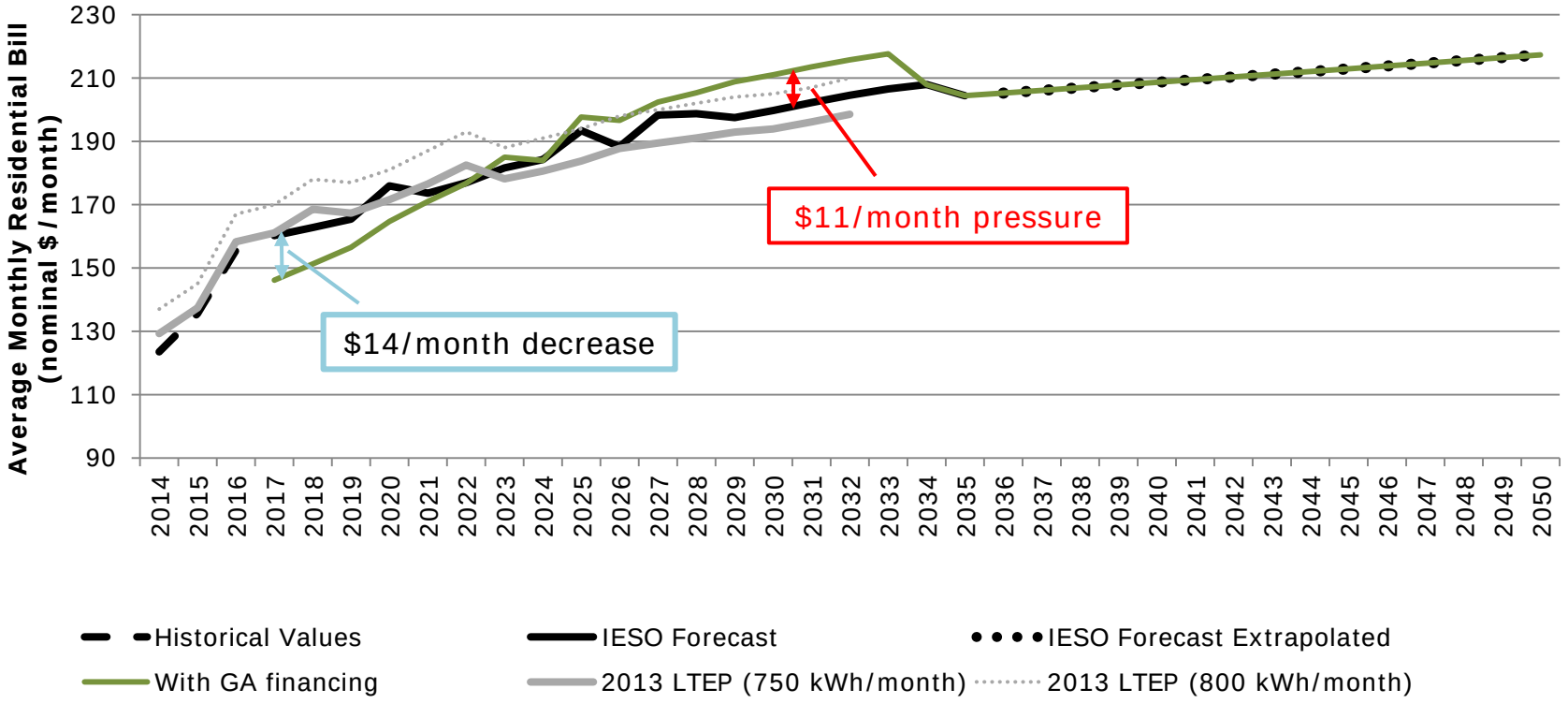
- GA and HOEP provide a natural hedge against each other – when one goes up, the other goes down – keeping total electricity costs relatively stable and predictable. Smoothing only the GA would lead to greater price volatility for consumers unless the schedule and amount of ratepayer payments was defined relative to the actual cost of GA.

- Some Class A consumers pay limited GA and would receive little benefit under the financing proposal. These consumers also currently pay very low rates. In addition, in recognition that Class B electricity consumers pay the majority of GA costs, could limit GA cost reductions through financing to Class B consumers only.

- Should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumption, further increasing future costs for individual ratepayers.

# Low / GA Financing – Impact on Residential Electricity Bills

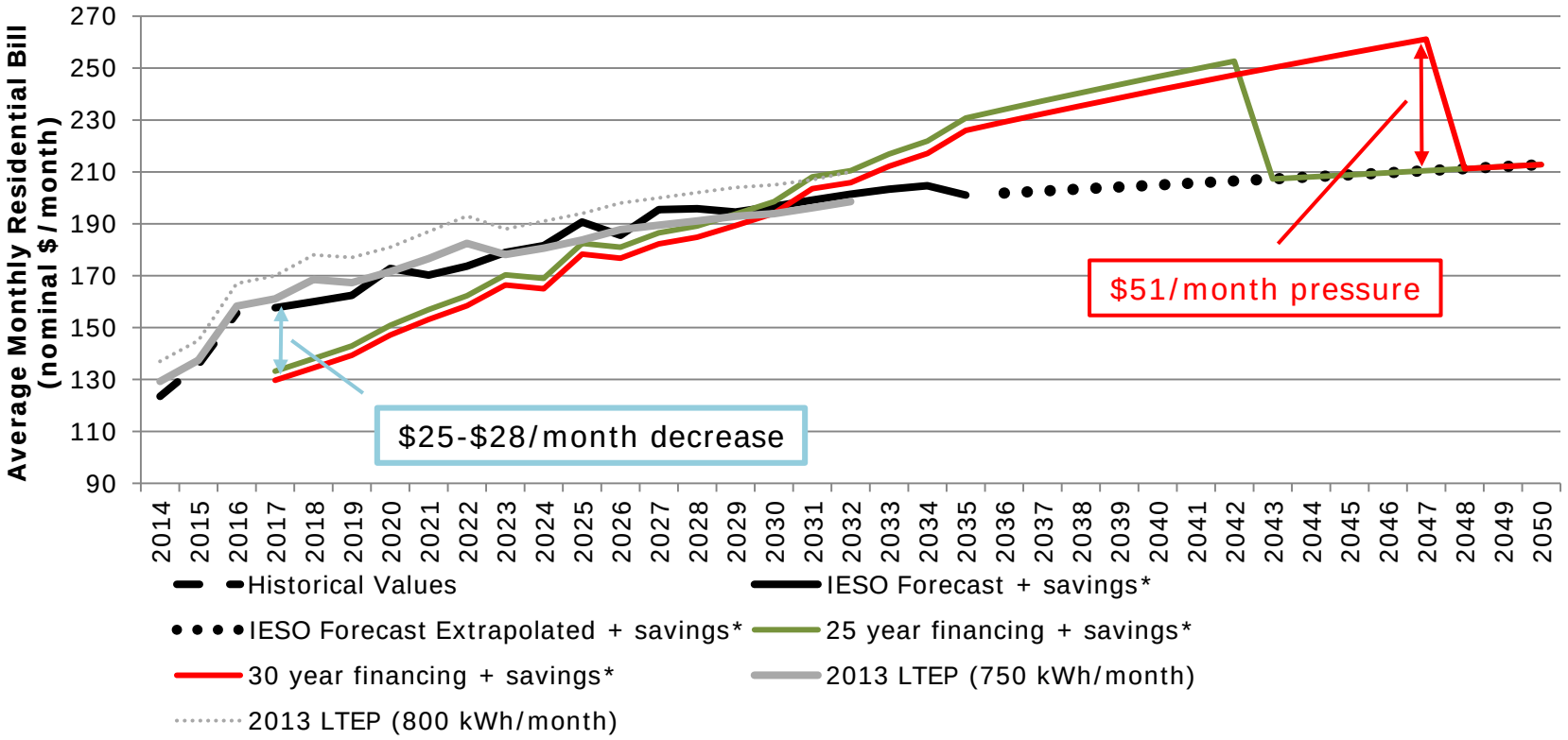
- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $2.5 billion and increases at 2% each year – up to a cap of no more than $2 billion more than the true cost of GA in any year – until the borrowed money is paid back in 2032.




- By **borrowing up to $9.3 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $14/month** at the cost of **increased future electricity bills over 10 years of up to $11/month** above the true cost of electricity production.

# High / GA Financing – Impact on Residential Electricity Bills

- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $4.4 and $5 billion and increases at 2% each year until the borrowed money is paid back over a 25 and 30 year financing period respectively.

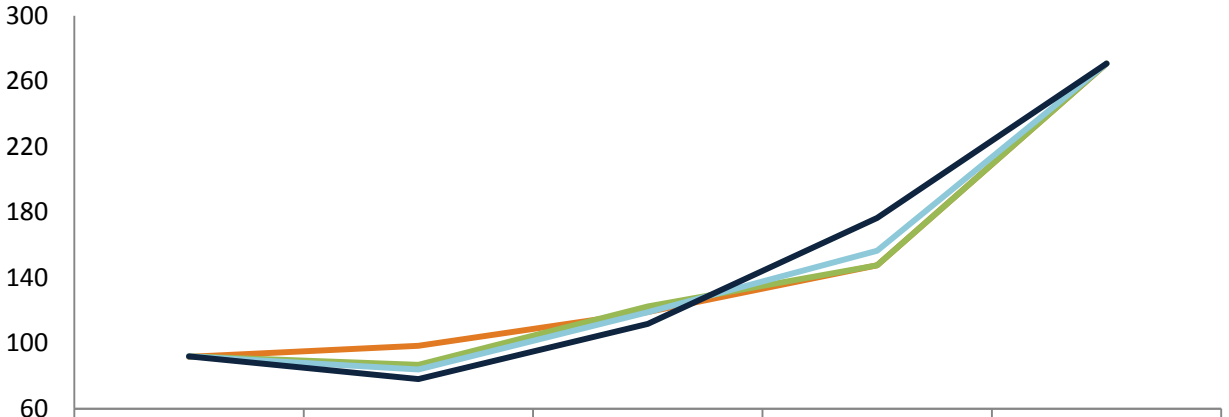



- By **borrowing up to $65 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $25-$28/month** at the cost of **increased future electricity bills over 12-17 years of up to $46-$51/month** above the true cost of electricity production.

# GA Financing – Impact of the Level of Financing on Large Industrial Electricity Consumers

- Below graph illustrates the estimated impact of the level of GA financing for an average Class A electricity consumer over a 25 year amortization period.

**Estimated All-In Electricity Price**
*for Average Class A in $/MWh*



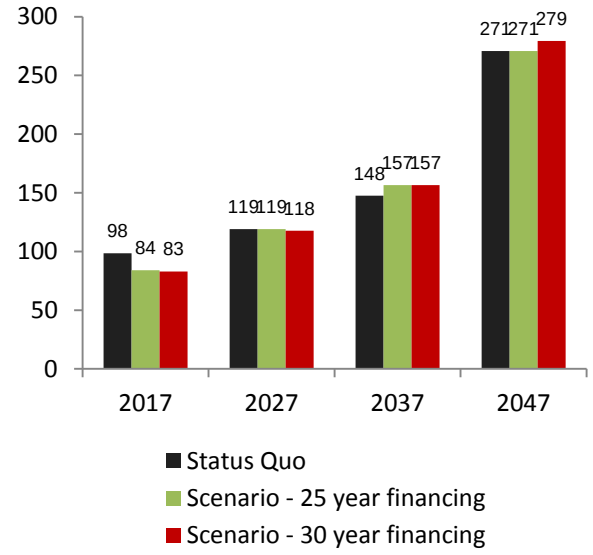

| | 2016 | 2017 | 2027 | 2037 | 2047 |
|---|---|---|---|---|---|
| Status Quo | 92 | 98 | 119 | 148 | 271 |
| Low Financing | - | 87 | 122 | 148 | 271 |
| Moderate Financing | | 84 | 119 | 157 | 271 |
| High Financing | | 78 | 112 | 177 | 271 |

**Note:** Assumes that demand by industrial sector continues at average 2011-2015 levels. Please see the Appendix or more information on the estimated impact on large industrial electricity consumers.

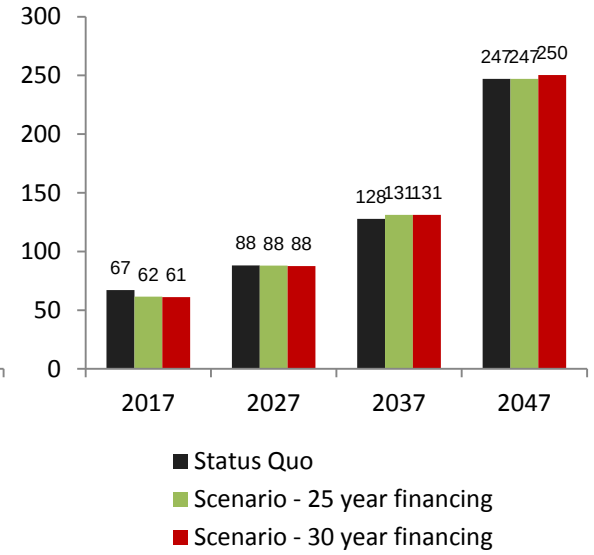
# GA Financing – Illustrative Impact for Large Industrial Electricity Consumers

- Below graphs illustrate the estimated impact under the moderate GA financing scenario for an average Class A electricity consumer, a consumer that pays low GA (i.e., pulp and paper) and high GA (i.e., refining and chemical manufacturing).

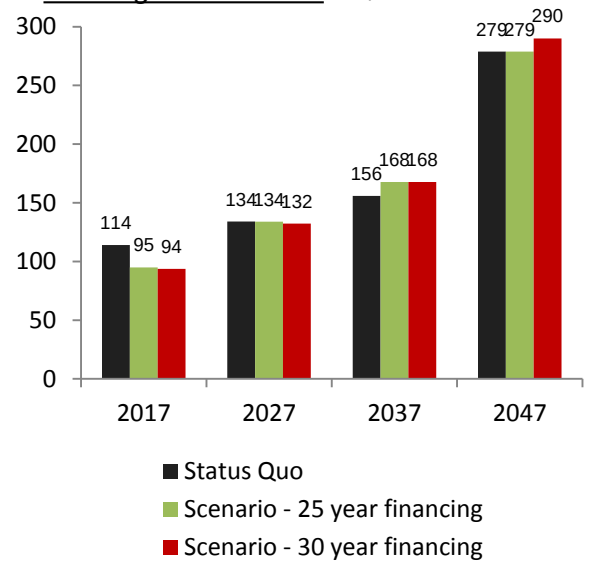
**Estimated All-In Electricity Price**
*for Average Class A in $/MWh*




**Estimated All-In Electricity Price**
*for Pulp & Paper in $/MWh*




**Estimated All-In Electricity Price**
*for Refining & Chemicals in $/MWh*




**Note:** Assumes that demand by industrial sector continues at average 2011-2015 levels.

# Other Options Considered – Typical Residential Electricity Consumer

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| b. Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |
| Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Options Considered – Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| b. Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |
| Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

**From:** Shajee Kathirgamanathan
**To:** John Kim
**Subject:** FW: Departure Tax
**Date:** Friday, January 06, 2017 4:43:49 PM
**Attachments:** Electricity Price Mitigation Proposal- Departure Tax v2.docx
Electricity Price Mitigation Proposal- Departure Tax v2-EFBv1.docx

---

I got this from Arie on the Departure tax note.

Made a few small markups, in the second attached. Will send it back to Darren, CCing you.

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

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**Sent:** Friday, January 06, 2017 2:56 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Wentao Shi <Wentao.Shi@ofina.on.ca>
**Subject:** Departure Tax

Hi Shajee,

Wentao and I have drafted the enclosed note. Please take a look at the specific areas in the note which reference EFB areas (inc. stranded debt and DRC) and feel free to add/make edits if you feel it is needed.

Thanks,
Arie Jarczyn
Senior Advisor
Strategic Investment and Finance Branch
Ontario Financing Authority
Tel: 416-325-1585
e-mail: arie.jarczyn@ofina.on.ca

*COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE*

**Electricity Price Mitigation Proposal: Dedication Departure Tax**

**Issue:** The Ministry of Energy, as part of a suite of proposed initiatives to mitigate the rising cost of electricity, has suggested for consideration the potential dedication of the Departure Tax payment from the Hydro One IPO, to ratepayers.

**Context: Departure Tax**

- In connection with the Hydro One IPO, Hydro One's exemption from tax under the federal Income Tax Act and the Taxation Act (Ontario) ceased to apply and Hydro One was deemed to have disposed of its assets immediately before it lost its tax exempt status for proceeds equal to the estimated fair market value of those assets at that time.

- As a result of this deemed disposition, Hydro One was liable to make a "departure tax" payment in lieu of tax under the Electricity Act in respect of the income and capital gain, to the OEFC. Prior to the IPO, the Province, as shareholder of Hydro One, made a capital contribution into Hydro One and received new common shares of Hydro One Limited for a total of $2.6 billion. This provided Hydro One with funds that it used to pay the "departure tax" to OEFC.
    - This transaction was fiscally neutral to the Province as the Province consolidates both OEFC's revenue and Hydro One's net income on its books (Please see the background section for an illustration of the departure tax)
    - OEFC (and the Province upon consolidation) recorded a higher payment in lieu of tax revenue due to the departure tax, but this amount will be offset by the reduction in Hydro One's net income as a result of the payment.

- On November 4, 2015, Hydro One paid OEFC the $2.6 billion "departure tax".

**Proposal Overview:**

- The Ministry of Energy has not provided specifics with regards to the potential implementation of electricity price mitigation measures through the dedication of the departure tax. The methodology noted below is the CEFD's assessment of the likely method of implementation.

- The dedication of the $2.6 billion in departure tax to the benefit of electricity ratepayers would likely involve the transfer of $2.6 billion from OEFC to the Province, resulting in an expense to the OEFC and revenue to the Province credited to the Consolidated Revenue Fund.
    - The Province would then direct $2.6 billion to ratepayers through the Ministry of Energy as a rate mitigation program, which would record an expense related to this program
        - A decision as to the length of the mitigation measure would also need to be made by the government.
    - The measure could be highlighted as a separate line item on the ratepayers monthly bill, identifying the impact of the reduction to ratepayers from the departure tax payment.

**Staff Comments**

**Impact to the Province/OEFC**

- Should the Ministry of Energy decide to dedicate the departure tax to ratepayers, there would be a significant negative fiscal impact up to $2.6B.
  - The departure tax payment by Hydro One to the OEFC, was effectively a true-up for lower PILs payments from Hydro One in previous years – and therefore should not be viewed as a one-time $2.6B cash windfall for the Province.
  - Since the Province already made a $2.6 billion capital contribution prior to the IPO to Hydro One to fund the departure tax, any amount dedicated from the departure tax to ratepayers would result in a fiscal impact.
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- [EFB: Please insert a bullet about stranded debt, or feel free to edit this bullet]In moving forward with a proposal to dedicate the Departure Tax, the OEFC would record a $2.6B expense on its financial statements
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**Impact to Ratepayers:**

- CEFD staff have performed an initial analysis of the impact to residential and industrial ratepayers from the allocation of $2.6 billion from the departure tax to ratepayers. Overall the impact to ratepayers from this potential proposal is relatively minimal.
  - Assuming that the $2.6 billion is allocated over a 5 year period, the benefit to residential ratepayers is $2.76 per month and industrial ratepayers is $3.71 per MWh
  - Assuming that the $2.6 billion is allocated over a 10 year period the benefit to residential ratepayers is $1.39 per month and industrial ratepayers is $1.86 per MWh

| Departure Tax Savings to Ratepayers | Allocation over 5 years | Allocation over 10 years |
|---|---|---|
| **Residential Ratepayers (savings $/mth)** | **$2.76** | **$1.39** |
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***Assumes total TWh supplied of 140 hours and monthly demand of 750 KWh per residential household**

**Other Considerations:**

- Aside from the proposed implementation methodology cited above, which results in an expense to the OEFC and revenue to the Province, as an alternative, OEFC could use its existing cash on hand to retire $2.6 billion of existing debt that it currently has outstanding with the Province. (As of March 2016, OEFC had over $3.4 billion in cash and cash equivalents on its balance sheet).
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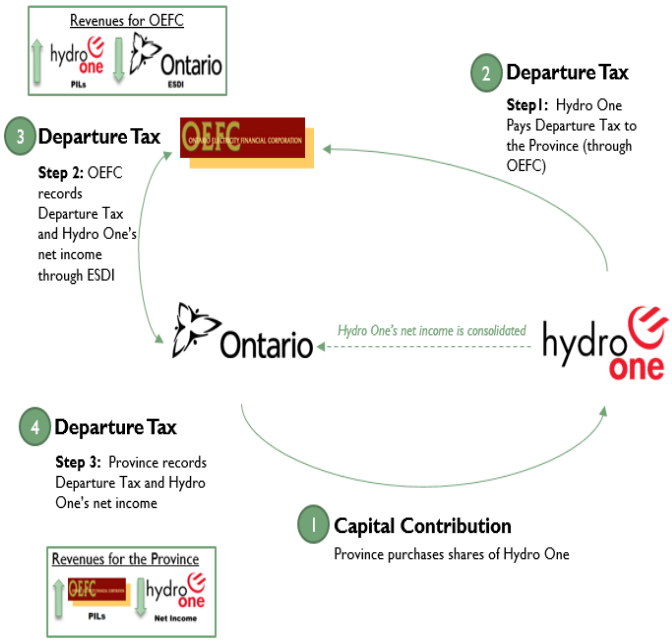
- It may however be a difficult communication exercise for the Province to link the receipt of $2.6 billion in cash ifrom the retirement of outstanding debt held with the Province to a specific electricity price mitigation measure.

**Background**

**Departure Tax Fiscal Overview**

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**Strategic Investment and Finance Branch**
**January 6, 2017**

*COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE*

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**Commented [SK61]:** Tricky relationship stranded debt and end of the residual stranded debt and debt retirement charge.

Happy to remove, however, announcement of April 1 2018 end date made in FES 2015; same time period as the IPO.

Clearly there was a consideration between the two policy initiatives.

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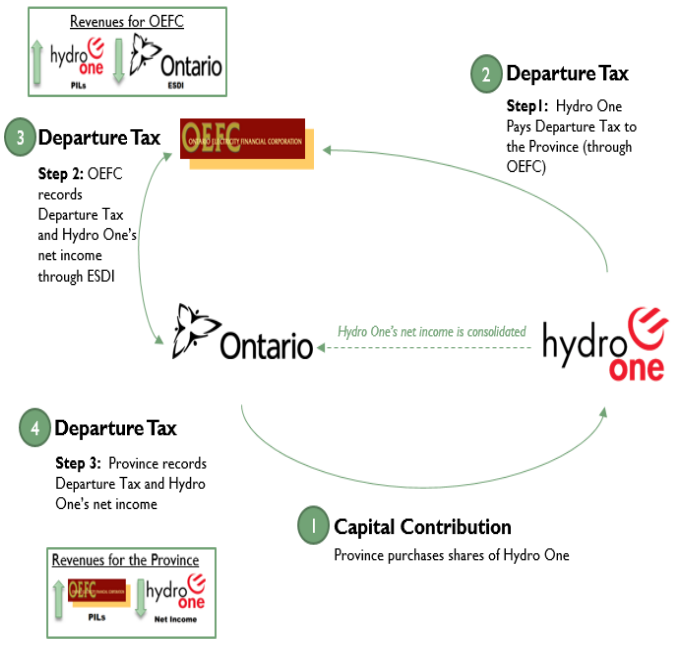


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*COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE*

**Strategic Investment and Finance Branch**
**January 6, 2017**

| | |
|---|---|
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| **To:** | John Kim |
| **Subject:** | FW: Departure Tax |
| **Date:** | Friday, January 06, 2017 4:52:09 PM |
| **Attachments:** | Electricity Price Mitigation Proposal- Departure Tax v2.docx<br>Electricity Price Mitigation Proposal- Departure Tax v2-EFBv1.docx |

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  - Assuming that the $2.6 billion is allocated over a 5 year period, the benefit to residential ratepayers is $2.76 per month and industrial ratepayers is $3.71 per MWh
  - Assuming that the $2.6 billion is allocated over a 10 year period the benefit to residential ratepayers is $1.39 per month and industrial ratepayers is $1.86 per MWh

| Departure Tax Savings to Ratepayers | Allocation over 5 years | Allocation over 10 years |
|---|---|---|
| **Residential Ratepayers (savings $/mth)** | **$2.76** | **$1.39** |
| **Industrial Ratepayers (savings $/MWh** | **$3.71** | **$1.86** |

***Assumes total TWh supplied of 140 hours and monthly demand of 750 KWh per residential household**

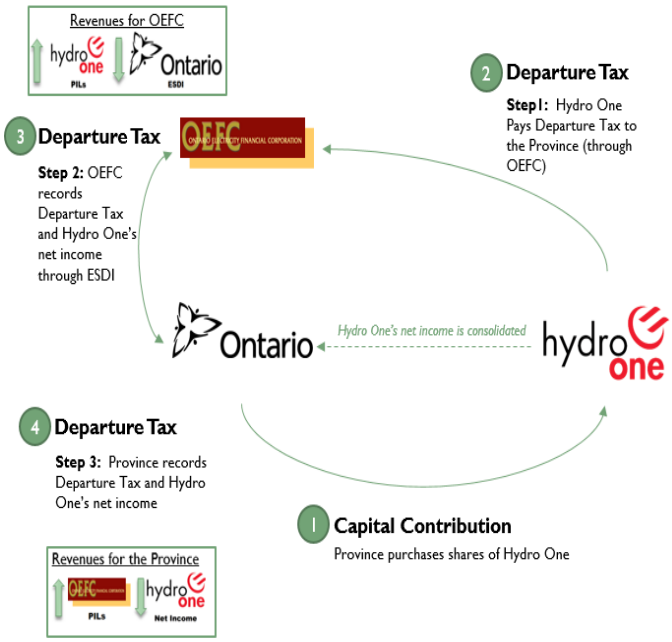
**Other Considerations:**

- Aside from the proposed implementation methodology cited above, which results in an expense to the OEFC and revenue to the Province, as an alternative, OEFC could use its existing cash on hand to retire $2.6 billion of existing debt that it currently has outstanding with the Province. (As of March 2016, OEFC had over $3.4 billion in cash and cash equivalents on its balance sheet).
    - This alternative would allow the Province to obtain $2.6 billion in funds without causing a direct fiscal impact to OEFC and negatively impacting stranded debt.

- It may however be a difficult communication exercise for the Province to link the receipt of $2.6 billion in cash ifrom the retirement of outstanding debt held with the Province to a specific electricity price mitigation measure.

**Background**

**Departure Tax Fiscal Overview**




1. **Capital contribution** of $2.6 B represents a payment of cash for more shares in the company. This is fiscally neutral (the Province is just exchanging one asset for another).
2. **Departure Tax Payment (Step 1):** Hydro One pays the departure tax to OEFC. This is an expense, so Hydro One's net income decreases.
3. **Departure Tax Payment (Step 2):** OEFC records payment in lieu of tax (PILs) revenue from the departure tax but also receives less income through the Electricity Sector Dedicated Income (ESDI) generated from Hydro One's net income. The end result is neutral to the Stranded Debt.
4. **Departure Tax Payment (Step 3):** The Province records PILs (through consolidation of OEFC) and also records Hydro One's net income, which fell in Step 1. The end result is a fiscally neutral transaction.

**Strategic Investment and Finance Branch**
**January 6, 2017**

*COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE*

**Electricity Price Mitigation Proposal: Dedication Departure Tax**

**Issue:** The Ministry of Energy, as part of a suite of proposed initiatives to mitigate the rising cost of electricity, has suggested for consideration the potential dedication of the Departure Tax payment from the Hydro One IPO, to ratepayers.

**Context: Departure Tax**

- In connection with the Hydro One IPO, Hydro One's exemption from tax under the federal Income Tax Act and the Taxation Act (Ontario) ceased to apply and Hydro One was deemed to have disposed of its assets immediately before it lost its tax exempt status for proceeds equal to the estimated fair market value of those assets at that time.

- As a result of this deemed disposition, Hydro One was liable to make a "departure tax" payment in lieu of tax under the Electricity Act in respect of the income and capital gain, to the OEFC. [In order to facilitate this], ~~P~~prior to the IPO, the Province, as shareholder of Hydro One, made a capital contribution into Hydro One and received new common shares of Hydro One Limited for a total of $2.6 billion. This provided Hydro One with funds that it used to pay the "departure tax" to OEFC.
    - This transaction was fiscally neutral to the Province as the Province consolidates both OEFC's revenue and Hydro One's net income on its books. (Please see the background section for an illustration of the departure tax)
    - OEFC (and the Province upon consolidation) recorded a higher payment in lieu of tax revenue due to the departure tax, but this amount will be offset by the reduction in Hydro One's net income as a result of the payment.

- On November 4, 2015, Hydro One paid OEFC the $2.6 billion "departure tax".

**Proposal Overview:**

- The Ministry of Energy has not provided specifics with regards to the potential implementation of electricity price mitigation measures through the dedication of the departure tax. The methodology noted below is the CEFD's assessment of the likely method of implementation.

- The dedication of the $2.6 billion in departure tax to the benefit of electricity ratepayers would likely involve the transfer of $2.6 billion from OEFC to the Province, resulting in an expense to the OEFC and revenue to the Province credited to the Consolidated Revenue Fund.
    - The Province would then direct $2.6 billion to ratepayers through the Ministry of Energy as a rate mitigation program, which would record an expense related to this program
        - A decision as to the length of the mitigation measure would also need to be made by the government.
    - The measure could be highlighted as a separate line item on the ratepayers monthly bill, identifying the impact of the reduction to ratepayers from the departure tax payment.

**Staff Comments**

**Impact to the Province ~~/~~and OEFC**

- Should the Ministry of Energy decide to dedicate the departure tax to ratepayers, there would be a significant negative fiscal impact of up to $2.6B.
    - The departure tax payment by Hydro One to the OEFC, was effectively a true-up for lower PILs payments from Hydro One in previous years – and therefore should not be viewed as a one-time $2.6B cash windfall for the Province.
    - Since the Province already made a $2.6 ~~billion~~ B capital contribution prior to the IPO to Hydro One to fund the departure tax, any amount dedicated from the departure tax to ratepayers would result in a fiscal impact.

- ~~[EFB: Please insert a bullet about stranded debt, or feel free to edit this bullet]~~In moving forward with a proposal to dedicate the Departure Tax, the OEFC would record a $2.6B expense on its financial statements
    - Originally, these funds were paid to the OEFC with the purpose to be dedicated towards ~~the repayment of~~ reducing stranded debt. Re-allocating this amount may have an impact on the defeasance schedule of this debt.

- [The Province has removed the Debt Retirement Charge from residential electricity bills beginning January 1, 2016 and indicated that it plans on removing the Debt Retirement Charge (DRC) from commercial, industrial and all other electricity bills starting April 1, 2018.
    - The decision to dedicate the departure tax which would cause stranded debt to increase may also make it more difficult for the Province to move forward with this policy initiative. ~~EFB: Please review to ensure comfort with this point as well.~~]

**Commented [SK61]:** Tricky relationship between stranded debt and end of the residual stranded debt and debt retirement charge.

Happy to remove, however, announcement of April 1 2018 end date made in FES 2015; same time period as the IPO.

Clearly there was a consideration (coordination?) between the two policy initiatives.

**Impact to Ratepayers:**

- CEFD staff have performed an initial analysis of the impact to residential and industrial ratepayers from the allocation of $2.6 billion from the departure tax to ratepayers. Overall the impact to ratepayers from this potential proposal is relatively minimal.
    - Assuming that the $2.6 billion is allocated over a 5 year period, the benefit to residential ratepayers is $2.76 per month and industrial ratepayers is $3.71 per MWh
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***Assumes total TWh supplied of 140 hours and monthly demand of 750 KWh per residential household**

**Other Considerations:**

- Aside from the proposed implementation methodology cited above, which results in an expense to the OEFC and revenue to the Province, as an alternative, OEFC could use its existing cash on hand to retire $2.6 billion of existing debt that it currently has outstanding with the Province. (As of March 2016, OEFC had over $3.4 billion in cash and cash equivalents on its balance sheet).
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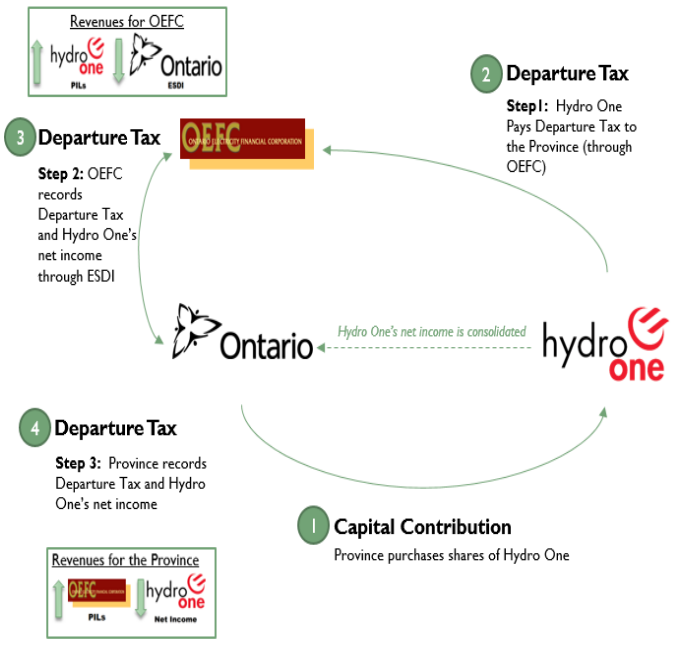
**Background**

**Departure Tax Fiscal Overview**




1. **Capital contribution** of $2.6 B represents a payment of cash for more shares in the company. This is fiscally neutral (the Province is just exchanging one asset for another).
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4. **Departure Tax Payment (Step 3):** The Province records PILs (through consolidation of OEFC) and also records Hydro One's net income, which fell in Step 1. The end result is a fiscally neutral transaction.

*COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE*

**Strategic Investment and Finance Branch**
**January 6, 2017**

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Ronald Kwan |
| **Cc:** | Tomasz Bugajski; Shajee Kathirgamanathan |
| **Subject:** | FW: Draft BN for Monday TB/MBC Meeting |
| **Date:** | Sunday, September 11, 2016 2:36:53 PM |
| **Attachments:** | RAN Electricity Price Mitigation v12 2016 09 11.doc |

Fyi.

**From:** Strang, James (TBS) [mailto:James.Strang@ontario.ca]
**Sent:** Sunday, September 11, 2016 2:24 PM
**To:** Keley Katona (ENERGY) <Keley.Katona@ontario.ca>
**Cc:** Felix Fung (MOF) <Felix.Fung@ontario.ca>; Madeleine Morgenstern (PPAGS) <Madeleine.Morgenstern@ontario.ca>; Sriram Subrahmanyan (MOF) <Sriram.Subrahmanyan@ontario.ca>; Ann Langleben (MOF) <Ann.Langleben@ontario.ca>; Patrick Laughton (MOF) <Patrick.Laughton@ontario.ca>; Nina Arbabzadeh (EDU) <Nina.Arbabzadeh@ontario.ca>; John Kim <John.Kim@ofina.on.ca>; Nick Smook (MOF) <Nick.Smook@ontario.ca>; Paul Kaufman (MOHLTC) <Paul.Kaufman@ontario.ca>; Len Hatzis (MGS) <Len.Hatzis@ontario.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Moore, Karen (CAB) <Karen.Moore4@ontario.ca>; Helen Graham (MOF) <Helen.Graham@ontario.ca>; Inglis, Liane (MOF) <Liane.Inglis@ontario.ca>; Jenarra DeSouza (MEDTE/MRI) <Jenarra.DeSouza@ontario.ca>
**Subject:** RE: Draft BN for Monday TB/MBC Meeting

Attached is an updated draft briefing note for TB/MBC on Monday. Cap and trade minutes updated to reflect MOECC and CO input. The Financial Summary table future year numbers have moved back to the numbers used at Chair's briefing, in consultation with Energy (there's a minute explicitly saying Energy will through the upcoming PRRT process update the outyear numbers). The $300M for 2016-17 remains and aligns with the signed admin sheet for the TB/MBC item.

James

**TREASURY BOARD / MANAGEMENT BOARD OF CABINET**
**REQUEST ASSESSMENT NOTE**

| | | |
|---|---|---|
| **Ministry:** | Energy | |
| **Meeting Date:** | September 12, 2016 | |
| **Agenda Class:** | Major | |
| **Last reviewed by:** N/A | | **Tracking to:** Cabinet - September 12, 2016 |

| **SUBMISSION TITLE:** | Electricity Price Mitigation |
|---|---|

## I. DECISION BEFORE THE BOARD

The Ministry of Energy is requesting approval of a suite of initiatives providing relief to various electricity consumer classes.

## II. RECOMMENDATIONS:

| | |
|---|---|
| • Approve a suite of initiatives to provide relief to various electricity consumer classes (pending Cabinet policy approval):<br>– Providing an 8% rebate to Regulated Price Plan consumers;<br>– Expanding the Industrial Conservation Initiative;<br>– Updating the Rural or Remote Rate Protection program; and,<br>– Using $270M in cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade by providing a modest reduction in rates. Balance of proceeds intended for electricity relief through the Climate Change Action Plan ($60M), could provide some fiscal offsets.<br>• Approve $300M in Supplementary Estimates for electricity price mitigation.<br>• Direct the Ministry to report back to TB/MBC through the annual planning process with updated future year impacts, and obtain any required TB/MBC approvals to implement the initiatives.<br>• Recommend proceeding to Cabinet with the proposed legislation amendments to existing regulations to implement the initiatives. | *Board Judgment* |

## III. FINANCIAL SUMMARY

| **$ Millions** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|
| Initiative cost requested | 300.0 | 1006.0 | 1004.0 |
| Initiative cost recommended | 300.0 | 1006.0 | 1004.0 |
| Recommended program base | 300.0 | 1006.0 | 1004.0 |
| Offset Recommended – Applies if cap and trade proceeds diverted to in-plan initiatives | 0.0 | (60.0) | (60.0) |
| Total Fiscal Impact | 300.0 | 946.0 | 944.0 |

## IV. KEY COMMENTS AND CONSIDERATIONS

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online. Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period. Appendix C provides supporting background information.

As part of the 2016 Budget, the government committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the Budget commitment and additional price mitigation, while delivering on the Province's climate change objectives, the Ministry of Energy has developed price mitigation initiatives that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

The Ministry is proposing the following to mitigate electricity prices for consumers (Appendix D provides more information on each item below):

- Provide an 8% rebate on the pre-tax cost of electricity to consumers eligible for the Regulated Price Plan (i.e., residential, small business and farms), equivalent to the provincial portion of HST.
- Expand Industrial Conservation Initiative (ICI) eligibility by lowering the threshold to 1 MW, to provide support to Class B eligible electricity consumers (i.e., commercial, institutional and small industrial).
- Update the Rural or Remote Rate Protection (RRRP) program, to provide relief to rural customers.
- Use cap and trade proceeds to provide a modest rate reduction for commercial and industrial electricity consumers.

Public high-profile communications would coincide with introduction of legislation (September 2016). Currently, the 8% rebate would be available starting January 1, 2017, along with updating the RRRP. Expanding ICI won't be added to bills until 2018 due to the time required to implement the expansion and for billing changes. The impact of cap and trade would not be added to electricity bills until 2017.

The following tables provide an overview of the four initiatives, recipients, projected financial impact, grouping them based on whether taxpayers or ratepayers cover the costs:

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Taxpayers cover the costs (Potential to impact the Province's Fiscal Plan)** | | | |
| **1.** | 8% Rebate to Regulated Price Plan | Fiscal<br>About $1.0B | Residential, small business and small farms, and other small users |
| **2a.** | Use cap and trade proceeds to provide a modest reduction in rates for commercial and industrial electricity consumers. (Implementation details under development). | ($270M) in cap and trade proceeds to offset $270M in costs for reducing rates<br><br>No Fiscal Impact | The CCAP allocated up to $330M/year in cap and trade proceeds for electricity price mitigation.<br><br>See item 2b. regarding the residual amount of cap and trade proceeds ($330M - $270M = $60M) |
| **2b.** | While CCAP anticipated $330M/year was required to keep electricity affordable, the residential portion of this commitment is met by the 8% rebate. As such, some of the CCAP allocated proceeds can be redirected to other GHG reduction initiatives already in the fiscal plan. | Fiscal<br>($60M) | Provides fiscal plan flexibility of $60M/year if these proceeds are diverted to offset costs of other existing in-plan initiatives that reduce GHG emissions. |
| | **Total Fiscal Impact** | $946M | Matches Financial Summary on page 1 for 2017-18 |

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Ratepayers cover the costs (No impact to the Province's Fiscal Plan)** | | | |
| **3** | Expanding ICI eligibility to customers above 1MW in all sectors | Rate base<br>($47M/$82M)** | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors |
| **4.** | Updating Rural or Remote Rate Protection | Rate base<br>($110M) | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. |

** Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.

Due to the nature of the ICI Global Adjustment mechanism and cost recovery of RRRP, the rate base proposals (#3 and #4) above benefit the targeted recipients, but come at a cost to all other electricity ratepayers in Ontario.

The following table from the Ministry highlights the benefits by electricity consumer class.

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Benefit | | Class B (Commercial) Benefit | Class A (Industrial) Benefit | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br>(-8%) | -$45/ month<br>(-20%) | -$3/MWh<br>(-2%) | -$3/ MWh<br>(-3%) | Up to -$52/MWh<br>(-34%) |

**Notes:** * The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

See Appendix E for more illustrative bill impacts. See Appendix F for an electricity bill mock-up.

Fiscal Impact

The Ministry estimates proceeding with an 8% Regulated Price Plan (RPP) rebate without a cap would cost an estimated $1.1 billion per year. The Ministry's estimate of $300M needed for 2016-17 (to cover the first three months of 2017 when the 8% rebate applies) will be addressed through Supplementary Estimates. The Ministry will use the annual planning process to update future year impacts.

The Ministry also indicates the current proposal would use cap and trade proceeds to eliminate carbon price impacts/ grid emission reductions to ratepayers, as was established through the CCAP. This proposal does not require the full $330M/year notionally allocated through the CCAP, which could provide fiscal plan flexibility of about $60M per year to commit to other GHG reduction initiatives in the fiscal plan.

Cap and Trade Proceeds

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers (on average). While residential and other consumers would benefit from the 8% pre-tax rebate, this does not apply to non-Regulated Price Plan eligible consumers (larger industrial, commercial, and other consumers). As such, the Ministry is proposing to direct a portion of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to provide a modest rate reduction. This proposal fulfills the policy objective established in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to electricity ratepayers.

To be characterized as a regulatory charge under the cap and trade program, auction proceeds need to be spent on programs that are reasonably likely to reduce or support the reduction of greenhouse gases. The Ministry has indicated that their proposal would use proceeds to offset

the costs of committed investments that reduce greenhouse gases (e.g., non-emitting generation and conservation programs) and could incent fuel-switching away from fossil fuels.

Considerations – Implementation

At this point, the Ministry has presented a high level overview of major implementation pieces:

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010. If passed, the legislation would require a general regulation. Amendments would also be required to various regulations to expand ICI and RRRP.
- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. The Ministry indicates it will consult with LDCs (possibly through the Ontario Energy Board) to accurately assess these impacts once the program has been announced. In the past, LDCs have asked for at least six months' notice when implementing billing system changes. Timing concerns may be alleviated by allowing LDCs to provide retroactive payments rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- Detailed messaging on bills could be implemented. The rebate would not be directly linked to HST. With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.
- The Ministry will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

Legal Considerations

8% Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):

- Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):

- To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):

- Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on

both sides).

Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):

- To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

Other Considerations

- This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets for the 8% rebate.
- The 8% rebate would provide a typical residential consumer about an $11 per month benefit on average, exceeding the Budget 2016 $2 per month on average cap and trade commitment. The proposal to offer a modest rate reduction for industrial and commercial consumers also exceeds the Budget commitment to simply offset the impact of cap and trade on these consumers.
- Reduction in electricity prices that do not consider consumption amounts (e.g., without the cap in the previous OCEB program) does not promote electricity conservation and may be seen as unaligned with climate change objectives.
- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
  - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
  - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
  - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

| | | | |
|---|---|---|---|
| **Name of analyst:** | James Strang<br>With input from TPD and OFA | **Phone number:** | 416-327-2071 |
| **Date:** | September 9, 2016 | **Log number:** | |
| **Branch / Division:** | GGPR/ PEMD/ Treasury Board Secretariat<br>Tax Policy Division/ Ministry of Finance<br>Ontario Financing Authority/ Ministry of Finance | | |

## APPENDIX A: PROPOSED MINUTE

Approve electricity price mitigation for residential, commercial and industrial consumers.

In this regard:

i) Approve a suite of initiatives to provide relief to various electricity consumer classes:

   a) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor, starting January 1, 2017.

   b) Increase the total amount of rate protection available to R2 low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2003.

   c) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

   d) Expand eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

   e) Provide a modest rate reduction to commercial and industrial electricity consumers using cap and trade auction proceeds to offset the cost.

ii) Recommend to Cabinet the proposed Ontario Rebate for Electricity Consumers Act, 2016 and that the Ministry proceed to Legislation and Regulations Committee before the end of 2016 with supporting regulations under the proposed Ontario Rebate for Electricity Consumers Act, 2016.

iii) Approve the implementation details associated with the suite of initiatives:

   a) Approve:

      1. The creation of a new item entitled "Ontario Rebate for Electricity Consumers" in the Electricity Price Mitigation Program (Vote/Item 2905-3).

      2. The creation of a new Transfer Payment entitled "Ontario Rebate for Electricity Consumers" in Rebate for Electricity Consumers (Vote/Item 2905-3).

      3. An expenditure increase in the amount of $300,000,000 in 2016-17 in the Transfer Payment entitled "Rebate for Electricity Consumers[1]" in Rebate for Electricity Consumers (Vote/Item 2905-3). Direct the Ministry to return any under-spending to the Treasury Board Contingency Fund.

[1] Pending approval of the proposed Ontario Rebate for Electricity Consumers Act, 2016

b) Note:

1. Funding for 2016-17 will be implemented through Supplementary Estimates in the Fall of 2016.

2. Future year impacts of $1,006,000,000 in 2017-18 and $1,004,000,000 in 2018-19, and $1,004,000,000 in 2019-20 and ongoing.

c) Direct the Ministry to report back to Treasury Board/Management Board of Cabinet in the 2017-18 Program Review, Renewal, and Transformation process on updated future year impacts, and a potential offset strategy for resource requirements to support program implementation

iv) Note the reallocation of cap and trade auction proceeds from the up to $1,320,000,000 that was previously allocated through the Climate Change Action Plan for electricity price mitigation, as follows:

a) The Ministry of Energy to work with the Ministry of the Environment and Climate Change to invest an estimated amount of up to $1,080,000,000, from 2017-18 to 2020-21, of Cap and Trade auction proceeds for non- Regulated Price Plan electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism with a linkage to GHG emission reductions and the government's Climate Change Action Plan. Cap and trade auction proceeds would be used to promote fuel switching to make electricity more competitive with traditionally cheaper fossil fuels, supporting the Government's Climate Change Action Plan.

b) The remaining up to $240,000,000, from 2017-18 to 2020-21, which was previously allocated in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to ratepayers, to be used for other existing initiatives within the fiscal plan and the Climate Change Action Plan that reduce greenhouse gas emissions.

In this regard:

1) Note any redirection of proceeds previously allocated in the Climate Change Action Plan is subject to the evaluation of the Minister of the Environment and Climate Change.

2) Direct the Ministry of the Environment and Climate Change to work with Treasury Board Secretariat and Ministry of Finance to identify other existing initiatives within the fiscal plan that reduce greenhouse gas emissions that can be funded with the remaining up to $240,000,000, from 2017-18 to 2020-21, which was allocated in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to ratepayers.

v) To support implementation of electricity price mitigation, the Ministry is proceeding with the following amendments to existing regulations:

a) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the Electricity Act, 1998 to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

b) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural or Remote Rate Protection Plan to R2 low density electricity customers and provide for a periodic adjustment mechanism.

vi) Direct the Ministry to work with the Premier's Office and Cabinet Office on the development and implementation of an integrated communications strategy.

# APPENDIX B: FINANCIAL TABLES

| FINANCIAL IMPACTS: CHANGES TO EXPENSE AND REVENUE | | | | | TABLE B1 |
|---|---|---|---|---|---|
| | | *Fiscal Plan Basis* | | | *Appropriations Basis* |
| **$ Millions** | | **2016-17** | **2017-18** | **2018-19** | **2016-17** |
| Initiative cost recommended | | 0.0000 | 0.0000 | 0.0000 | |
| *Expense changes:* | | | | | |
| Operating item (Supplementary Estimates inclusion for 2016-17 amount) | Oper | 300.0000 | 1006.0000 | 1004.0000 | 0.0000 |
| Operating Offset | Oper | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | | | | | |
| | | | | | |
| *Revenue changes:* | | | | | |
| Revenue Increase/ Offset - Applies if cap and trade proceeds diverted to in-plan initiatives | | 0.0000 | (60.0000) | (60.0000) | |
| Revenue decrease | | 0.0000 | 0.0000 | 0.0000 | |
| **Total Fiscal Impact (draw from c-funds)** | | **300.0000** | **946.0000** | **940.0000** | **0.0000** |

## APPENDIX C: ELECTRICITY SECTOR BACKGROUND

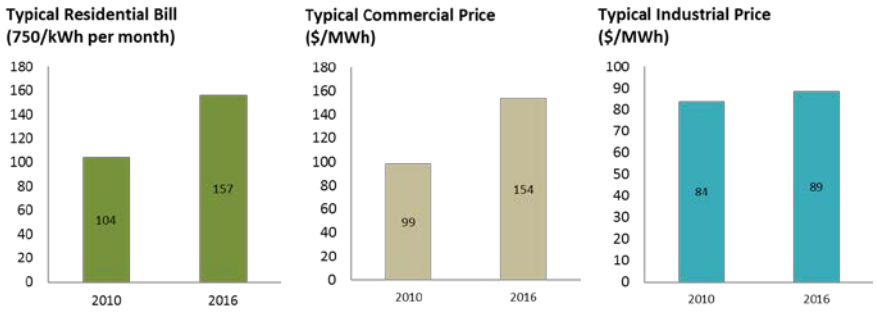
The Ministry has provided the following information to provide electricity sector context this item.

There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

*** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period.




**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

Existing Rate Mitigation efforts are on-going:

- Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs.
  - For example, Northern Ontario residential electricity consumers receive tax credits in recognition of higher electricity costs in the north and rural consumers receive a subsidy funded through the rate-base due to the higher cost of delivering power to rural areas.
  - As of 2016, the government removed the Debt Retirement Charge (DRC) from residential electricity bills. While this saves a typical residential electricity ratepayer about $60 per year, it is less than the benefit previously provided through the Ontario Clean Energy Benefit (OCEB).
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers.

- The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- Because electricity costs must be fully recovered from electricity consumers, rate mitigation funded through the rate-base often represents a shifting of costs from one consumer group to another (i.e., industrial to residential and commercial consumers).
  - Rate-based initiatives are generally associated with incenting changes in behaviour that provide electricity system benefits (i.e., shifting electricity consumption from on-peak to off-peak periods).

The table below shows the estimated cost shifts in the province's electricity system that result from three existing government programs (i.e., ICI, RRRP and OESP):

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

Since 2013, a number of actions have and are being taken to reduce overall electricity system costs. Despite these actions to reduce system costs, electricity rates continue to increase for consumers:

- Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
- Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
- Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
- Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
- Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.

## APPENDIX D: FURTHER INFORMATION SUPPORTING PROPOSED INITIATIVES

The following information has been provided by the Ministry.

**1. Provide an 8% rebate to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms), equivalent to the provincial portion of HST**

The Ministry is proposing to introduce legislation/regulation to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit. This would be equivalent to the provincial portion of the HST.

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).
- An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

| **Eligible for the 8% rebate** (< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate** (> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Farms eligible for Regulated Price Plan (Including Class B farms that opted out of the Regulated Price Plan)<br>• Small businesses<br>  – Coffee / snack retailer<br>  – Convenience store<br>  – Apparel store<br>  – Hair salon<br>  – Small insurance office | • Class A consumers<br>  – Manufacturer<br>  – Large grocery store<br>  – Mines<br>  – Auto assembly plants<br>• Class B consumers<br>  – Commercial offices (low rise)<br>  – Hotel<br>  – General warehousing |

**2. Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial)**

Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers). Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would (the benefit would be seen by consumers starting in 2018):

- Reduce electricity peak demand and electricity system costs by incenting more consumers to lower their electricity demand during peak periods;
- Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
- Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| Short-term | Up to 21% | 80 | 47 | Increase of $0.42/month |
| Long-term | Up to 34% | 165 | 82 | Increase of $0.74/month |

The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility. The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating. Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.

## 3. Update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers

The Ministry is proposing to provide an additional $110M in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

RRRP is a rate-based funded program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.

- Today, RRRP is a $175M program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
- The majority of the program funding ($127M) provided to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a rebate of $31.50. The proposed update to the program would increase the benefit to $60/month
- RRRP funding supporting R2 customers has been capped at the current level since 2003. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

An additional $110M in program funding would see an increased benefit of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.

- This would increase the R2 portion of the RRRP to $237 million with a monthly impact on an average residential consumer of ~$0.60.
- The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the benefit remains constant.

## 4. Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.

- To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).
- However, providing an 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other GHG reduction initiatives in the fiscal plan.

The rate reduction proposal would provide additional benefit to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $240M over the first four year compliance period).

# APPENDIX F: ILLUSTRATIVE BILL IMPACTS

The Ministry has provided the following illustrative bill impacts:

| | Current Bill ( before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $139 /month | N/A | 8% pre-tax rebate: - $11 | $128 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $229 /month | RRRP: –$32 | 8% pre-tax rebate + Updated RRRP: - $45 | $184 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $101 /month | OESP: -$38 | 8% pre-tax rebate: - $8 | $93 /month |
| Small Business (Toronto – 403,200 kWh/month) | $149 /MWh | N/A | 8% pre-tax rebate: - $12/MWh | $137 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $203 /MWh | N/A | 8% pre-tax rebate: - $16/MWh | $187 /MWh |

**Notes:**

***** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as $1,332 per year for a family.

** Income of less than $28,000, family of 4.

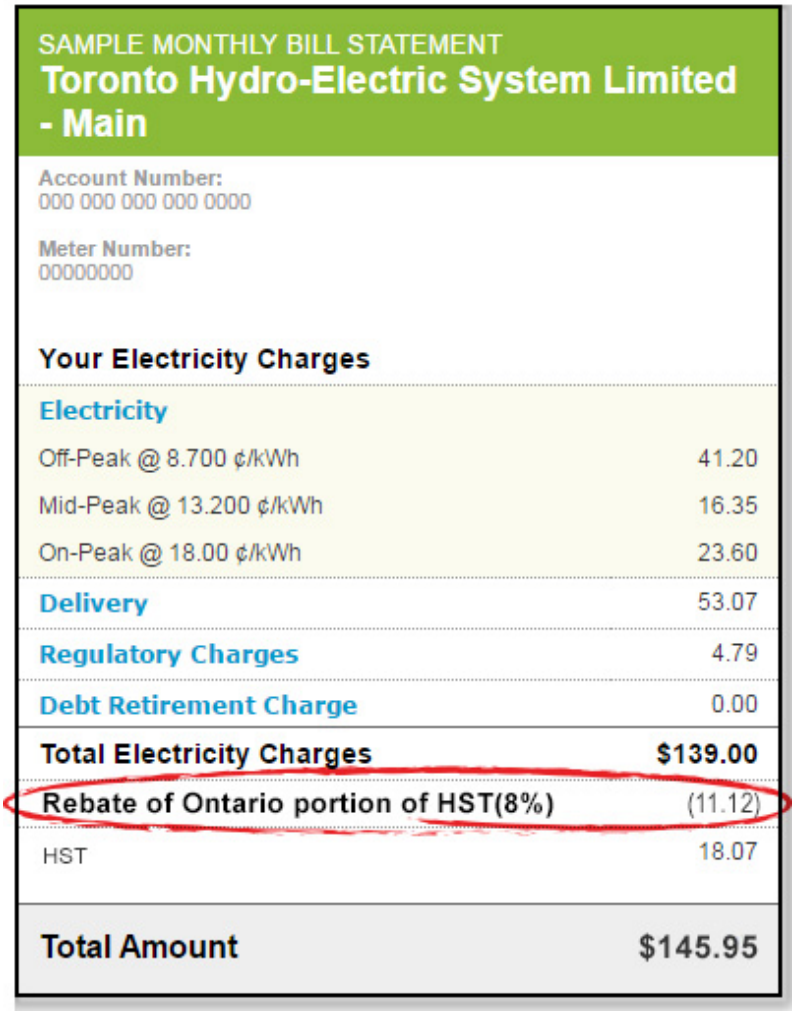
The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Totals may not add due to rounding.

| | Current Rate | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Rate |
|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | $105 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI + NIERP: -$69/MWh | Proceeds Recycling: -$2.60/MWh | $66 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling + ICI: Up to -$52/MWh | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $149 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $151 /MWh |

**Notes:**

The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

## APPENDIX E: ILLUSTRATIVE BILL MOCK-UP



SAMPLE MONTHLY BILL STATEMENT

**Toronto Hydro-Electric System Limited - Main**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| **Rebate of Ontario portion of HST(8%)** | (11.12) |
| HST | 18.07 |
| **Total Amount** | **$145.95** |

**Note:** Final bill presentment pending submission to LRC.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Ronald Kwan |
| **Cc:** | Tomasz Bugajski; Shajee Kathirgamanathan |
| **Subject:** | FW: Electricity Item - Cabinet/TB on Monday at 9 am |
| **Date:** | Monday, September 12, 2016 8:14:28 AM |
| **Attachments:** | RAN Electricity Price Mitigation v13 2016 09 12 CLEAN.doc |

Fyi…..the latest.

**From:** Morgenstern, Madeleine (TBS) [mailto:Madeleine.Morgenstern@ontario.ca]
**Sent:** Monday, September 12, 2016 8:10 AM
**To:** Felix Fung (MOF) <Felix.Fung@ontario.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Electricity Item - Cabinet/TB on Monday at 9 am

Hi John,

Here is the latest version.

Thanks,
Madeleine

**From:** Fung, Felix (TBS)
**Sent:** September-12-16 8:01 AM
**To:** Kim, John (OFA)
**Cc:** Morgenstern, Madeleine (TBS); Kathirgamanathan,Shajee (OFA)
**Subject:** RE: Electricity Item - Cabinet/TB on Monday at 9 am

Thanks John!

We're going to send you the final version of the note very shortly (just got the ok from our DMO).

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** September-12-16 7:59 AM
**To:** Fung, Felix (TBS)
**Cc:** Morgenstern, Madeleine (TBS); Kathirgamanathan,Shajee (OFA)
**Subject:** RE: Electricity Item - Cabinet/TB on Monday at 9 am

Hi Felix,

I understand Ron is planning to attend so we are not planning to be there.

Hope all goes well!

Thanks,

John.

**From:** Fung, Felix (TBS) [mailto:Felix.Fung@ontario.ca]
**Sent:** Friday, September 09, 2016 5:25 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Jenarra DeSouza (MEDTE/MRI) <Jenarra.DeSouza@ontario.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Inglis, Liane (MOF) <Liane.Inglis@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
**Cc:** Madeleine Morgenstern (PPAGS) <Madeleine.Morgenstern@ontario.ca>; James Strang (MOF) <James.Strang@ontario.ca>
**Subject:** Electricity Item - Cabinet/TB on Monday at 9 am

Hi everyone,

This is to let everyone know that Energy's Electricity item will be going to TB/MBC on Monday morning at 9 am. The meeting will be at the Council Chambers, Room 275, in the Legislature.

Due to the room size, not everyone may be able to go inside the room - but we are happy to have folks outside in the anteroom should questions come up.

If you plan to attend, please arrive by 8:45 am.

We will be sharing the next version of the assessment note and TB minute later today / this evening.

Thanks,
Felix

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**TREASURY BOARD / MANAGEMENT BOARD OF CABINET**
**REQUEST ASSESSMENT NOTE**

| | |
|---|---|
| **Ministry:** | Energy |
| **Meeting Date:** | September 12, 2016 |
| **Agenda Class:** | Major |
| **Last reviewed by:** N/A | **Tracking to:** Cabinet - September 12, 2016 |

| **SUBMISSION TITLE:** | Electricity Price Mitigation |
|---|---|

## I. DECISION BEFORE THE BOARD

The Ministry of Energy is requesting approval of a suite of initiatives providing relief to various electricity consumer classes.

## II. RECOMMENDATIONS:

| | |
|---|---|
| • Approve a suite of initiatives to provide relief to various electricity consumer classes (pending Cabinet policy approval):<br>– Providing an 8% rebate to Regulated Price Plan eligible consumers;<br>– Expanding the Industrial Conservation Initiative;<br>– Updating the Rural or Remote Rate Protection program; and,<br>– Using $270M in cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade by providing a modest reduction in rates. Balance of proceeds intended for electricity relief through the Climate Change Action Plan ($60M), could provide some fiscal offsets.<br>• Approve $300M in 2016-17 in Supplementary Estimates for electricity price mitigation.<br>• Direct the Ministry to report back to TB/MBC through the annual planning process with updated future year impacts, and obtain any required TB/MBC approvals to implement the initiatives.<br>• Recommend proceeding to Cabinet with the proposed legislation and amendments to existing regulations to implement the initiatives. | *Board Judgment* |

## III. FINANCIAL SUMMARY

| **$ Millions** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|
| Initiative cost requested | 300.0 | 1006.0 | 1004.0 |
| Initiative cost recommended | 300.0 | 1006.0 | 1004.0 |
| Recommended program base | 300.0 | 1006.0 | 1004.0 |
| Offset Recommended – Applies if cap and trade proceeds diverted to in-plan initiatives | 0.0 | (60.0) | (60.0) |
| Total Fiscal Impact | 300.0 | 946.0 | 944.0 |

## IV. KEY COMMENTS AND CONSIDERATIONS

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online. Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period. Appendix C provides supporting background information.

As part of the 2016 Budget, the government committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the Budget commitment and additional price mitigation, while delivering on the Province's climate change objectives, the Ministry of Energy has developed price mitigation initiatives that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

The Ministry is proposing the following to mitigate electricity prices for consumers (Appendix D provides more information on each item below):

- Provide an 8% rebate on the pre-tax cost of electricity to consumers eligible for the Regulated Price Plan (i.e., residential, small business and farms), equivalent to the provincial portion of HST.
- Expand Industrial Conservation Initiative (ICI) eligibility by lowering the threshold to 1 MW, to provide support to additional commercial, institutional and small industrial consumers.
- Update the Rural or Remote Rate Protection (RRRP) program, to provide relief to rural customers.
- Use cap and trade proceeds to provide a modest rate reduction for commercial and industrial electricity consumers.

Public high-profile communications would coincide with introduction of legislation (September 2016). Currently, the 8% rebate would be available starting January 1, 2017, along with updating the RRRP. Expanding ICI won't be added to bills until 2018 due to the time required to implement the expansion and for billing changes. The impact of cap and trade would not be added to electricity bills until 2017.

The following tables provide an overview of the four initiatives, recipients, projected financial impact, grouping them based on whether taxpayers or ratepayers cover the costs:

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Taxpayers cover the costs (Potential to impact the Province's Fiscal Plan)** | | | |
| **1.** | 8% Rebate to Regulated Price Plan | Fiscal<br>About $1.0B | Residential, small business and farms, and other small users |
| **2a.** | Use cap and trade proceeds to provide a modest reduction in rates for commercial and industrial electricity consumers. (Implementation details under development). | ($270M) in cap and trade proceeds to offset $270M in costs for reducing rates<br><br>No Fiscal Impact | The CCAP allocated up to $330M/year in cap and trade proceeds for electricity price mitigation.<br><br>See item 2b. regarding the residual amount of cap and trade proceeds ($330M - $270M = $60M) |
| **2b.** | While CCAP anticipated $330M/year was required to keep electricity affordable, the residential portion of this commitment is met by the 8% rebate. As such, some of the CCAP allocated proceeds can be redirected to other GHG reduction initiatives already in the fiscal plan. | Fiscal<br>($60M) | Provides fiscal plan flexibility of $60M/year if these proceeds are diverted to offset costs of other existing in-plan initiatives that reduce GHG emissions. |
| | **Total Fiscal Impact** | $946M | Matches Financial Summary on page 1 for 2017-18 |

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Ratepayers cover the costs (No impact to the Province's Fiscal Plan)** | | | |
| **3** | Expanding ICI eligibility to customers above 1MW in all sectors | Rate base<br>($47M/$82M)** | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors |
| **4.** | Updating Rural or Remote Rate Protection | Rate base<br>($110M) | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. |

** Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.

Due to the nature of the ICI Global Adjustment mechanism and cost recovery of RRRP, the rate base proposals (#3 and #4) above benefit the targeted recipients, but come at a cost to all other electricity ratepayers in Ontario.

The following table from the Ministry highlights the benefits by electricity consumer class.

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Benefit | | Class B (Commercial) Benefit | Class A (Industrial) Benefit | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br>(-8%) | -$45/ month<br>(-20%) | -$3/MWh<br>(-2%) | -$3/ MWh<br>(-3%) | Up to -$52/MWh<br>(-34%) |

**Notes:** * The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

See Appendix E for more illustrative bill impacts. See Appendix F for an electricity bill mock-up.

Fiscal Impact

The Ministry estimates proceeding with an 8% Regulated Price Plan (RPP) rebate without a cap would cost an estimated $1.0 billion per year. The Ministry's estimate of $300M needed for 2016-17 (to cover the first three months of 2017 when the 8% rebate applies) will be addressed through Supplementary Estimates. The Ministry will use the annual planning process to update future year impacts.

The Ministry also indicates the current proposal would use cap and trade proceeds to eliminate carbon price impacts/ grid emission reductions to ratepayers, as was established through the CCAP. This proposal does not require the full $330M/year notionally allocated through the CCAP, which could provide fiscal plan flexibility of about $60M per year to commit to other GHG reduction initiatives in the fiscal plan.

Cap and Trade Proceeds

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers (on average). While residential and other consumers would benefit from the 8% pre-tax rebate, this does not apply to non-Regulated Price Plan eligible consumers (larger industrial, commercial, and other consumers). As such, the Ministry is proposing to direct a portion of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to provide a modest rate reduction. This proposal fulfills the policy objective established in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to electricity ratepayers.

To be characterized as a regulatory charge under the cap and trade program, auction proceeds need to be spent on programs that are reasonably likely to reduce or support the reduction of greenhouse gases. The Ministry has indicated that their proposal would use proceeds to offset the costs of committed investments that reduce greenhouse gases (e.g., non-emitting generation and conservation programs) and incent fuel-switching away from fossil fuels.

Considerations – Implementation

At this point, the Ministry has presented a high level overview of major implementation pieces:

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010. If passed, the legislation would require a general regulation. Amendments would also be required to various regulations to expand ICI and RRRP.
- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. The Ministry indicates it will consult with LDCs (possibly through the Ontario Energy Board) to accurately assess these impacts once the program has been announced. In the past, LDCs have asked for at least six months' notice when implementing billing system changes. Timing concerns may be alleviated by allowing LDCs to provide retroactive payments rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- Detailed messaging on bills could be implemented. The rebate would not be directly linked to HST. With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.
- The Ministry will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

Legal Considerations

8% Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):

- Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):

- To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural or remote customers):

- Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):

- To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

Other Considerations

- This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets for the 8% rebate.
- The 8% rebate would provide a typical residential consumer about an $11 per month benefit on average, exceeding the Budget 2016 $2 per month on average cap and trade commitment. The proposal to offer a modest rate reduction for industrial and commercial consumers also exceeds the Budget commitment to simply offset the impact of cap and trade on these consumers.
- Reductions in electricity prices that do not consider consumption amounts (e.g., without the cap in the previous OCEB program) do not promote electricity conservation and may be seen as unaligned with climate change objectives.
- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
  - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
  - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
  - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

| | | | |
|---|---|---|---|
| **Name of analyst:** | James Strang<br>With input from TPD and OFA | **Phone number:** | 416-327-2071 |
| **Date:** | September 12, 2016 | **Log number:** | |
| **Branch / Division:** | GGPR/ PEMD/ Treasury Board Secretariat<br>Tax Policy Division/ Ministry of Finance<br>Ontario Financing Authority/ Ministry of Finance | | |

## APPENDIX A: PROPOSED MINUTE

Approve electricity price mitigation for residential, commercial and industrial consumers.

In this regard:

i) Approve a suite of initiatives to provide relief to various electricity consumer classes:

   a) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor, starting January 1, 2017.

   b) Increase the total amount of rate protection available to R2 low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2003.

   c) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

   d) Expand eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

   e) Provide a modest rate reduction to commercial and industrial electricity consumers using cap and trade auction proceeds to offset the cost.

ii) Recommend to Cabinet the proposed Ontario Rebate for Electricity Consumers Act, 2016 and that the Ministry proceed to Legislation and Regulations Committee before the end of 2016 with supporting regulations under the proposed Ontario Rebate for Electricity Consumers Act, 2016.

iii) Approve the implementation details associated with the suite of initiatives:

   a) Approve:

      1. The creation of a new item entitled "Ontario Rebate for Electricity Consumers" in the Electricity Price Mitigation Program (Vote/Item 2905-3).

      2. The creation of a new Transfer Payment entitled "Ontario Rebate for Electricity Consumers" in Rebate for Electricity Consumers (Vote/Item 2905-3).

      3. An expenditure increase in the amount of $300,000,000 in 2016-17 in the Transfer Payment entitled "Rebate for Electricity Consumers[1]" in Rebate for Electricity Consumers (Vote/Item 2905-3). Direct the Ministry to return any under-spending to the Treasury Board Contingency Fund.

[1] Pending approval of the proposed Ontario Rebate for Electricity Consumers Act, 2016

b) Note:

1. Funding for 2016-17 will be implemented through Supplementary Estimates in the Fall of 2016.

2. Future year impacts of $1,006,000,000 in 2017-18 and $1,004,000,000 in 2018-19, and $1,004,000,000 in 2019-20 and ongoing.

c) Direct the Ministry to report back to Treasury Board/Management Board of Cabinet in the 2017-18 Program Review, Renewal, and Transformation process on updated future year impacts, and a potential offset strategy for resource requirements to support program implementation

iv) Further to the Cabinet Minute of May 11, 2016 and the Treasury Board Minute of May 19, 2016, note the reallocation of cap and trade auction proceeds from the up to $1,320,000,000 that was previously allocated through the Climate Change Action Plan for electricity price mitigation, as follows:

a) The Ministry of Energy to work with the Ministry of the Environment and Climate Change, Treasury Board Secretariat, Ministry of Finance, Cabinet Office and Office of the Premier, to allocate up to $1,080,000,000, from 2017-18 to 2020-21, of Cap and Trade auction proceeds to address rate-impacts on non-Regulated Price Plan electricity consumers (e.g., industrial, commercial and institutional) related to cap and trade and the expansion of other rate-based programs, subject to the evaluation by the Minister of the Environment and Climate Change.

In this regard:

1) Direct the Ministry of Energy to work with the Ministry of the Environment and Climate Change and report back to Cabinet by the end of 2016 with options on the appropriate mechanism.

b) The remaining up to $240,000,000, from 2017-18 to 2020-21, which was previously allocated in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to ratepayers, to be used for other existing initiatives within the fiscal plan and the Climate Change Action Plan that reduce greenhouse gas emissions, subject to the evaluation by the Minister of the Environment and Climate Change.

In this regard:

1) Direct the Ministry of the Environment and Climate Change to work with Treasury Board Secretariat and Ministry of Finance to identify other existing initiatives within the fiscal plan and the Climate Change Action Plan that reduce greenhouse gas emissions that can be funded with the remaining up to $240,000,000, from 2017-18 to 2020-21.

v) To support implementation of electricity price mitigation, the Ministry is proceeding with the following amendments to existing regulations:

a) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the Electricity Act, 1998 to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and allow electricity consumers and market participants between 1 MW and 5 MW to opt in.

b) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural or Remote Rate Protection Plan to R2 low density electricity customers and provide for a periodic adjustment mechanism.

vi) Direct the Ministry to work with Office of the Premier and Cabinet Office on the development and implementation of an integrated communications strategy.

# APPENDIX B: FINANCIAL TABLES

| FINANCIAL IMPACTS: CHANGES TO EXPENSE AND REVENUE | | | | | TABLE B1 |
|---|---|---|---|---|---|
| | | *Fiscal Plan Basis* | | | *Appropriations Basis* |
| **$ Millions** | | **2016-17** | **2017-18** | **2018-19** | **2016-17** |
| Initiative cost recommended | | 0.0000 | 0.0000 | 0.0000 | |
| *Expense changes:* | | | | | |
| Operating item (Supplementary Estimates inclusion for 2016-17 amount) | Oper | 300.0000 | 1006.0000 | 1004.0000 | 0.0000 |
| Operating Offset | Oper | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | | | | | |
| | | | | | |
| *Revenue changes:* | | | | | |
| Revenue Increase/ Offset - Applies if cap and trade proceeds diverted to in-plan initiatives | | 0.0000 | (60.0000) | (60.0000) | |
| Revenue decrease | | 0.0000 | 0.0000 | 0.0000 | |
| **Total Fiscal Impact (draw from c-funds)** | | **300.0000** | **946.0000** | **940.0000** | **0.0000** |

# APPENDIX C: ELECTRICITY SECTOR BACKGROUND

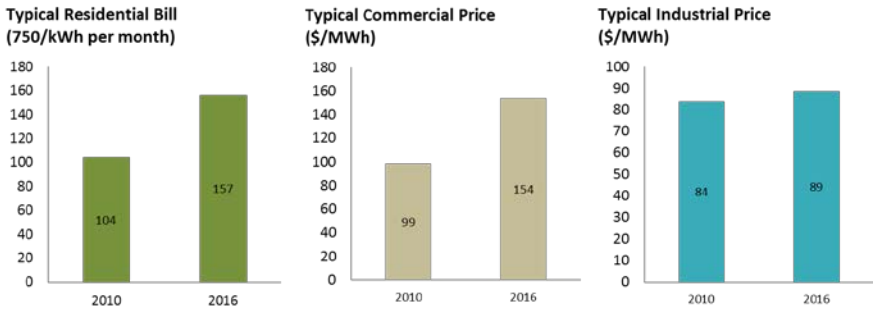
The Ministry has provided the following information to provide electricity sector context this item.

There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

*** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period.




**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

Existing Rate Mitigation efforts are on-going:

- Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs.
  - For example, Northern Ontario residential electricity consumers receive tax credits in recognition of higher electricity costs in the north and rural consumers receive a subsidy funded through the rate-base due to the higher cost of delivering power to rural areas.
  - As of 2016, the government removed the Debt Retirement Charge (DRC) from residential electricity bills. While this saves a typical residential electricity ratepayer about $60 per year, it is less than the benefit previously provided through the Ontario Clean Energy Benefit (OCEB).
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers.

- The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- The Rural or Remote Rate Protection (RRRP) program is provided to rural or remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- Because electricity costs must be fully recovered from electricity consumers, rate mitigation funded through the rate-base often represents a shifting of costs from one consumer group to another (i.e., industrial to residential and commercial consumers).
  - Rate-based initiatives are generally associated with incenting changes in behaviour that provide electricity system benefits (i.e., shifting electricity consumption from on-peak to off-peak periods).

The table below shows the estimated cost shifts in the province's electricity system that result from three existing government programs (i.e., ICI, RRRP and OESP):

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

Since 2013, a number of actions have and are being taken to reduce overall electricity system costs. Despite these actions to reduce system costs, electricity rates continue to increase for consumers:

- Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
- Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
- Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
- Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
- Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.

## APPENDIX D: FURTHER INFORMATION SUPPORTING PROPOSED INITIATIVES

The following information has been provided by the Ministry.

**1. Provide an 8% rebate to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms), equivalent to the provincial portion of HST**

The Ministry is proposing to introduce legislation/regulation to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit. This would be equivalent to the provincial portion of the HST.

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).
- An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

| **Eligible for the 8% rebate** (< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate** (> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Farms eligible for Regulated Price Plan (Including Class B farms that opted out of the Regulated Price Plan)<br>• Small businesses<br>– Coffee / snack retailer<br>– Convenience store<br>– Apparel store<br>– Hair salon<br>– Small insurance office | • Class A consumers<br>– Manufacturer<br>– Large grocery store<br>– Mines<br>– Auto assembly plants<br>• Class B consumers<br>– Commercial offices (low rise)<br>– Hotel<br>– General warehousing |

**2. Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial)**

Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers). Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would (the benefit would be seen by consumers starting in 2018):

- Reduce electricity peak demand and electricity system costs by incenting more consumers to lower their electricity demand during peak periods;
- Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
- Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| Short-term | Up to 21% | 80 | 47 | Increase of $0.42/month |
| Long-term | Up to 34% | 165 | 82 | Increase of $0.74/month |

The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility. The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating. Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.

## 3. Update the Rural or Remote Rate Protection (RRRP) program, to provide relief to rural customers

The Ministry is proposing to provide an additional $110M in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

RRRP is a rate-based funded program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.

- Today, RRRP is a $175M program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
- The majority of the program funding ($127M) provided to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a rebate of $31.50. The proposed update to the program would increase the benefit to $60/month
- RRRP funding supporting R2 customers has been capped at the current level since 2003. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

An additional $110M in program funding would see an increased benefit of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.

- This would increase the R2 portion of the RRRP to $237 million with a monthly impact on an average residential consumer of ~$0.60.
- The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the benefit remains constant.

## 4. Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.

- To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).
- However, providing an 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other GHG reduction initiatives in the fiscal plan.

The rate reduction proposal would provide additional benefit to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $240M over the first four year compliance period).

# APPENDIX E: ILLUSTRATIVE BILL IMPACTS

The Ministry has provided the following illustrative bill impacts:

| | Current Bill ( before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $139 /month | N/A | 8% pre-tax rebate: - $11 | $128 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $229 /month | RRRP: –$32 | 8% pre-tax rebate + Updated RRRP: - $45 | $184 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $101 /month | OESP: -$38 | 8% pre-tax rebate: - $8 | $93 /month |
| Small Business (Toronto – 403,200 kWh/month) | $149 /MWh | N/A | 8% pre-tax rebate: - $12/MWh | $137 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $203 /MWh | N/A | 8% pre-tax rebate: - $16/MWh | $187 /MWh |

**Notes:**

***** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as $1,332 per year for a family.

** Income of less than $28,000, family of 4.

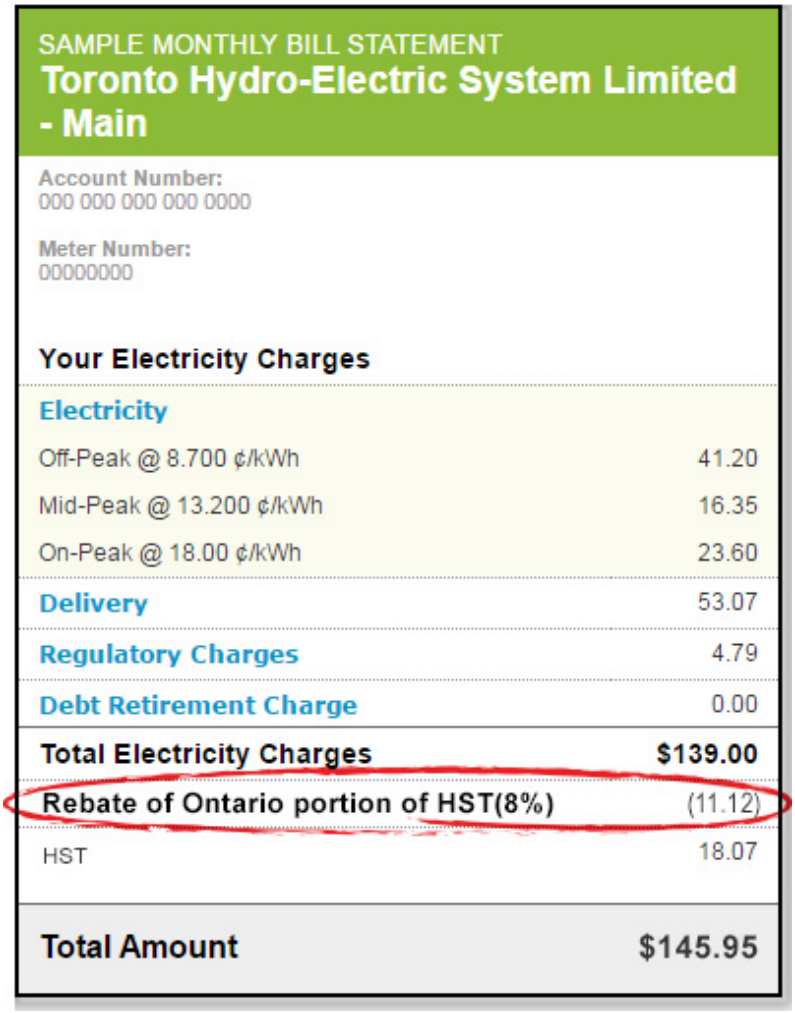
The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Totals may not add due to rounding.

| | Current Rate | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Rate |
|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | $105 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI + NIERP: -$69/MWh | Proceeds Recycling: -$2.60/MWh | $66 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling + ICI: Up to -$52/MWh | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $149 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $151 /MWh |

**Notes:**

The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

## APPENDIX F: ILLUSTRATIVE BILL MOCK-UP



SAMPLE MONTHLY BILL STATEMENT

**Toronto Hydro-Electric System Limited - Main**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| **Rebate of Ontario portion of HST(8%)** | (11.12) |
| HST | 18.07 |
| **Total Amount** | **$145.95** |

**Note:** Final bill presentment pending submission to LRC.

## APPENDIX G: BACKGROUND CONTEXT

**Budget commitment** (*2016 Ontario Budget - Chapter I: Building Prosperity and Creating Jobs*)**:**

The government will also take steps to ensure that the net impact of cap and trade would not result in an overall increase in electricity costs for commercial and industrial consumers, and that there would be a modest benefit of up to $2 per month, on average, to residential consumers.

**CCAP public document** (under *Action Area – Buildings and Homes: Reduce emissions from fossil-fuel use in buildings*)**:**

Keep Electricity Rates Affordable: Use cap and trade proceeds to offset the cost of greenhouse gas pollution reduction initiatives that are currently funded by residential and industrial consumers through their bills.

**CCAP policy minute** (May 11, 2016)**:**

ENERGY develop additional options to addressing rate-impacts on electricity consumers and work with MOECC, the Premier's Office and Cabinet Office regarding the selected option for inclusion in the action plan

**CCAP TB/MBC minute** (May 19, 2016)**:**

i) Approve-in-principle the following estimated ranges to guide potential investment of cap and trade proceeds over four years, from 2017-18 to 2020-21, should proceeds be available:

| **CCAP Action** | **Initiative** | **Potential Funding range from proceeds over 4-year period** | **Estimated GHG reduction in 2020 associated with potential funding** |
|---|---|---|---|
| Moving toward a lower-carbon energy supply with adequate capacity and affordable low-carbon electricity. | Eliminate Carbon Price Impacts / Grid Emission Reductions to Ratepayers | · Range - $1,000,000,000 to $1,320,000,000 | 3,000,000 Tonnes (Energy Planning) |

| | |
|---|---|
| **From:** | Tomasz Bugajski |
| **To:** | Ronald Kwan; John Kim |
| **Subject:** | FW: Electricity item |
| **Date:** | Tuesday, September 06, 2016 12:31:21 PM |
| **Attachments:** | Cabinet Submission - Electricity Price Mitigation 20160902 330pm (3).pptx |

FYI – not sure if you have this version.

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

**From:** Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
**Sent:** Tuesday, September 06, 2016 12:30 PM
**To:** Ghufran Tarin (MOF) <Ghufran.Tarin@ontario.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** FW: Electricity item

All – FYI. Latest turn of the electricity deck.

**From:** Young, Gwendolynne (MOF)
**Sent:** September 6, 2016 12:28 PM
**To:** Pearce, Christopher (MOF); Baig, Saad (MOF); Nguyen, Marianne (MOF)
**Cc:** McLean, David (MOF); Chaput, Brandon (MOF)
**Subject:** FW: Electricity item

Hi All,
FYI - Attached is the current draft Cab Sub from ENERGY (care of TBS) on HST/Electricity. Further changes are expected. This item is tracking to CAB on Sept 14th.

**Gwen Young**
p: 416.325.0741 | bb: 647.982.2419

**From:** Subrahmanyan, Sriram (MOF)
**Sent:** September 6, 2016 12:13 PM
**To:** DeSouza, Jenarra (MOF); Langleben, Ann (MOF); Lawson, Lynn (MOF); Young, Gwendolynne (MOF); Kwan, Ronald (OFA)
**Subject:** Fw: Electricity item

Sent from my BlackBerry 10 smartphone on the Rogers network.

**From:** Morgenstern, Madeleine (TBS) <Madeleine.Morgenstern@ontario.ca>

**Sent:** Tuesday, September 6, 2016 11:50 AM
**To:** Subrahmanyan, Sriram (MOF); Kim, John (OFA); Kathirgamanathan,Shajee (OFA)
**Cc:** Fung, Felix (TBS); Strang, James (TBS)
**Subject:** Electricity item

Hi everyone,

Just received a draft Cab Sub from ENE, which they expect will change again based on comments from their MO. We are reviewing this now as we understand our MO may be interested in a briefing. We will forward invites and any additional materials as we receive. Password is the external Budget password.

Thanks,
Madeleine

# Electricity Price Mitigation

## Ministry of Energy

## WORKING DRAFT

## Date: September 14, 2016

Minister

Deputy Minister

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

- Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables.
  - This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%.

- Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online.

- The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers.

# Context – Electricity Consumer Classes

- There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

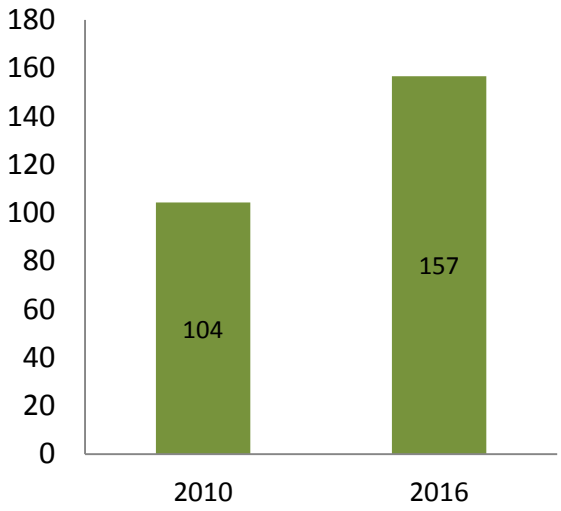
- The following slide provide further information on the prices paid by different classes of electricity consumers.

**** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

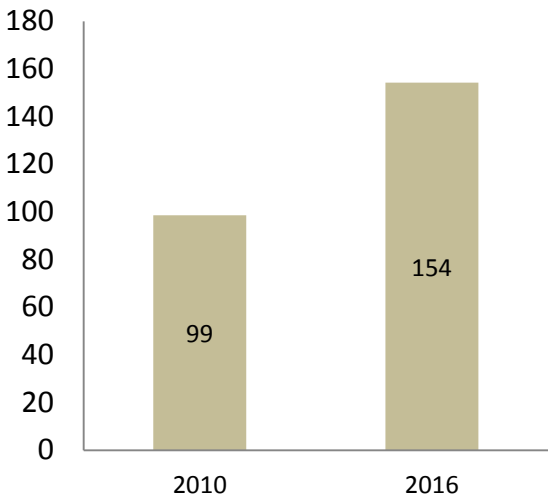
# Context – Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period.

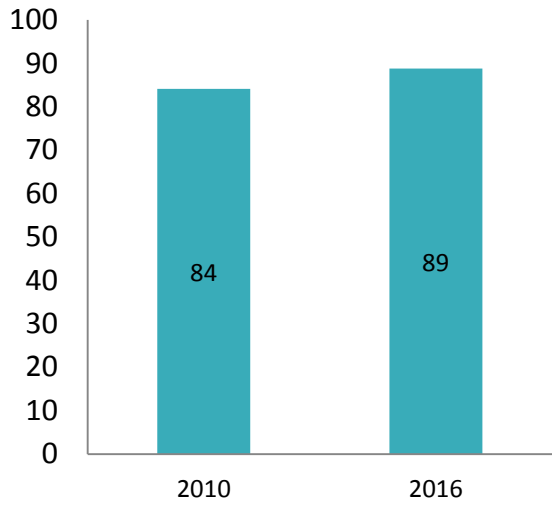
**Typical Residential Bill (750/kWh per month)**




**Typical Commercial Price ($/MWh)**




**Typical Industrial Price ($/MWh)**




**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

# Existing Rate Mitigation

- Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs.
  - For example, Northern Ontario residential electricity consumers receive tax credits in recognition of higher electricity costs in the north and rural consumers receive a subsidy funded through the rate-base due to the higher cost of delivering power to rural areas.

- As of 2016, the government removed the Debt Retirement Charge (DRC) from residential electricity bills. While this saves a typical residential electricity ratepayer about $60 per year, it is less than the benefit previously provided through the Ontario Clean Energy Benefit (OCEB).
  - OCEB provided a tax-base rebate of 10% rebate on the total cost of electricity charges related to electricity consumption on eligible bills between 2011 and 2015.

- Because electricity costs must be fully recovered from electricity consumers, rate mitigation funded through the rate-base often represents a shifting of costs from one consumer group to another (i.e., industrial to residential and commercial consumers).
  - Rate-based initiatives are generally associated with incenting changes in behaviour that provide electricity system benefits (i.e., shifting electricity consumption from on-peak to off-peak periods).

- The following slides provide an overview of the programs currently available to different electricity consumer classes along with the cost shift associated with several of the programs.

# Existing Rate Mitigation (cont'd)

| Program | Consumer Type | Rate/Tax-based | Description |
|---|---|---|---|
| Northern Ontario Energy Credit | **Residential** | Tax | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year. |
| Ontario Energy and Property Tax Credit | | Tax | Also delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families. |
| Ontario Electricity Support Program | | Rate | Provides ongoing assistance directly on the bills of eligible low-income electricity consumers. |
| Rural or Remote Rate Protection | | Rate | Provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas. |
| saveONenergy Conservation Programs (including Home Assistance Program for low income customers) | | Rate | Delivered by LDCs which provide financial incentives for electricity-saving measures like LEDs, ENERGYSTAR certified ceiling fans, baseboard programmable thermostats, clotheslines, and advanced powerbars. |
| saveONenergy Conservation Programs (including Retrofit Program for Buildings and other programs) | **Commercial** | Rate | saveONenergy suite of electricity conservation programs for commercial customers offered by local distribution companies (LDCs) help businesses save energy to better manage their electricity consumption and reduce their annual electricity costs. See Appendix for more information. |
| Industrial Conservation Initiative | **Industrial** | Rate | Encourages Ontario's largest consumers to reduce consumption during peak periods to save on average 25% on their electricity bills. |
| Industrial Accelerator Program | | Rate | Provides financial incentives of up to $10 million to transmission-connected electricity consumers, to invest in energy-efficiency or self-generation which would reduce the amount of electricity withdrawn from the provincial grid. |
| Industrial Electricity Incentive | | Rate | Provides reduced electricity rates for companies starting or expanding operations in Ontario. |
| Northern Industrial Electricity Rate Program | | Tax | Provides $20 megawatt per hour (MWh) rebate for qualifying large northern industrial consumers. |
| Demand Response | | Rate | Provides payments to businesses and industry to shift consumption at times when the electricity system is stressed. DR currently provides ~500 MW of capacity to the system. |

# Current Cost Shifts in Ontario's Electricity System

- Ontario has implemented several programs that have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial).

- The table below shows the estimated cost shifts in the province's electricity system that result from three existing government programs (i.e., ICI, RRRP and OESP):

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

# 2016 Budget Commitment – Overview

- The 2016 Budget committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers.

- To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP) committed $1.3 billion from the Greenhouse Gas Reduction Account (GGRA) over the first compliance period (2017-2020).

- The $1.3 billion was estimated to go to different electricity consumer classes as follows:
  - $120 million for residential consumers;
  - $170 million for commercial consumers; and
  - $40 for industrial consumers.

# Electricity System Cost Reduction Initiatives

- A number of actions have and are being taken to reduce overall electricity system costs:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

# Context – Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:

  - **Tax-based Lever:**
    - Provide an on-bill rebate funded from the tax-base to all consumers or specific classes of consumers (i.e., the Ontario Clean Energy Benefit (OCEB) provided a rebate for eligible electricity consumers).

  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.

  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds to offset the cost of existing initiatives that help reduce greenhouse gas (GHG) emissions (i.e., the CCAP committed to offset the impact of cap and trade and to keep electricity rates affordable).

# Rate Mitigation Proposal – Overview

- The Ministry of Energy is proposing to implement the following electricity price mitigation initiatives. The approach identified below would provide relief across all electricity consumer classes:

  1) Provide an 8% rebate to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms), equivalent to the provincial portion of HST;

  2) Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial);

  3) Update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers; and

  4) Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

- The following slides provide additional information on the above initiatives.

***Note:** Eligibility for the 8% rebate would be similar to OCEB and include some customers not on the Regulated Price Plan (RPP), such as Independent Power Authority consumers and consumers that have opted-out of RPP.

# Rate Mitigation Proposal – Illustrative* Impacts

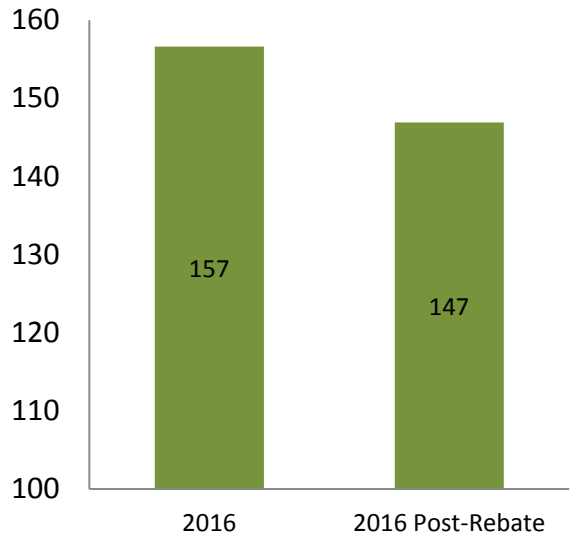
| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Impact | | Class B (Commercial) Impact | Class A (Industrial) Impact | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural** (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion | $270 million annually | -$10/ month<br><br>(-6%) | -$45/ month<br><br>(-20%) | -$1/MWh<br><br>(-1%) | -$1/ MWh<br><br>(-1%) | Up to -$52/MWh<br><br>(-34%) |

***Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

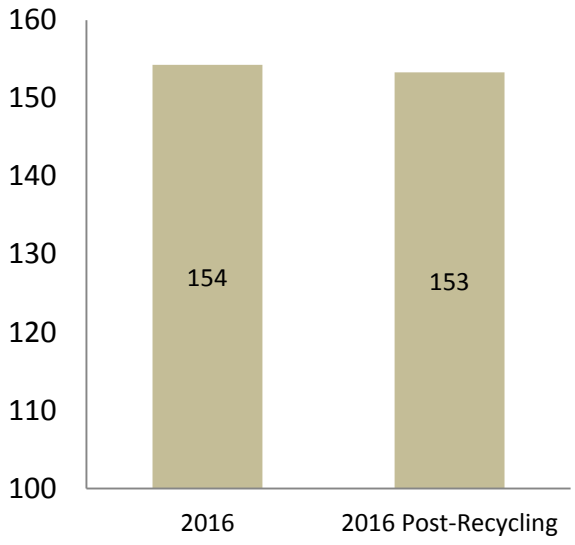
****Note**: Rural customers refers to customers of Hydro One eligible to receive RRRP (R2 rate class customers)

# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class

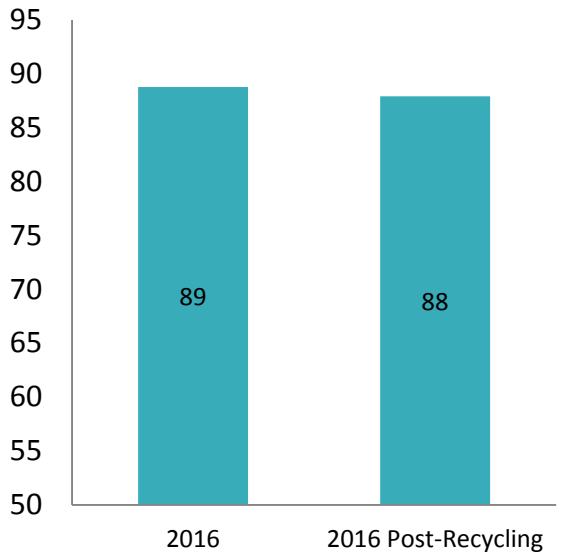
**Typical Residential Bill**
**750/kWh per month**




**Typical Commercial Price ($/MWh)**




**Typical Industrial Price ($/MWh)**




**Residential:** The net impact of the 8% rebate is a 6% reduction.

**Commercial:** The net impact of proceeds recycling is a 1% reduction.

**Industrial:** The net impact of proceeds recycling is a 1% reduction.

**Note:** Residential bills reflect electricity rates as per the Regulated Rate Plan (RRP) which came into effect on May 1, 2016. Commercial and industrial electricity prices reflect YTD June 2016. The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

# 1) 8% Rebate to Regulated Price Plan Eligible Consumers

- ENERGY is proposing to introduce legislation/regulation by X [placeholder for date] to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit.
  - This would be equivalent to the provincial portion of the HST*.

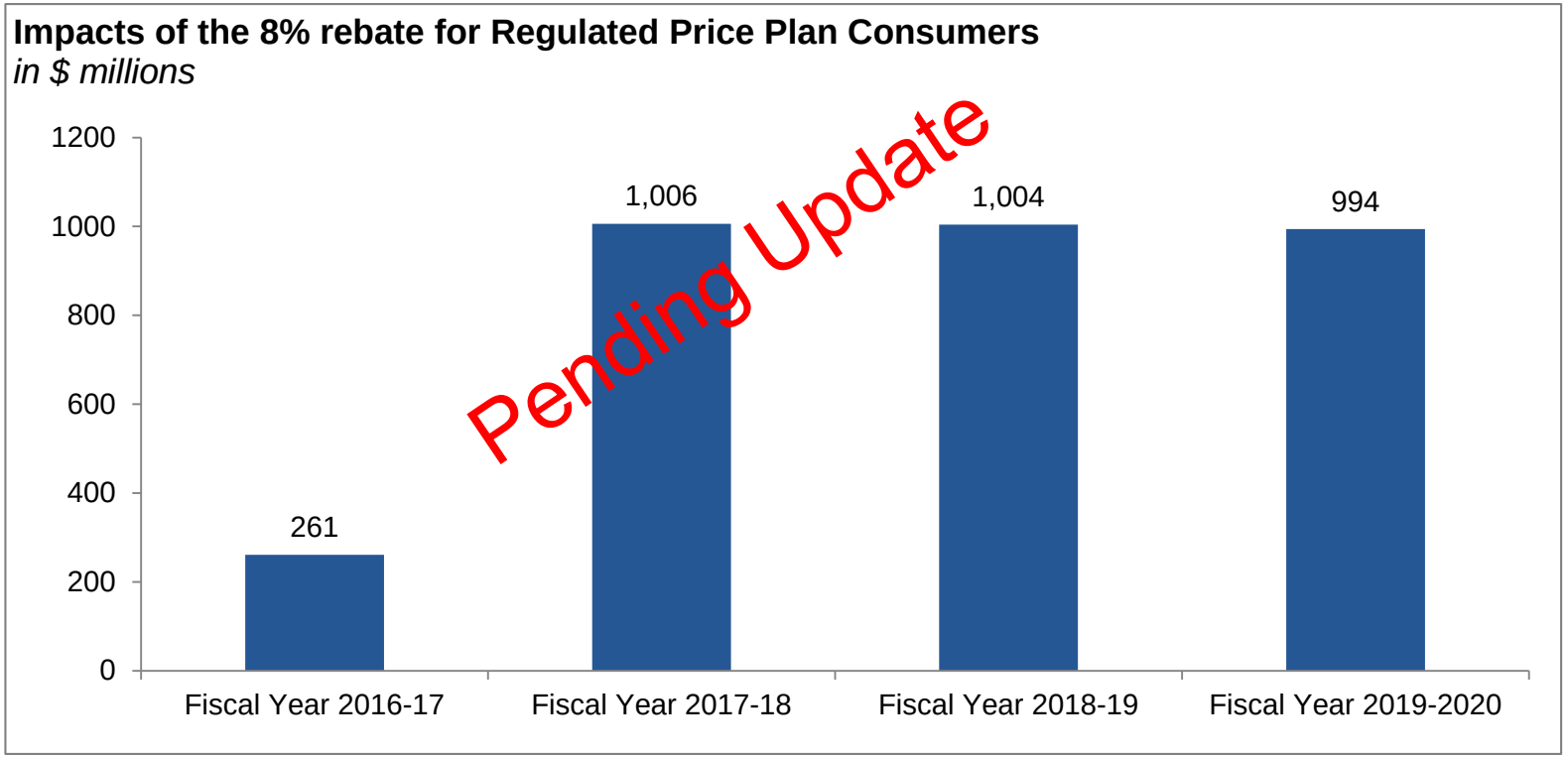
| **Eligible for the 8% rebate**<br>(< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate**<br>(> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>  − Coffee / snack retailer<br>  − Convenience store<br>  − Apparel store<br>  − Hair salon<br>  − Small insurance office | • Class A consumers<br>  − Manufacturer<br>  − Large grocery store<br>  − Mines<br>  − Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>  − Commercial offices (low rise)<br>  − Hotel<br>  − General warehousing |

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).

***Note:** An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

# 1) 8% Rebate to Regulated Price Plan Eligible Consumers – Projected Impact

- ENERGY estimates that the average annual cost of an 8% rebate to consumers eligible for Regulated Price Plan consumers would be approximately $1.0 billion between 2017 and 2020.



# 2) Industrial Conservation Initiative (ICI) Expansion

- ENERGY is proposing to amend O. Reg. 429/04 to expand ICI eligibility effective [X placeholder date].

- Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers).
  - Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

- ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:
  - Reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods;
  - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
  - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

# 2) ICI Expansion – Projected Impact

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

- The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility
  - Short-term refers to the expected impact once ICI billing begins for new Class A consumers (one year after expanded eligibility takes place).
  - Long-term is the expected impact once new Class A consumers have had time to significantly change their behaviour and investment decisions in response to the ICI.

- The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating.

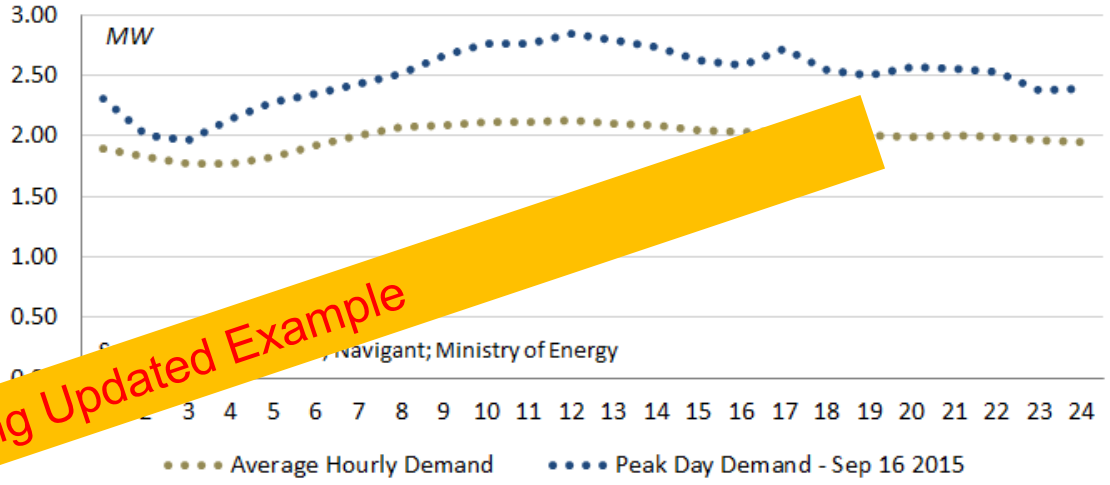
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.

# 2) ICI Expansion – Illustrative Example of Newly Eligible Consumer

- Plastics manufacturers, such as Poly Five Plastics in Toronto, are among the consumers that would become eligible if the threshold was lowered.
- Such manufacturers fall under NAICS* code 32 and have relatively flat load profiles, reflecting around the clock production. This means they would be beneficiaries of ICI even with no change in consumption behaviour.
- Companies like Poly Fi… could expect to … vings if they a… …ble to respond to …ces during high demand …

**Typical Demand Profile, 2-3 MW Consumer**

*Manufacturer, NAICS Code 32 - Nov 2014 to Oct 2015*




Pending Updated Example

**Illustrative Bill Savings, 2-3 MW Consumer**

*Manufacturer, NAICS code 32*

| | *Status Quo* | *No Price Response* | *Short Term Response* | *Long Term Response* |
|---|---|---|---|---|
| | **Class B** | **Class A** | **Class A** | **Class A** |
| GA | 75.26 | 58.06 | 43.55 | 29.03 |
| Total bill | **126.28** | **109.09** | **94.58** | **80.06** |
| *Savings* | | *-14%* | *-25%* | *-37%* |

*Source*: Navigant; Ministry of Energy

*** Note:** North American Industry Classification System (NAICS) is the standard used by statistical agencies in classifying business establishments.

# 3) Rural or Remote Rate Protection (RRRP) Update

- ENERGY is proposing to amend O.Reg 442/01 to provide an additional $110 million in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

- RRRP is a rate-based funded subsidy program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.
  - Today, RRRP is a $175-million program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
  - The majority of the program funding ($125.5 million) provides a subsidy to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a monthly subsidy for R2 customers of $31.50.
  - RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

- An additional $110 million in program funding would see an increased subsidy of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.
  - This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
  - The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the subsidy remains constant.

# 3) Rural or Remote Rate Protection (RRRP) Update

| Bill Comparisons @ 1000kWh/month (Pre-HST) | | |
|---|---|---|
| | **Total Current Delivery**** Charge** | **Total Current Bill** |
| **Hydro One R2** (Current RRRP Subsidy Levels) | ~$111 | ~$229 |
| **Hydro One R2** (With Proposed RRRP Expansion) | ~$83 | ~$201 |
| **Hydro One R1** | ~$82.50 | ~$201 |
| **Algoma Power** (Receives RRRP) | ~$79.50 | ~$197 |
| **Provincial Average*** | ~$51 | ~$169 |
| **Lowest Cost Total Bill LDC**** | ~$48 | ~$149* |
| **Lowest Cost Delivery Charge LDC***** | ~$36 | ~$154 |

**Average Bill of Ontario municipal LDCs and non-municipal Algoma Power, CNPI, and Hydro One Urban. Excludes Hydro One Remote, Hydro One R1 and Cornwall Electric.*

***The LDC with the lowest total bill is Fort Frances Power Corporation (FFPC). However, FFPC does not have the lowest delivery costs in the province. FFPC customers who are not enrolled with a retailer receive a $0.0125/kwh discount on power due to a historic (1905) mill agreement. In order to maintain the discount, FFPC maintains its ROE at 0%.*

****Hydro Hawkesbury has the lowest delivery rates at ~$36 per month*

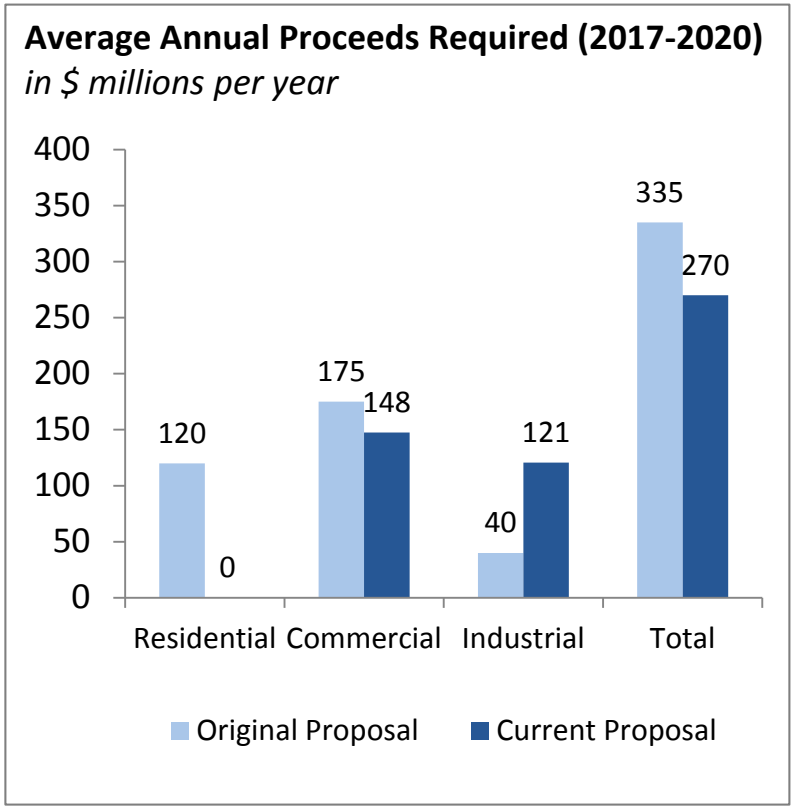
*****Delivery charges include distribution rates (fixed and variable), transmission, and line loss.*

# 4) Redirect Cap and Trade Proceeds Recycling

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.
  - To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).

- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

- The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $0.24 billion over the first compliance period).




**Note:** The original proposal was to offset the impact of cap and trade via GA to the average industrial, and would provide a benefit to commercial and residential consumers. Current proposal would recycle proceeds volumetrically to industrial and commercial consumers.

# Considerations – Implementation

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010.
  - If passed, the legislation would require a general regulation.
  - Amendments would also be required to various regulations to expand ICI and RRRP.

- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. ENERGY (possibly through Ontario Energy Board) will consult with LDCs to accurately assess these impacts once the program has been announced.
  - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - Timing concerns may be alleviated by allowing LDCs to provide retroactive ~~payments~~ rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.

- Detailed messaging on bills (for "low-volume" consumer bills ) could be implemented by amending O. Reg. 275/04 (made under the Ontario Energy Board Act, 1998). See appendix for bill mock-up.
  - The rebate would not be directly linked to HST.
  - With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.

- ENERGY will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

# Considerations – Fiscal

- The Climate Change Action Plan (CCAP) committed about $1.3 billion over four years for electricity mitigation for industrial, commercial and residential consumers from GGRA proceeds.
  - The current rate mitigation proposal requires approximately 20% less in proceeds, saving approximately $240 million relative to the CCAP commitment over the first compliance period (2017-2020).

- The 8% rebate is expected to cost about $1 billion per year (i.e., $4 billion from 2017-2020), representing an additional pressure on the fiscal plan.
  - Consideration could be given to allocating the $240 million in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset.

# Considerations – Legal

- In order to avoid characterization as an unconstitutional tax, a non-tax levy must have a sufficient nexus between those who pay and the regulatory scheme in the sense that those who pay have caused the need for or benefit from the regulatory scheme. Although the case law is not developed on the extent to which some regulated actors can be required to subsidize others, risk is reduced to the extent that any cross-subsidization serves true regulatory goals rather than revenue re-distribution goals.

- HST Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):
  - Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

- ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):
  - Shifting costs to some consumers to lower rates for others without more carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

- RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):
  - Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

- Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):
  - To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

# Communications

- Public high-profile communications would coincide with introduction of legislation (September 2016).
  - Stakeholder outreach/technical briefings with LDCs, Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.
  - Echo public announcements in southwest and north; proactive provincial/local media.

- **Positioning:**
  - A fiscally prudent plan to benefit all ratepayers in a lasting, meaningful way.
  - Rural customers will receive the largest single rate relief ever.
  - Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.

- **Issues Considerations:**
  - Significant benefit for rural and remote residential customers; net gain for all residential customers.
  - More complex to communicate, but can be presented as a full plan that includes reforms and improvements to the system.
  - Consistent with cap-and-trade commitment that no business sector will be left worse off, though small businesses outside ICI will benefit the least.

# Communications – Key Messages

- [Placeholder]

# Proposed Cabinet Minute

CABINET AGREED THAT:

1. THE MINISTRY OF ENERGY (ENERGY), WITH SUPPORT FROM THE MINISTRY OF FINANCE (MOF), SHALL PREPARE LEGISLATION THAT WOULD PROVIDE AN EIGHT PERCENT (8%) REBATE ON THE PRE-TAX COST OF ELECTRICITY FOR THE FOLLOWING CLASSES OF CONSUMERS:
   A. ALL CONSUMERS ELIGIBLE TO BE BILLED UNDER THE ONTARIO ENERGY BOARD'S REGULATED PRICE PLAN; AND
   B. ANY OTHER CONSUMERS WHO WERE ELIGIBLE FOR FINANCIAL ASSISTANCE UNDER THE *ONTARIO CLEAN ENERGY BENEFIT ACT, 2010* (OCEBA) DURING THE PERIOD THAT PROGRAM WAS IN PLACE.

2. THE LEGISLATION SHALL BE GENERALLY MODELLED UPON THE OCEBA, AND WOULD INCLUDE THE FOLLOWING ELEMENTS:
   A. THE REBATE WOULD BE AVAILABLE STARTING JANUARY 1, 2017 AND BEFORE SUCH DATE AS MAY BE PRESCRIBED;
   B. THE REBATE WOULD NOT BE SUBJECT TO A CAP UNLESS A CAP IS PRESCRIBED;
   C. THE LEGISLATION WOULD SPECIFY THE TYPES OF COSTS TO WHICH THE REBATE WOULD OR WOULD NOT BE APPLIED, WITH AUTHORITY TO MAKE CHANGES BY REGULATION;
   D. THE LEGISLATION WOULD ADDRESS INVOICING REQUIREMENTS, INCLUDING AUTHORITY TO PRESCRIBE HOW THE REBATE IS TO APPEAR ON CONSUMER ELECTRICITY BILLS;
   E. THE LEGISLATION WOULD INCLUDE AUTHORITY TO PRESCRIBE THE WAY IN WHICH THE REBATE IS TO BE FLOWED THROUGH TO CONSUMERS, AND THE WAY IN WHICH ELECTRICITY VENDORS PROVIDING THE REBATE ARE TO BE REIMBURSED;
   F. THE LEGISLATION WOULD INCLUDE RECORD-KEEPING REQUIREMENTS FOR ELECTRICITY VENDORS AND ANY OTHER PRESCRIBED PERSONS; AND
   G. THE LEGISLATION WOULD INCLUDE INSPECTION POWERS FOR INSPECTORS APPOINTED BY THE MINISTER OF FINANCE, INCLUDING POWERS RELATED TO RECOVERY OF OVERPAYMENTS.

Pending Update


26

# Proposed Cabinet Minute (cont'd)

3. ENERGY AMEND O. REG. 429/04 (ADJUSTMENTS UNDER SECTION 25.33 OF THE ACT) MADE UNDER THE *ELECTRICITY ACT, 1998* TO EXPAND ELIGIBILITY FOR CLASS A CONSUMERS AND CLASS A MARKET PARTICIPANTS UNDER THE INDUSTRIAL CONSERVATION INITIATIVE (ICI) TO ALL ELECTRICITY CONSUMERS AND MARKET PARTICIPANTS WITH A PEAK DEMAND ABOVE AN AVERAGE OF ONE MEGAWATT (1MW) WITH NO SECTORAL RESTRICTIONS ON PARTICIPATION.

4. ENERGY AMEND O. REG 442/01 (RURAL OR REMOTE ELECTRICITY RATE PROTECTION) MADE UNDER THE *ONTARIO ENERGY BOARD ACT, 1998* TO INCREASE THE TOTAL AMOUNT OF RATE PROTECTION AVAILABLE TO LOW DENSITY HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE RATE PROTECTION PROGRAM BY $110 MILLION, EFFECTIVE JANUARY 1, 2017.

5. ENERGY CONSIDER AND, IF APPROPRIATE, UTILIZE A MECHANISM TO PERIODICALLY ADJUST THE TOTAL ANNUAL AMOUNT OF RATE PROTECTION AVAILABLE TO HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE ELECTRICITY RATE PROTECTION REGULATION / PROGRAM, EFFECTIVE JANUARY 1, 2018.

Pending Update

6. ENERGY TO RECYCLE UP TO AN AVERAGE OF $270 MILLION OF CAP AND TRADE AUCTION PROCEEDS FROM THE *GREENHOUSE GAS REDUCTION ACCOUNT* PER YEAR OVER THE FIRST COMPLIANCE PERIOD (2017-2020) TO COMMERCIAL AND INDUSTRIAL ELECTRICITY CONSUMERS.

7. ENERGY AND MOF TO WORK WITH CABINET OFFICE (CO) AND PREMIER'S OFFICE (PO) ON COMMUNICATIONS PLAN.

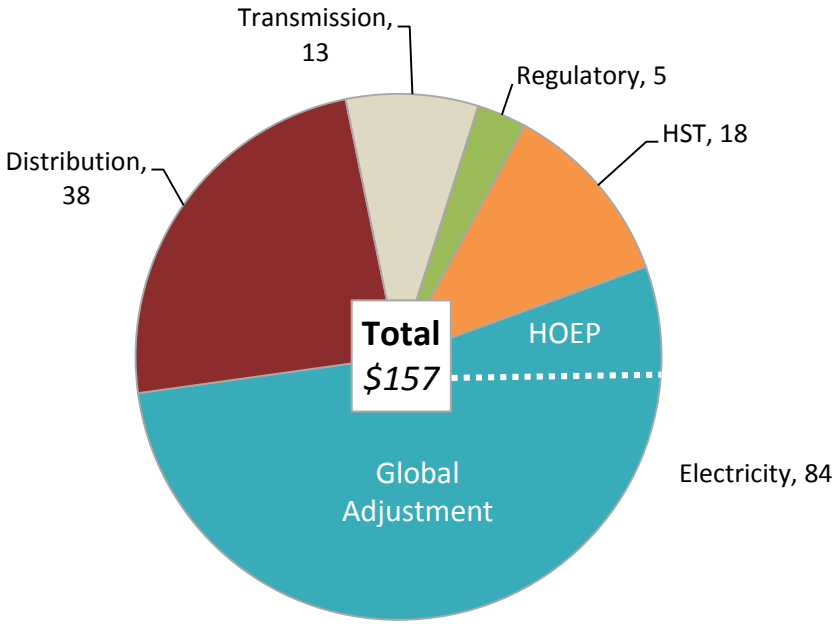
# Appendix

# Residential Electricity Prices

- There are approximately 5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of May 1, 2016 (750 kWh/month)*




*Source*: OEB, Toronto Hydro

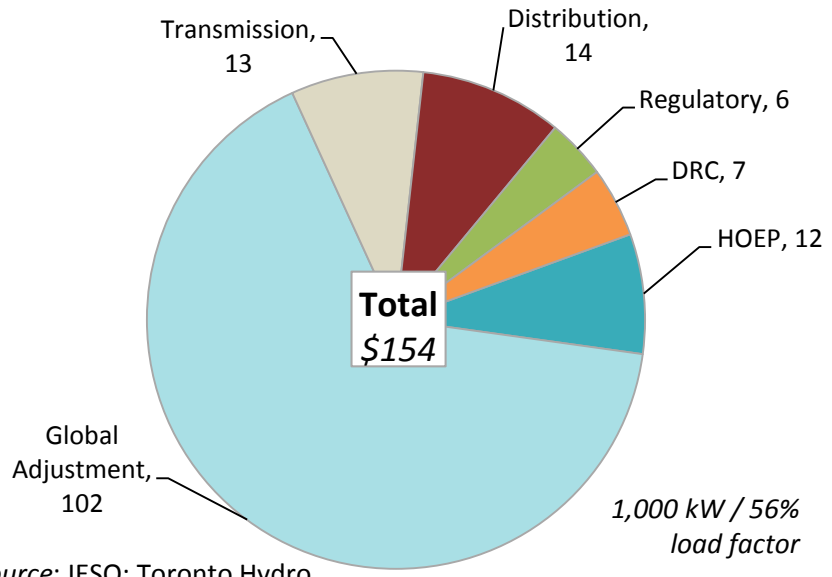
# Commercial Electricity Prices

- There are approximately 400,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.

- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




*Source*: IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.

- Targeted pricing programs are currently not available for Class B consumers.

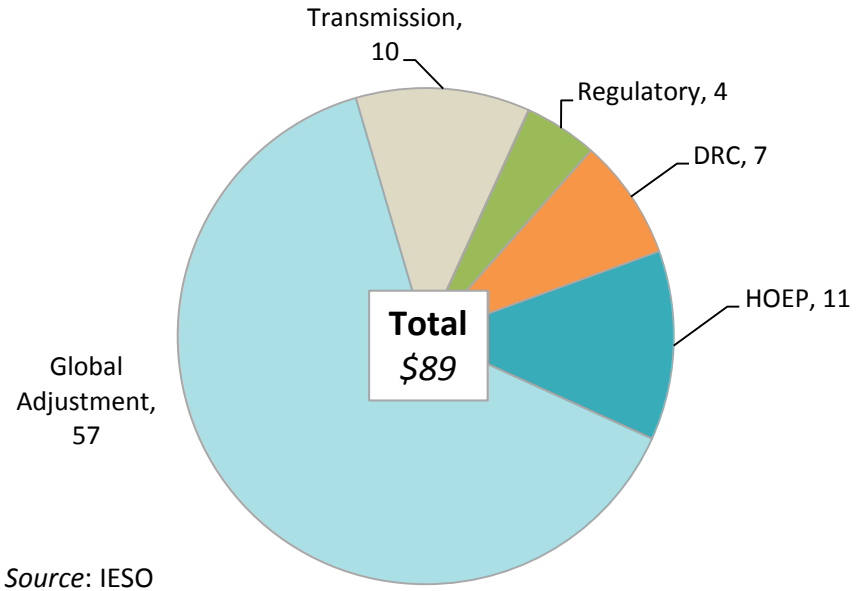
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*




*Source*: IESO

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $64/MWh for these consumers. The program is funded through the tax base.

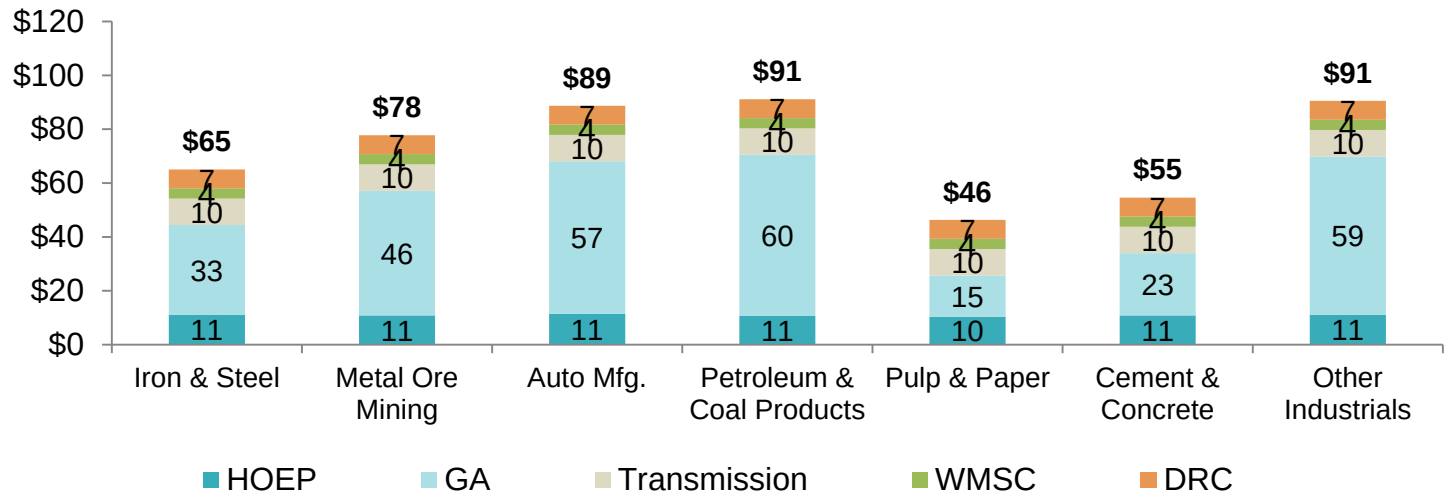
*** Note:** Industrial consumers receive input tax credits for their HST.

# Industrial Electricity Prices by Sector

- While industrial consumers (Class A) benefit from participation in the ICI program, there is a significant amount of variability in the ability to shift away from peak periods across customer classes, impacting the savings achieved.

- The below chart shows the prices paid in 2015 across a number of industrial sectors. Consumers in the north that receive rebates under the Northern Industrial Electricity Rate Program (NIERP) achieve rates that are $20/MWh lower than the below.

**Average all-in Class A, Transmission-connected Electricity Prices by Industrial Sector (estimated $/MWh), Year-to-Date June 2016**




**Note:** HOEP = Hourly Ontario Energy Price, GA = Global Adjustment, WMSC = Wholesale Market Service Charges, DRC = Debt Retirement Charge

# saveONenergy Conservation Programs

| Program | Consumer Type | Description |
|---|---|---|
| **Heating and Cooling Initiative** | **Residential** | Provides rebates to help offset the cost of purchasing and installing new heating and cooling equipment in the home. |
| **Coupons** | | Available in-store for one month in the spring and fall and can be downloaded year-round to use at participating retailers to help Ontarians save on a wide range of energy-efficient products including LED bulbs, power bars with integrated timers and more. |
| **Audit Funding** | **Business** | Up to 50% of the cost of an energy audit to identify opportunities for energy efficiency upgrades and eligible incentives. |
| **Retrofit Program** | | Provides various incentives for as much as 50 per cent of project costs, and advanced funding for assisted and social housing buildings, for updating old or inefficient equipment, including lighting, motors, unitary AC or packaged rooftop units. |
| **Small Business Lighting** | | Provides incentives for new energy efficient lighting. |
| **New Home Construction** | | Designed to encourage home builders and renovators to construct energy-efficient homes, and includes incentives for installation of energy-efficient measures. |
| **Training and Support** | | Helps provide access to the most up-to-date training, such as in building commissioning, certified measurement and verification, and how to be an energy manager. |
| **Process and Systems** | | Provides up to $50,000 for engineering studies and up to 70% of capital costs for energy efficiency upgrades. |
| **Industrial Accelerator Program** | | Assists eligible transmission-connected companies to fast track capital investment in major energy conservation projects. |

# HST – Overview

- The HST is a value-added tax. Unlike a sales tax, under a value-added tax most businesses effectively do not pay tax on their inputs because they are able to claim input tax credits (ITCs).
  - Through ITCs, the HST removes embedded sales taxes paid by businesses.
  - Only HST registrants that have taxable sales can claim ITCs. Businesses selling HST-exempt goods or services (such as financial services) are not eligible to claim input tax credits.

- Unlike businesses engaged in commercial activities, Public Service Bodies (PSBs) are generally not eligible to claim input tax credits. Instead, they can recover a portion of the HST paid by applying for PSB rebates from the Canada Revenue Agency.
  - PSBs consist of municipalities, universities, public colleges, school authorities, hospital authorities and charities and qualifying non-profit organizations.
  - See Appendix for additional information.

- To help low- to moderate-income individuals and families with the sales tax they pay on home energy costs (including electricity), Ontario provides tax relief through the energy component of the Ontario Energy and Property Tax Credit (OEPTC).
  - For the 2016 benefit year, eligible families and single people could get up to $224 to help with these costs, totalling about $445 million in tax relief.

- Ontario also provides tax relief through the Ontario Sales Tax Credit (OSTC), which was enhanced in 2010 to help low- to moderate- income individuals and families with the overall sales taxes they pay.
  - For the 2016 benefit year, eligible individuals can get up to $291 plus additional amounts of up to $291 for their spouse and each of their dependant children under age 19.
  - The 2016 OSTC is estimated to provide about $1.3 billion in tax relief.

# Placeholder – HST Exemptions in Other Jurisdictions

| Jurisdiction | Tax | Business | Residential | Comment |
|---|---|---|---|---|
| **British Columbia** | PST | Yes – 7% | No | • PST does not apply to residential energy, including electricity, acquired solely for residential use in a residential dwelling<br>• BC's carbon tax does not apply to electricity bills. |
| **Alberta** | None | N/A | N/A | • Alberta does not have a provincial sales tax. |
| **Saskatchewan** | PST | Yes – 5%<br>Except for electricity purchased to heat a building. | No | • PST does not apply to electricity purchased for use in a residential dwelling.<br>• PST does not apply to electricity purchased for use in heating a building that is heated solely by the electricity. |
| **Manitoba** | PST | Yes – 8%<br>Reduced rate of 1.6% applies to electricity used by a qualifying business to operate machinery | Yes – 8%<br>Electricity purchased for mixed use, 80% of which is home heating, has a reduced rate of 1.4%. Electricity solely to heat the purchaser's home is exempt. | • Winnipeg also applies a tax of 2.5% on residential and 5% on commercial. |
| **Ontario** | HST | Yes (less ITC (input tax credits)) | Yes – 8% | |
| **Quebec** | QST | Yes (less ITCs) | Yes – 9.975% | |
| **Nova Scotia** | HST | Yes (less ITCs) | Yes – 10% less provincially administered rebate. | • Rebate is equal to the provincial portion of the HST, and is administered similar to OCEB, but applies to many energy sources. |
| **New Brunswick** | HST | Yes (less ITCs) | Yes – 10% | |
| **Prince Edward Island** | HST | Yes (less ITCs) | Yes – 9% (10% beginning Oct 1, 2016) | |
| **Newfoundland and Labrador** | HST | Yes (less ITCs) | Yes – 10% | • Had a provincially administered Home Heating Rebate program until July 2015. |
| **Federal** | GST | Yes (less ITCs) | Yes – 5% | |

# HST – Considerations

- An across-the-board 8% rebate could be criticized as providing HST relief to those who effectively do not pay HST (businesses) as well as to those who receive HST relief through Public Service Body rebates or income tax relief.

- Providing a rebate equivalent to the 8% provincial portion of the HST on electricity, could lead to pressure to provide similar relief for other fuels and energy sources.
  - Ontarians who heat their homes with electricity will benefit from the provincial rebate, while Ontarians who heat their homes with natural gas, heating oil, propane, etc. would continue to pay the full 13% HST on those other energy sources.
  - The costs of natural gas, heating oil, propane, etc. are expected to increase as a result of Ontario's forthcoming cap and trade program.

- The provincial rebate would be an amount equal to the 8% provincial portion of the HST on electricity. OCEB, in contrast, was 10% of the bill including HST.

- The Province may also need to change the reporting for the cost of the energy component of the Ontario Energy and Property Tax Credit, which provides relief for HST on home energy. The energy component is reported as an offset of HST revenue.
  - Ministry program expenses could increase by as much as $445 million (TBC).

- The greater degree of complexity in the design of the program, the more difficult it will be to draft, implement and administer.

- To improve the province's ability to track impacts and program outcomes, subsequent legislative amendments to enable exchanges of data with LDCs could be considered.

# Additional Information – Public Service Bodies

- Unlike businesses engaged in commercial activities, Public Service Bodies (PSBs) are generally not eligible to claim input tax credits. Instead, they can recover a portion of the HST paid by applying for PSB rebates from the Canada Revenue Agency.

- Ontario's rebate rates are intended to keep these sectors fiscally neutral relative to the Retail Sales Tax they paid on their inputs under the former RST system.

| REBATE RATES FOR PSBs | | |
|---|---|---|
| **PSB Type** | **Ontario (8%)** | **Federal (5%)** |
| Municipalities | 78% | 100% |
| Universities & Public Colleges | 78% | 67% |
| School Authorities | 93% | 68% |
| Hospital Authorities | 87% | 83% |
| Charities and Qualifying Non-Profit Organizations* | 82% | 50% |

**A qualifying non-profit organization receives at least 40% of its funding from government.*

# Placeholder – Electricity Bill Mock-Up

# Industrial Conservation Initiative (ICI) – Overview

- In January 2011, Ontario amended O.Reg. 429/04 to implement the Industrial Conservation Initiative (ICI). This initiative established two classes of consumers:
  - "Class A" consumers are those with monthly peak demand exceeding 5 MW. They are charged global adjustment (GA) on the basis of their contribution to system peak demand during the highest 5 system demand hours of the year.
  - "Class B" consumers are all other consumers. They continue to be charged GA as a flat rate applied to their consumption.
- In May 2014, O.Reg. 429/04 was further amended to admit all consumers with monthly peak demand between 3 and 5 MW within certain energy-intensive industrial sectors into the ICI.
- This change has been successful in:
  - Incenting large consumers to significantly reduce their peak demand during the highest demand hours of the year, and
  - Providing large industrials with the ability to manage their electricity costs and remain competitive with competing jurisdictions.

# Expected Numbers of Newly Eligible ICI Consumers

- As part of its ICI survey, Navigant collected data on the number of consumers in the 1-2 MW, 2-3 MW and 3-5 MW categories. Navigant's response rate for the survey was approximately 76%. Approximately 300 consumers are currently participating in ICI.

- The table below sets out the number of consumers in each tranche from the survey along with an "adjusted number" which estimates the actual total number of customers in each tranche in the province (i.e., it accounts for the response rate).

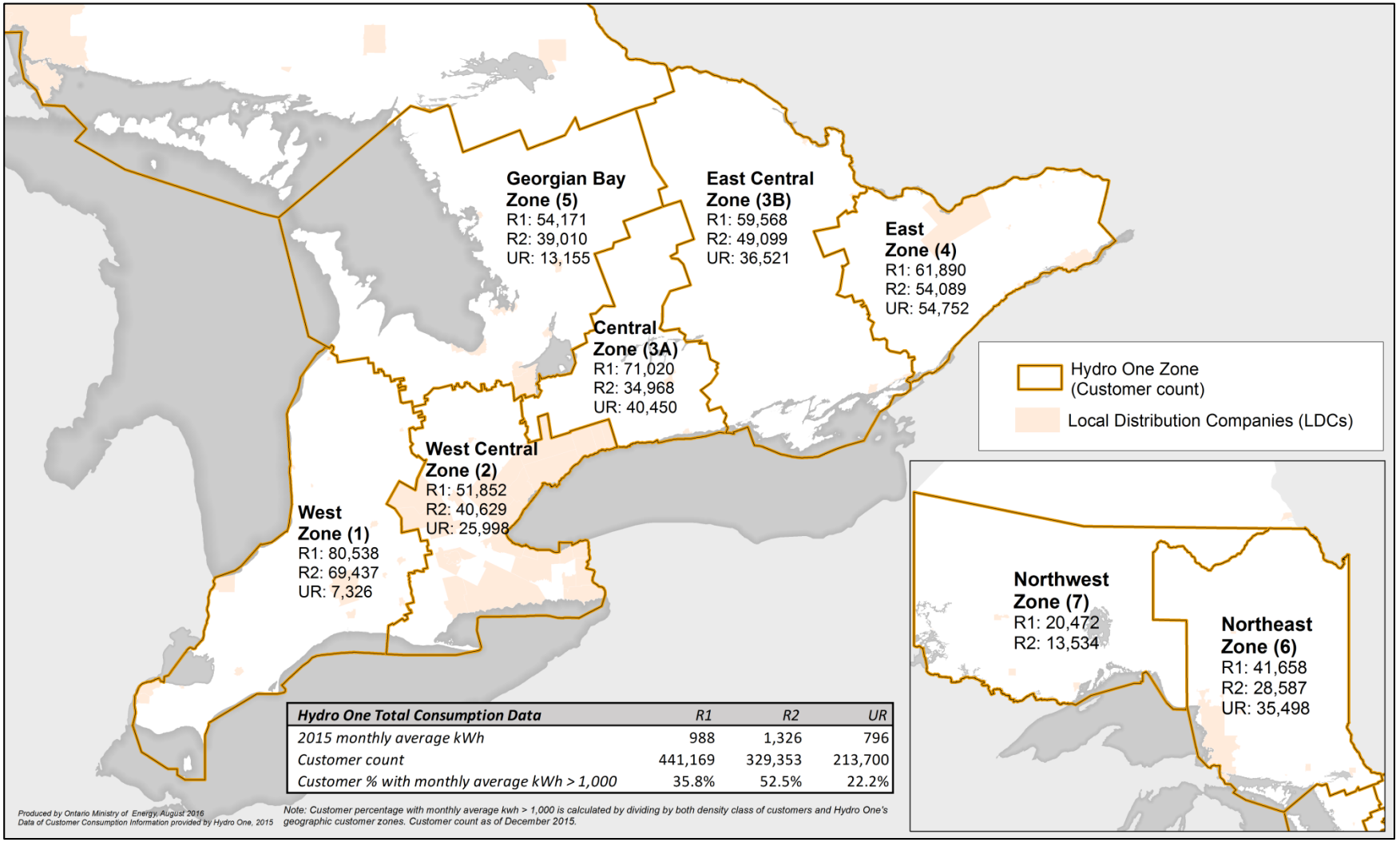
- As expected, there are a greater number of consumers in the 1 -2 MW category than in the 2 – 3 MW category.

| | **1-2 MW** | **2-3 MW** | **3-5 MW*** |
|---|---|---|---|
| # of customers – ICI survey | 649 | 197 | 171 |
| # of customers – Adjusted for response rate | 854 | 259 | 225 |

*Source:* Navigant; Ministry of Energy

* Includes consumers that are already eligible for and participating in ICI. ENERGY estimates that approximately 75 of 225 estimated consumers in the 3-5 MW category are participating in ICI.

# Hydro One Consumers by Customers Class

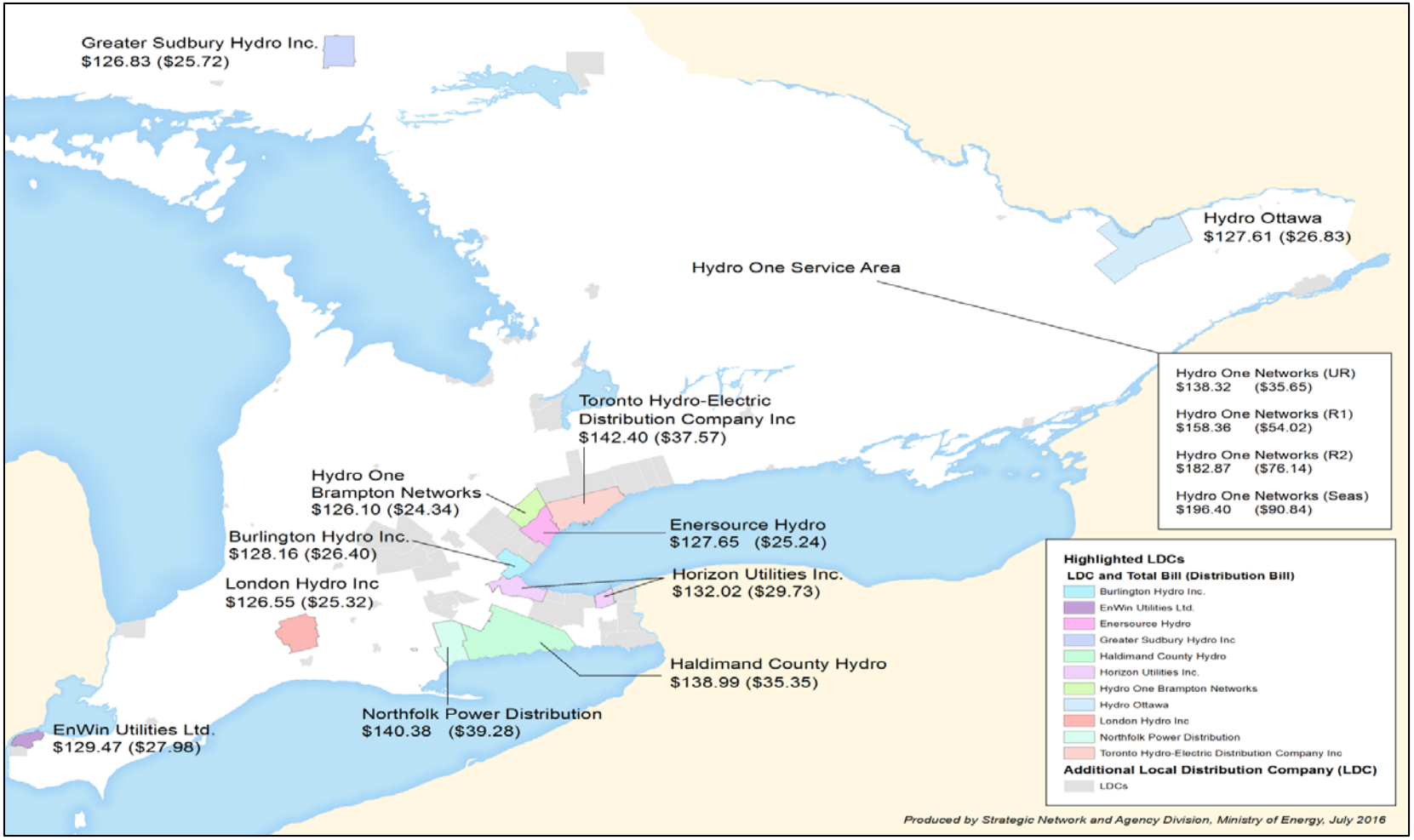



| *Hydro One Total Consumption Data* | *R1* | *R2* | *UR* |
|---|---|---|---|
| *2015 monthly average kWh* | 988 | 1,326 | 796 |
| *Customer count* | 441,169 | 329,353 | 213,700 |
| *Customer % with monthly average kWh > 1,000* | 35.8% | 52.5% | 22.2% |

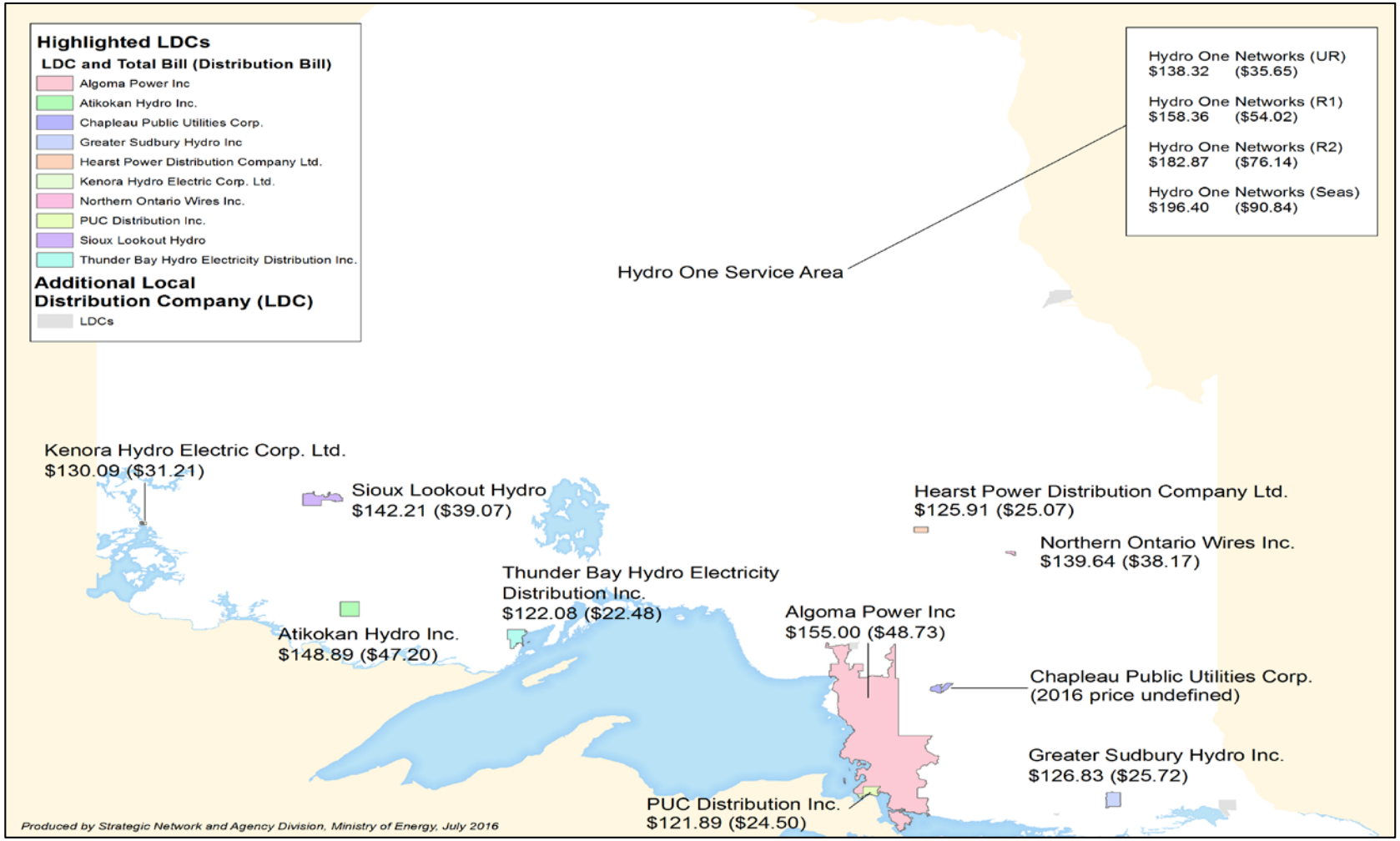
*Produced by Ontario Ministry of Energy, August 2016*
*Data of Customer Consumption Information provided by Hydro One, 2015*

*Note: Customer percentage with monthly average kwh > 1,000 is calculated by dividing by both density class of customers and Hydro One's geographic customer zones. Customer count as of December 2015.*

# Selected Rate Comparison – Total Bill and Distribution Rate



# Selected Rate Comparison – Total Bill and Distribution Rate



# Alignment With Climate Change Action Plan

- Ontario's Climate Change Action Plan (CCAP) commits $6.0 – 8.3 billion over 4 years to greenhouse gas (GHG) reduction initiatives, funded by Cap and Trade auction proceeds.

- The CCAP includes up to $1.32 billion over 4 years to help keep electricity rates affordable for residential and industrial consumers. This initiative is estimated to reduce up to 3,000,000 tonnes of greenhouse gas (GHG) emmissions by 2020.

| ***$ Billions*** | **2017-18** | **2018-19** | **2019-20** | **2020-21** | **Total** |
|---|---|---|---|---|---|
| Total Committed in CCAP | **$1.5 – 2.1** | **$1.5 – 2.1** | **$1.5 – 2.1** | **$1.5 – 2.1** | **$6.0 – 8.3** |
| *Electricity Price Mitigation* | *Up to 0.3* | *Up to 0.3* | *Up to 0.3* | *Up to 0.3* | *Up to 1.3* |

- Ontario's *Climate Change Mitigation and Low-carbon Economy Act, 2016* requires that all proceeds generated from Cap and Trade be used to help reduce greenhouse gas emissions.

- Should a portion of CCAP funding currently allocated to Electricity Price Mitigation be used to offset rate increases for certain industrial consumers, the remaining CCAP funding could provide a fiscal plan offset to the overall initiative by funding other existing initiatives that help reduce greenhouse gas emissions – for example:
  - Regional Express Rail;
  - Hamilton LRT;
  - Hurontario LRT; and
  - Energy efficiency in schools.

**From:** Emily Kerr
**To:** John Kim
**Subject:** FW: Energy Cabinet Submissions
**Date:** Thursday, November 24, 2016 1:07:39 PM

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FYI.

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**From:** Strang, James (TBS) [mailto:James.Strang@ontario.ca]
**Sent:** Thursday, November 24, 2016 1:07 PM
**To:** Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Energy Cabinet Submissions

Hi Emily, we have call with CO this afternoon on the Energy file and will be asking for materials during that call. I'll get back to you.

James

---

**From:** Emily Kerr [mailto:Emily.Kerr@ofina.on.ca]
**Sent:** November 24, 2016 9:59 AM
**To:** Fung, Felix (TBS); Strang, James (TBS)
**Cc:** Kim, John (OFA)
**Subject:** Energy Cabinet Submissions

Hi Felix and James,

I understand that Energy is involved in two submission to a Minister's Table on Climate Change on December 8. The submissions are:

- Long-Term Energy Plan update
- Rate mitigation

Would you have copies of these submissions?

Thanks,
Emily

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| | |
|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan |
| **Subject:** | FW: Energy and Price Mitigation |
| **Date:** | Monday, December 12, 2016 1:31:29 PM |
| **Attachments:** | Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |

Could you and I work on the draft comments note?

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** Monday, December 12, 2016 1:26 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Subject:** Energy and Price Mitigation

Hi,

Apparently a draft "bootleg" copy.

Please review and do a markup. A short note with staff comments would be helpful too.

Is a draft for EOD doable?

The "Trillium Trust" would notionally be either all incremental electricity projects vs Moving Ontario Forward, and hitting the bottom line once in-service and amortised. Or crowds out Moving Ontario Forward projects. However, could hurt the fiscal bottom line if it is perceived as detracting from Hydro One potential rate base growth, hurting market value upfront, and net income (and corporate taxes) over time. Does that make sense?

And little or no near-term rate impact, as new projects would affect the rate base years out, unless the Trillium Trust is used for existing Tx projects already about to come on line.

I might want to argue that if they do the DRC one, it is in effect giving up a chunk of the Departure Tax benefit to OEFC. And on the departure tax, aside from all the regulatory principles arguments, I might think about saying that the elimination of the deferred tax liability portion was just truing up the PILs amounts owing.

Thanks,
Ron

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8%  per cent rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured,  the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP),  which provides an opportunity to consider a range of policy changes to  how the Ontario energy sector operates.

# Broad Policy Themes / Rationale

- No longer use rate-base to pay for social programs by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.
- Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.
- Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new “green bank entity” over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the “Trillium Trust” to make investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded  interties and expansion of natural gas to rural areas, etc.
- Empower energy  agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario’s electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to “opt into” a single rate plan as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time.
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.16 | 2.31 | 2.41 | 2.49 | 2.54 | 2.58 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.13 | 0.13 | 0.14 | 0.14 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.88 | 3.08 | 3.21 | 3.33 | 3.39 | 3.44 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 2.82 | 3.05 | 2.47 | 2.56 | 2.13 | 2.14 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.10 | 0.10 | 0.11 | 0.11 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Taxpayer Funded Electricity Price Mitigation

| *($M)* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | | 398 | 419 | 433 | 447 |
| 2. Expand the OESP (i.e., 50% increase) | TBD | TBD | TBD | TBD | TBD |
| 3. Fund Conservation Programs Through The Tax-Base | 110 | 450 | 450 | 450 | 450 |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC efficiencies | - | - | - | - | - |
| c. OPG – Borrowing | - | - | - | - | - |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | 110 | 450 | - | - | - |
| 8. Cancel / Adjust FIT | - | - | - | - | - |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| 2. Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy

# Considerations / Outcomes

- The proposed initiatives provide the following opportunities to:
  - Lower the cost of electricity for all consumers;
  - Re-set how electricity programs and energy infrastructure is funded (i.e., shifting costs to the tax-base from rate-base);
  - Provide electricity consumers with greater choices (i.e., signal rate plan);
  - Provide system benefits (e.g., market renewal); and
  - Increase cost effectiveness and improve efficiency.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Adam Prokop; Salman Qadir |
| **Cc:** | Shajee Kathirgamanathan; Gavin He |
| **Subject:** | FW: Energy and Price Mitigation |
| **Date:** | Tuesday, December 13, 2016 8:13:49 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v4Clean (CEFD)_Markup.doc |

Something we worked on urgently yesterday.

---

**From:** Ronald Kwan
**Sent:** Tuesday, December 13, 2016 7:03 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Energy and Price Mitigation

Hi John, et al,

Thanks.

I added a summary table upfront and some other suggested edits. Please review.

Ron

---

**From:** John Kim
**Sent:** December-12-16 5:13 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Energy and Price Mitigation

Pls. use this version.

Thanks,

John.

---

**From:** John Kim
**Sent:** Monday, December 12, 2016 5:05 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Energy and Price Mitigation

Hi Ron,

Pls. see attached with input from all three branches.

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** Monday, December 12, 2016 1:26 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Subject:** Energy and Price Mitigation

Hi,

Apparently a draft "bootleg" copy.

Please review and do a markup. A short note with staff comments would be helpful too.

Is a draft for EOD doable?

The "Trillium Trust" would notionally be either all incremental electricity projects vs Moving Ontario Forward, and hitting the bottom line once in-service and amortised. Or crowds out Moving Ontario Forward projects. However, could hurt the fiscal bottom line if it is perceived as detracting from Hydro One potential rate base growth, hurting market value upfront, and net income (and corporate taxes) over time. Does that make sense?

And little or no near-term rate impact, as new projects would affect the rate base years out, unless the Trillium Trust is used for existing Tx projects already about to come on line.

I might want to argue that if they do the DRC one, it is in effect giving up a chunk of the Departure Tax benefit to OEFC. And on the departure tax, aside from all the regulatory principles arguments, I might think about saying that the elimination of the deferred tax liability portion was just truing up the PILs amounts owing.

Thanks,
Ron

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on ~~the~~ potential price mitigation initiatives, as outlined in its deck.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to~~wards~~ decarbonize) and modernize the electricity infrastructure (~~i.~~e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

Energy's proposals generally involve shifting costs from the rate base to the tax base. While the~~se~~ subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), th~~e~~ose proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those pres~~t~~ented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit NIERP – Northern ~~Ontario~~Industrial Electricity Rate program DRC – Debt etirement Charge

OREC – Ontario Rebate for Electricity Consumers NOEC – Northern Ontario Energy Credit OEPTC – Ont. Energy & Property Tax Credit
~~DRC – Debt etirement Charge~~ ~~OEPTC – Ontario Energy and Property Tax Credit~~

## Energy's Broad Policy Themes / Rationales

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| Provide greater support for lower income Ontarians by enhancing the **OESP or expanding eligibility** | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the ne**w "green bank entity" over time** | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| Expand the scope of the "Trillium Trust" to make investments in energy infr**astructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value, including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return on |
| **E**nd the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |

## Detail on Proposals

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy noted ~~in previous drafts of its price mitigation deck~~ that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - ~~OESP credits could be increased to address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits).~~
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, ~~.~~ ~~I~~incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.~~.~~
  - ~~o~~
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).

  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy ~~is proposed~~lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related ~~to the~~ deferred tax benefit, as well ~~and~~ as the s.50.3 benefit under the *Electricity Act, 1998*.]
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported~~proposed end date of the DRC~~.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission
3. Total would be significantly larger with the TBDs crystalized.

**~~Electricity Finance Branch,~~ Corporate and Electricity Finance Division**
**/ Ontario Financing Authority**
**December 12, 2016**

**From:** John Kim
**To:** John Kim
**Subject:** FW: FPC related request
**Date:** Monday, September 05, 2016 9:09:28 AM
**Attachments:** image001.png
RAN Electricity Price Mitigation v5 (2016 08 31).doc

---

**From:** Morgenstern, Madeleine (TBS) [mailto:Madeleine.Morgenstern@ontario.ca]
**Sent:** Wednesday, August 31, 2016 10:35 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** RE: FPC related request

Thanks very much, Shajee. This is really helpful. I've made edits to our TB/MBC note based on these (see attached), and happy to discuss if you have any questions or concerns. Otherwise – see you soon! ☺

---

**From:** Shajee Kathirgamanathan [mailto:Shajee.Kathirgamanathan@ofina.on.ca]
**Sent:** August-31-16 9:55 AM
**To:** Morgenstern, Madeleine (TBS)
**Cc:** Kim, John (OFA); Bugajski, Tomasz (OFA)
**Subject:** RE: FPC related request

Hi Madeleine,

Please find attached, additional comments from the OFA on the RAN note.

Changes tracked from the previous version. The comments are for internal discussion/reference.

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Morgenstern, Madeleine (TBS) [mailto:Madeleine.Morgenstern@ontario.ca]
**Sent:** Tuesday, August 30, 2016 6:05 PM
**To:** Jenarra DeSouza (MEDTE/MRI) <Jenarra.DeSouza@ontario.ca>
**Cc:** Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>; Sandy Luk (MOHLTC) <Sandy.Luk@ontario.ca>; Nina Arbabzadeh (EDU) <Nina.Arbabzadeh@ontario.ca>; Patrick Laughton (MOF) <Patrick.Laughton@ontario.ca>; Tim Cook (MOF) <Tim.Cook@ontario.ca>; James Strang (MOF) <James.Strang@ontario.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Sriram Subrahmanyan

(MOF) <Sriram.Subrahmanyan@ontario.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Ann Langleben (MOF) <Ann.Langleben@ontario.ca>
**Subject:** RE: FPC related request

Thanks very much, Jenarra. Appreciate the quick turnaround.

I've accepted TPD's edits in the attached version and have tracked a few additional edits based on draft feedback from OFA. Please let me know if there are any additional edits or comments by 10am tomorrow.

Please note, Deputy Thompson will attend Secretary's briefing tomorrow for this item. Due to his availability, this item has been moved to the beginning of the agenda and is **now scheduled for 11:30am**.

Thanks to all for your help.
Madeleine

---

**From:** DeSouza, Jenarra (MOF)
**Sent:** August-30-16 5:20 PM
**To:** Morgenstern, Madeleine (TBS)
**Cc:** Schuurman, Tim (MOF); Birks, Ryan (MOF); Luk, Sandy (TBS); Arbabzadeh, Nina (TBS); Laughton, Patrick (TBS); Cook, Tim (TBS); Strang, James (TBS); Bugajski, Tomasz (OFA); Kwan, Ronald (OFA); Subrahmanyan, Sriram (MOF); Kim, John (OFA); Kathirgamanathan,Shajee (OFA); Langleben, Ann (MOF)
**Subject:** RE: FPC related request

Hi Madeleine,

Please find attached TPD's edits and comments in track changes.

Let us know if you have any questions or concerns.

Best,

Jenarra

---

**From:** Morgenstern, Madeleine (TBS)
**Sent:** August-30-16 3:15 PM
**To:** Subrahmanyan, Sriram (MOF); Kim, John (OFA); Kathirgamanathan,Shajee (OFA)
**Cc:** DeSouza, Jenarra (MOF); Schuurman, Tim (MOF); Birks, Ryan (MOF); Luk, Sandy (TBS); Arbabzadeh, Nina (TBS); Laughton, Patrick (TBS); Cook, Tim (TBS); Strang, James (TBS); Bugajski, Tomasz (OFA)
**Subject:** RE: FPC related request

Hi everyone,

With appreciation for the fact that we're all working with limited materials at this stage, please see attached draft TB/MBC assessment note regarding the electricity price mitigation item for Secretary's briefing tomorrow.

We would appreciate TPD's and OFA's additions to the note – any further details you have from the FPC briefing or your own analysis would be great. Please provide by **10:00am tomorrow** as we have to print the note for Agenda Office in advance of the briefing. Apologies for the tight turnaround.

Finally, I understand you are available to support at the briefing tomorrow. The item is scheduled for 12:20pm in the TB/MBC Boardroom on the first floor of the Frost Building, but usually best to arrive 10-15 minutes in advance if possible. Let me know if you have any questions or concerns.

Thanks in advance for your support on this file.

**Madeleine Morgenstern**
Team Lead, Resources Portfolio
General Government, Planning and Resources Branch ¦ Planning and Expenditure Management Division
Office of the Treasury Board ¦ Treasury Board Secretariat
7 Queen's Park Crescent E., 3rd Floor, Toronto M7A 1Y7
(416) 325-7020

TBS

---

**From:** Laughton, Patrick (TBS)
**Sent:** August-30-16 12:54 PM
**To:** Subrahmanyan, Sriram (MOF); Cook, Tim (TBS); Hughes, Karen (TBS)
**Cc:** DeSouza, Jenarra (MOF); Schuurman, Tim (MOF); Birks, Ryan (MOF); Morgenstern, Madeleine (TBS); Luk, Sandy (TBS); Arbabzadeh, Nina (TBS)
**Subject:** RE: FPC related request

Hi Sriram –

Have looped in with are team working on the submission and we haven't received any additional information and continue to work off the FPC deck. The team did connect with Cabinet Office yesterday and they indicated they received direction to hold off on connecting with MOECC on the cap and trade element at this stage (I am looking to confirm but it sounds as though there is some sensitivity around engaging MOECC before the proposal is fully fleshed out). We have adopted the same approach – at least until we have a proposal from ENE which would provide greater clarity on initiatives that might be eligible for offset.

Happy for you to join the Secretary's Briefing with OFA tomorrow and will forward the invitation. The leads in our area (Madeleine Morgenstern/Sandy Luk) will connect with OFA/TPD regarding choreography and logistics as well as the note which is under development. The briefing runs from 1130-130pm and this item is on the agenda for 1220pm.

On a related note, OFA has been leading the TBS policy briefings on this which

you/your staff may also want to attend (happy to extend the invite for this as well). We have heard that the direction is for the item to track direct to cabinet on the 13th after TB/MBC on the 12th.

P.

---

**From:** Subrahmanyan, Sriram (MOF)
**Sent:** August-30-16 11:19 AM
**To:** Cook, Tim (TBS); Hughes, Karen (TBS); Laughton, Patrick (TBS)
**Cc:** DeSouza, Jenarra (MOF); Schuurman, Tim (MOF)
**Subject:** RE: FPC related request

Direction at fiscal prep was ongoing. You may have better luck getting numbers from them, including offsets if there are any left.

---

**From:** Cook, Tim (TBS)
**Sent:** August 30, 2016 11:18 AM
**To:** Subrahmanyan, Sriram (MOF); Hughes, Karen (TBS); Laughton, Patrick (TBS)
**Cc:** DeSouza, Jenarra (MOF)
**Subject:** RE: FPC related request

Thanks Sriram

Quick question: Has there been any discussion about whether this is a time-limited program, or is it on-going? (If it is on-going, we'll need estimates for 2020-21 and 2021-22).

Thanks
Tim

---

**From:** Subrahmanyan, Sriram (MOF)
**Sent:** August 30, 2016 11:13 AM
**To:** Hughes, Karen (TBS); Cook, Tim (TBS); Laughton, Patrick (TBS)
**Cc:** DeSouza, Jenarra (MOF)
**Subject:** FW: FPC related request

FYI. This doesn't include any cap & trade. Have you received any further info? I understand there's a Secretary's briefing at 12:30. Can you include me in that?

Thanks

Sriram

---

**From:** Armstrong, Hillary (ENERGY)
**Sent:** August 29, 2016 9:43 AM
**To:** DeSouza, Jenarra (MOF)
**Cc:** Katona, Keley (ENERGY); Hill, Allyson (ENERGY); Cayley, Daniel (ENERGY); Schuurman, Tim (MOF); McGrath, Tara (MOF); Birks, Ryan (MOF); Tiburcio, Daniel (MOF); Subrahmanyan, Sriram (MOF); Kwan, Ronald (OFA); Reid, Michael (ENERGY); Hume, Steen (ENERGY)

**Subject:** FW: FPC related request

Good morning Jenarra,

Please find attached some estimates of the fiscal impacts of the rebate.

Thanks,
Hillary

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**From:** Subrahmanyan, Sriram (MOF)
**Sent:** August 26, 2016 9:47 AM
**To:** Hume, Steen (ENERGY); Reid, Michael (ENERGY)
**Cc:** Cook, Tim (TBS); Kwan, Ronald (OFA); Schuurman, Tim (MOF); Hill, Allyson (ENERGY); Cayley, Daniel (ENERGY); McGrath, Tara (MOF); Tiburcio, Daniel (MOF); Birks, Ryan (MOF)
**Subject:** Numbers

Our fiscal team is updating the plan for a briefing, and needs confirmation of the annual costs of the option that was approved. I think you have it from the previous modeling. Could you send to Tara as soon as possible, and cc me? Also have to know how much of the c&t can be used this year – you may have to connect with Daniel.

thanks

---

**From:** Hume, Steen (ENERGY)
**Sent:** August 25, 2016 4:31 PM
**To:** Subrahmanyan, Sriram (MOF); Reid, Michael (ENERGY)
**Cc:** Cook, Tim (TBS); Waterston, Michael (MOF); Kwan, Ronald (OFA); Schuurman, Tim (MOF); Hill, Allyson (ENERGY); Cayley, Daniel (ENERGY)
**Subject:** Re: Next steps

Hi Siram. We'll set something up tomorrow.

Thanks, Steen

Sent from my BlackBerry 10 smartphone on the Rogers network.

---

**From:** Subrahmanyan, Sriram (MOF)
**Sent:** Thursday, August 25, 2016 4:19 PM
**To:** Hume, Steen (ENERGY); Reid, Michael (ENERGY)
**Cc:** Cook, Tim (TBS); Waterston, Michael (MOF); Kwan, Ronald (OFA); Schuurman, Tim (MOF)
**Subject:** Next steps

Are you amenable to a call or meeting tomorrow to confirm the FPC decisions, approval track, discuss legislation drafting issues and comms, etc., and who's doing what? May need your legal as well.

Thanks

Sent from my BlackBerry 10 smartphone on the Rogers network.

---

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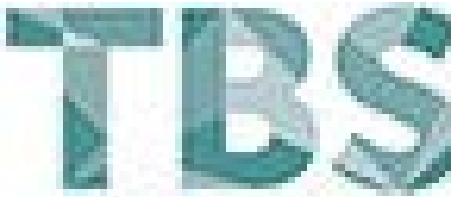
TBS

ADD ON

# TREASURY BOARD / MANAGEMENT BOARD OF CABINET REQUEST ASSESSMENT NOTE

| | |
|---|---|
| **Ministry:** | Energy |
| **Meeting Date:** | September 13, 2016 |
| **Agenda Class:** | Major |
| **Last reviewed by:** N/A | **Tracking to:** Cabinet - September 14, 2016 |

| **SUBMISSION TITLE:** | Electricity Price Mitigation |
|---|---|

**NO MATERIALS RECEIVED –BASED ON FPC SUBMISSION**

## I. DECISION BEFORE THE BOARD

The Ministry of Energy is requesting approval of a suite of initiatives providing relief to various electricity consumer classes.

## II. RECOMMENDATIONS:

| | |
|---|---|
| • Approve a suite of initiatives to provide relief to various electricity consumer classes (pending Cabinet policy approval):<br>– Providing ~~an~~ a pre-tax 8% rebate to Regulated Price Plan consumers;<br>– Expanding the Industrial Conservation Initiative;<br>– Updating the Rural and Remote Rate Protection program; and,<br>– Using cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade. Balance of proceeds intended for electricity relief through the Climate Change Action Plan could provide some fiscal offsets (to be confirmed by Energy).<br>• Approve in principle an expenditure increase estimated at~~of~~ $261M in 2016-17 for the Electricity Price Mitigation, offset from the Treasury Board Contingency Fund. [estimate subject to refinement from the Ministry]<br>• Direct the Ministry to report back to TB/MBC with implementation details, including confirmation of financial implications, and required TB/MBC approvals to implement.<br>• Recommend to Cabinet that the Ministry proceed to Cabinet with the proposed legislation (TBD). | *Board Judgment* |

## III. FINANCIAL SUMMARY

| **$ Millions** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|
| Initiative cost requested | 261.0 | 1006.0 | 1004.0 |
| Initiative cost recommended | 261.0 | 1006.0 | 1004.0 |

| | | | |
|---|---|---|---|
| Recommended program base | 261.0 | 1006.0 | 1004.0 |
| Offset Recommended | 0.0 | 60.0 (TBD) | 60.0 (TBD) |
| Total Fiscal Impact | 261.0 | 946.0 | 944.0 |

## IV. KEY COMMENTS AND CONSIDERATIONS

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online.

As part of the 2016 Budget, the government committed to mitigating electricity cost impacts that were anticipated from the cap and trade program. This included a commitment to provide a modest benefit of up to $2 per month, on average, to residential consumers. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable for residential and industrial consumers.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the CCAP commitment and additional price mitigation~~In order to achieve this~~, the Ministry of Energy has developed price mitigation options that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal *(based on FPC materials; proposal still being refined by Ministry)*

The Ministry is proposing the following to mitigate electricity prices for consumers:

- Provide an 8% pre-tax rebate to Regulated Price Plan consumers (i.e., residential, small business and farms), similar to OCEB but without ~~a~~ the 3,000 kilowatt-hour per month cap.
- Provide targeted business support by expanding the ICI eligibility threshold to customers above 1MW in all sectors.
- Provide relief to rural customers by updating Rural and Remote Rate Protection (RRRP).
- Use of cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade.

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **1.** | 8% Rebate to Regulated Price Plan | Fiscal ($1B)* | Residential, ~~Farms, Ss~~small business and small farms, and other small users |
| **2.** | Expanding ICI eligibility to customers above 1MW in all sectors | Rate base ($47M/$82M)** | ~~Small~~ Intermediate and large-sized ~~I~~industrial, ~~Commercial~~ commercial and ~~Institutional~~ institutional consumers above 1MW in all sectors |

| | | | |
|---|---|---|---|
| **3.** | Updating Rural and Remote Rate Protection | Rate base ($110M) | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. |
| **4.** | Redirecting proceed recycling to Commercial and Industrial or provide fiscal offsets to the 8% rebate | TBD | TBD |

* Annual ~~Numbers~~ numbers from ENERGY.

** Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.

Consumer impacts of the proposal are TBD.
Due to the nature of the ICI Global Adjustment mechanism and cost recovery of RRRP, the rate base proposals (#2 and #3) benefit the targeted recipients, but come at a cost to all other electricity rate payers in Ontario.

Fiscal Impact

- Slide 25 of the final version of the recent Electricity Price Mitigation Options deck notes that "proceeding with an 8% Regulated Price Plan (RPP) rebate without a cap would cost an estimated $1 billion per year".
- The $1 billion figure is a 2017 to 2020 calendar year average of cost estimates developed by Ministry of Energy staff, as follows:

| *$ millions* | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|
| | 1,003 | 1,014 | 975 | 1,049 |
| Avg. 2017-20 | 1,010 | | | |

- On a fiscal year basis, the above estimates become:

| *$ millions* | **2016-17** | **2017-18** | **2018-19** | **2019-20** |
|---|---|---|---|---|
| | 261 | 1,006 | 1,004 | 994 |
| 3-Year Avg. | 1,001 | | | |

- Ministry staff are in the process of developing a refined estimate of the cost.

Cap and Trade Proceeds
The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers (on average). While residential and other consumers would benefit from the 8% pre-tax rebate, this does not apply to non-Regulated Price Plan consumers (~~most~~ larger industrial, ~~and~~ commercial, and other ~~consumers~~). As such, ~~in addition to providing supports to these consumers through ICI expansion,~~ the Ministry is proposing to direct a portion of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to mitigate impacts.

To be characterized as a regulatory charge under the cap and trade program, auction proceeds need to be spent on programs that are reasonably likely to reduce or support the reduction of greenhouse gases. It is unclear from current materials whether this proposal meets this requirement.

Other Considerations

- This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets.

- The 8% rebate would provide a typical residential consumer about an $11 per month benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average cap and trade commitment.
- Reduction in electricity prices that does not consider consumption amounts (e.g., without the cap in the previous OCEB program) does not promote electricity conservation and may be seen as unaligned with climate change objectives.
- There is potentially a need for supplementary estimates as the existing vote (2905) Electricity Price Mitigation does not include a separate item for the 8% rebate (2905 was used for the Ontario Clean Energy Benefit and currently includes the Northern Ontario Energy Credit).
- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
  - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
  - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
  - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.
- 
- New legislation would be required (~~based~~ may be similar to the~~on~~ Ontario Clean Energy Benefit Act, 2010). Amendments to various regulations to expand ICI and RRRP would also be required. ~~Should the program have an end date, it is recommended that the date be specified in legislation.~~

| | | | |
|---|---|---|---|
| **Name of analyst:** | James Strang<br>With input from TPD and OFA | **Phone number:** | 416-327-2071 |
| **Date:** | August 30, 2016 | **Log number:** | |
| **Branch / Division:** | GGPR/ PEMD/ Treasury Board Secretariat<br>Tax Policy Division/ Ministry of Finance<br>Ontario Financing Authority/ Ministry of Finance | | |

## APPENDIX A: PROPOSED MINUTE
## UNDER DEVELOPMENT

# APPENDIX B: FINANCIAL TABLES

| FINANCIAL IMPACTS: CHANGES TO EXPENSE AND REVENUE | | | | | TABLE B1 |
|---|---|---|---|---|---|
| | | *Fiscal Plan Basis* | | | *Appropriations Basis* |
| **$ Millions** | | **2016-17** | **2017-18** | **2018-19** | **2016-17** |
| Initiative cost recommended | | 0.0000 | 0.0000 | 0.0000 | |
| *Expense changes:* | | | | | |
| Operating item | Oper | 261.0000 | 1006.0000 | 1004.0000 | 261.0 |
| Operating Offset | Oper | 0.0000 | 0.0000 | 0.0000 | 00000 |
| | | | | | |
| | | | | | |
| *Revenue changes:* | | | | | |
| Revenue Increase/ Offset | | 0.0000 | 60.0000 | 60.0000 | |
| Revenue decrease | | 0.0000 | 0.0000 | 0.0000 | |
| **Total Fiscal Impact (draw from c-funds)** | | **261.0000** | **946.0000** | **944.0000** | **261.0000** |

**From:** Ronald Kwan
**To:** John Kim; Emily Kerr
**Cc:** Gavin He
**Subject:** FW: Follow up information - OESP recommendations and LDC consolidation information
**Date:** Wednesday, January 25, 2017 5:29:20 PM
**Attachments:** image004.png
image005.png
image006.png
image007.png
EDA Letter_Steve Orsini.pdf

---

Hi,

Note the attached. Please note in the BN for the EDA meeting.

Ron

-----Original Message-----
From: McLean, David (MOF) [mailto:David.McLean@ontario.ca]
Sent: January-25-17 17:27
To: Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>
Subject: Fw: Follow up information - OESP recommendations and LDC consolidation information

FYI

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Thompson, Scott (MOF) <Scott.Thompson@ontario.ca>
Sent: Wednesday, January 25, 2017 5:24 PM
To: McLean, David (MOF)
Subject: FW: Follow up information - OESP recommendations and LDC consolidation information

_____
From: Orsini, Steve (CAB)
Sent: Wednesday, January 25, 2017 5:24:39 PM (UTC-05:00) Eastern Time (US & Canada)
To: Bevan, Andrew (OPO); Rowe, Mary (OPO); Teliszewsky, Andrew (ENERGY); Imbrogno, Serge (ENERGY); Thompson, Scott (MOF); Davidson, Steven (CAB); Bromm, William (CAB); Kwamena, Boafoa (CAB)
Subject: FW: Follow up information - OESP recommendations and LDC consolidation information

I had a chance to meet with the Electricity Distribution Association. They raised a number of issues. I expressed interest in getting their advice on how to increase take-up of the OESP.

Here are their suggestions (appendix 2).

I will defer to Energy and Finance as to which ones of their suggestions are worth pursuing further.

Steve

From: Teresa Sarkesian [mailto:tsarkesian@eda-on.ca]
Sent: January-25-17 5:18 PM
To: Orsini, Steve (CAB)
Cc: Ted Wigdor
Subject: RE: Follow up information - OESP recommendations and LDC consolidation information

Hi Steve, as a follow up to our meeting I have attached a letter regarding recommendations on improving the uptake of the OESP program and to provide you with info related to the history of LDC consolidation and current discussions in the sector.

If you have any questions, please do not hesitate to contact me.

Best regards,

Teresa

Teresa Sarkesian
President and CEO
Electricity Distributors Association
3700 Steeles Avenue West, Suite 1100
Vaughan, Ontario, L4L 8K8
Direct Line 905.265.5313, Fax: 905-265-5301 https://urldefense.proofpoint.com/v2/url?u=http-3A__www.eda-2Don.ca&d=CwIFEA&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=lYqulJJnqfxO5431Uw8ghWAHz6F3PkI2znI7RPACN08&m=WxZDCAXAsra-v-OGvUoJJZ1ONhOpx8vkx1LUT-slzzE&s=BcYZJRWyBoo4JmLQ_cD01oBxDcZx68LX40E7Yj49GVQ&e= <https://urldefense.proofpoint.com/v2/url?u=http-3A__www.eda-2Don.ca_&d=CwIFEA&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=lYqulJJnqfxO5431Uw8ghWAHz6F3PkI2znI7RPACN08&m=WxZDCAXAsra-v-OGvUoJJZ1ONhOpx8vkx1LUT-slzzE&s=04xNk9mdYhNAC6fki6eGrivUobq59jjQa3lMNnPkQgM&e= >

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From: Orsini, Steve (CAB) [mailto:Steve.Orsini@ontario.ca]

Sent: Tuesday, January 10, 2017 9:53 AM
To: Ted Wigdor <twigdor@eda-on.ca<mailto:twigdor@eda-on.ca>>
Cc: Teresa Sarkesian <tsarkesian@eda-on.ca<mailto:tsarkesian@eda-on.ca>>
Subject: RE: Follow up information

Thanks Teresa and Ted for meeting with me. I look forward to future discussions.

From: Ted Wigdor [mailto:twigdor@eda-on.ca]
Sent: January-09-17 4:56 PM
To: Orsini, Steve (CAB)
Cc: Teresa Sarkesian
Subject: Follow up information

Hi Steve,

Teresa and I would like to thank you for a very productive meeting we had with you on Thursday. We'll be sending you a more formal thank you letter along with the supplementary information you requested at the meeting. In the meeting, per your request, I am attaching the electronic version of the document that highlights the recommendations of potential savings in the distribution sector.

We'll be in touch soon. Have a good evening.

Regards,

Ted Wigdor
Vice President, Corporate & Member Affairs Electricity Distributors Association
3700 Steeles Ave W, Suite 1100
Vaughan, ON L4L 8K8
Direct: 905.265.5362 Main: 905.265.5300 Cell: 416.809.6781 www.eda-on.ca<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.eda-2Don.ca&d=CwIFEA&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=lYquIJJnqfxO5431Uw8ghWAHz6F3PkI2znI7RPACN08&m=WxZDCAXAsra-v-OGvUoJJZ1ONhOpx8vkx1LUT-slzzE&s=BcYZJRWyBoo4JmLQ_cD01oBxDcZx68LX40E7Yj49GVQ&e= >

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*The Voice of Ontario's Electricity Distributors*

January 25, 2017

Mr. Steve Orsini
Secretary of the Cabinet
Cabinet Office
Whitney Block, 6th Floor
99 Wellesley St. West
Toronto, ON M7A 1A1

Dear Mr. Orsini:

On behalf of the Electricity Distributors Association, I would like to thank you for taking the time to meet with my colleague, Ted Wigdor, and me earlier this month. We greatly appreciated the opportunity to review with you a number of public policy issues we are currently working on through our submission on the Long-Term Energy Plan and our pre-budget submission.

As we discussed, some local distribution companies (LDCs) are exploring new partnership models so that LDCs can tap into more private equity but maintain municipal ownership. We really appreciated your recommendations and will pursue them further.

We have also provided the government some recommendations on potential cost savings in the distribution sector. We wish to emphasize a couple of recommendations. Our members are experiencing significantly higher costs when filing rate applications. A more streamlined process will result in approximately $35 million in savings for ratepayers annually. As well, the recent changes to the Rural or Remote Rate Protection Program will result in annual costs of approximately $237 million to ratepayers. We believe that this is a social program and recommend that the program be funded through the tax base rather than the rate base.

As you know, we support voluntary consolidation of LDCs where there is a business case that demonstrates benefits to the LDCs, their shareholders and customers. Consolidations are ongoing, and more activity is currently underway than in the past. As requested, we have compiled the number of LDCs over the years, along with current discussions that are underway, in Appendix 1 to this letter.

Regarding recommendations on how to increase the uptake on the Ontario Electricity Support Program, we are enclosing recommendations brought forward from our members in Appendix 2 to this letter.

Thank you once again for meeting with us. We look forward to continuing this productive dialogue. In the meantime, if you have any follow questions, please feel free to contact me directly at 905-265-5313.

Sincerely yours,

Teresa Sarkesian
President and CEO



**Electricity Distributors Association**
3700 Steeles Ave. W., Suite 1100, Vaughan, Ontario L4L 8K8 Tel 905.265.5300 1.800.668.9979 Fax 905.265.5301 email@eda-on.ca www.eda-on.ca

## APPENDIX 1

### NUMBER OF LDCs

(excluding First Nations utilities)

*2000 – 251
*2001 – 172
*2002 – 97
*2003 – 95
*2004 – 94
**2005 – 89
**2006 – 87
**2007 – 84
**2008 – 82
**2009 – 77
**2010 – 77
**2011 – 75
**2012 – 73
**2013 – 73
**2014 – 72
**2015 – 71
**2016 – 65

* data provided by the EDA
**data provided by the OEB

### Policy/Legislative Changes

Here is a list of policy recommendations and legislative changes that helped stimulate mergers and acquisitions since 2000.

1. Many of the mergers took place upon passage of the *Energy Competition Act, 1998.* One of the requirements under this Act was that electricity utilities be transformed as business corporations under the *Ontario Business Corporations Act*. While the legislation did not impose mergers, many mergers took place during that time. From 2000 to 2002 Hydro One acquired 89 LDCs, representing 58% of the consolidation in those years. The remaining 42% of the consolidation, 65 LDCs, were municipality-to-municipality transactions.
2. In 2009 the Ontario government put in place an exemption from transfer tax on transfers of electricity assets in the public sector.
3. In 2012 the government established the Distribution Sector Review Panel, chaired by Murray Elston. The panel's report was released in Dec. 2012.
4. In 2014 the government established the Premier's Advisory Council on Government Assets chaired by Ed Clark, which issued its report in 2015.

### Upcoming/Potential Mergers

- Horizon Utilities, Enersource and PowerStream will be merging on Feb. 1 2017, and the new company, Alectra, is expected to complete its acquisition of Hydro One Brampton on March 1, 2017.
- In 2016 Hydro One reached an agreement to acquire Orillia Power. The purchase is under review by the Ontario Energy Board.
- As well, Hydro One has put in an offer for Peterborough Distribution Inc.
- Thunder Bay Hydro and Kenora Hydro announced in 2016 that they are exploring a merger.
- St. Thomas Energy and Entegrus Powerlines announced in 2016 that they are exploring a merger.

- In 2016, Veridian Connections, Whitby Hydro and Oshawa PUC signed a Memorandum of Understanding to explore an amalgamation of the three utilities.
- The board of Wasaga Distribution is looking to sell the company but has not yet signed a sale agreement.
- The town of Midland is considering selling Midland Power Utility Corporation but has not yet signed a sale agreement.
- Guelph Hydro is in an exploratory review of its future structure/ownership.
- West Coast Huron (Goderich) is in merger considerations with Erie Thames Powerlines having a right of first refusal.
- Collus PowerStream is considering a sale or merger of the remaining 50% of its company.

## APPENDIX 2

## ONTARIO ELECTRICITY SUPPORT PROGRAM

Regarding the OESP, we canvassed our members to identify potential barriers to widespread uptake of the program along with possible solutions for the government to consider:

Language:
It is a possibility that many residents eligible for the OESP do not speak English as a first language. To raise awareness of the program, the government may wish to develop a campaign targeting those Ontarians with materials translated into a variety of languages, starting with those that have a relatively high immigration rate, e.g. Mandarin or Cantonese, Tagalog, etc. (depending on the geographic area that is being targeted)

Social Stigma/Self-Identification:
Some feedback has been received that possible recipients are embarrassed and feel that there is social stigma to be labeled "in need of financial support or assistance". They also may not be comfortable with more third parties being aware of their socio-economic status beyond traditional social service agencies and the tax system.

Application Process:
A few LDCs commented that some of the questions are difficult to comprehend. Perhaps those questions could be converted to plainer language.
As well, the application process requires the applicant to include supporting documentation that the applicant may not have, or it may require the applicant to rely on the assistance of someone else to complete the application process. Perhaps the government could consider reasonable facsimiles of the supporting documents, or rely on information that the government should already have, e.g. previous tax returns.

Technical Glitches:
There were also many technical issues with the application portal that led to high rejection rates. The portal was not able to properly match the applicants' information to the LDCs' customer information systems, leading to those rejections. These issues could cause frustration for the applicants and cause them to abandon their application. The OEB was made aware of these system problems but it is not known if they have been rectified. A simplified system without technical issues will likely increase the uptake of the program. Accessibility is key.

Cross-Ministry/Intergovernmental Collaboration:
LDCs also recommend that the Ministry of Energy consider working with the Ministry of Housing and/or the Ministry of Community and Social Services, and the federal government to ensure the program reaches the right people. Examples of tactics these ministries could work on together include:

- Mail drop and posters for social housing complexes.
- Send posters and/or flyers to unemployment offices and food banks.
- Send repeated inserts with disability, EI, OAS and CPP cheques and any other ones where people are receiving social assistance.

People receiving these forms of transfer payments may qualify under the OESP.

Other locations where materials could be made available include:

- MPPs' constituency offices
- Public libraries
- Community centres
- Government offices

Schedule on the Income Tax Form:
There are currently schedules on the provincial income tax form to determine eligibility for sales tax or property tax credits. Since the OESP is based on income, perhaps the Ministry of Energy could work with the Ministry of Finance to develop a schedule on the income tax return to determine OESP eligibility.

Help Provided by LDCs:
LDCs can offer some assistance in promotional efforts, e.g. social media and websites, based on available resources. Some of them have done some extra promotion, including:

- Sending a customer service team to retirement communities to present the program and assist with applications.
- Sending letters to recent LEAP recipients
- Sending letters to all community centres in their service territory

However, utilities may not have the resources to run ongoing campaigns or implement additional tactics. Perhaps the government could provide assistance to support these activities or provide support to local social service agencies to provide these activities.

**From:** John Kim
**To:** Salman Qadir
**Cc:** Shajee Kathirgamanathan; Adam Prokop; Gavin He
**Subject:** FW: GA scenario
**Date:** Thursday, January 26, 2017 10:53:24 AM

Hi Salman,

Would you mind doing a fiscal impact chart for each scenarios? Essentially, the bump up in the debt would potentially be fiscal impact on the downside.

Thanks,

John.

**From:** Malecki, Justin (ENERGY) [mailto:Justin.Malecki@ontario.ca]
**Sent:** Thursday, January 26, 2017 9:34 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Tim Christie (ENERGY) <Tim.Christie@ontario.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: GA scenario

Hello John,

Yes, the table Tim sent you yesterday is the 30-year financing version of scenario 1a. Below is the same table but for the 30-year financing version of scenario 1b. Don't hesitate to let us know if there is anything else you need.

Cheers,

Justin Malecki, PhD
Senior Advisor, Energy System Planning
Ontario Ministry of Energy
416-325-9372

| ***Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments ($ million)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 10,679 | 9,912 | 9,200 | 8,540 | 8,798 | 9,063 | 9,337 | 9,619 | 9,910 | 10,209 | 10,517 | 10,835 | 11,162 | 11,499 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 1,416 | 3,410 | 5,932 | 9,857 | 12,396 | 14,586 | 16,190 | 18,462 | 19,964 | 20,774 | 22,271 | 23,313 | 23,236 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-26-17 8:17 AM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA); Malecki, Justin (ENERGY)
**Subject:** RE: GA scenario

Thanks Tim.

Am I right in thinking this is the latest 1A? Could we also get the 1B?

John.

**From:** Christie, Tim (ENERGY) [mailto:Tim.Christie@ontario.ca]
**Sent:** Wednesday, January 25, 2017 3:59 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Justin Malecki (ENERGY) <Justin.Malecki@ontario.ca>
**Subject:** RE: GA scenario

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 8,769 | 8,944 | 9,123 | 9,306 | 9,492 | 9,682 | 9,875 | 10,073 | 10,274 | 10,480 | 10,689 | 10,903 | 11,121 | 11,344 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 | 12,451 | 14,425 | 16,098 | 17,240 | 19,111 | 20,281 | 20,836 | 22,164 | 23,133 | 23,087 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-23-17 4:50 PM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA)
**Subject:** GA scenario

Hi Tim,

Hope all's well.

I left you a voicemail and wanted to clarify what I'm looking for. Would you have the accumulated debt figure, by year, for the 23bn scenario?

Thanks,

John.

Y. John Kim
Director, Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

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**From:** John Kim
**To:** Nagati Kwan
**Cc:** Gavin Ho; Emily Kerr
**Subject:** FW: GA scenario
**Date:** Wednesday, January 25, 2017 4:00:42 PM

Fyi, we will have a look.

---

**From:** Christie, Tim (ENERGY) [mailto:Tim.Christie@ontario.ca]
**Sent:** Wednesday, January 25, 2017 3:59 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Justin Malecki (ENERGY) <Justin.Malecki@ontario.ca>
**Subject:** RE: GA scenario

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| **Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing *($ millions)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 8,769 | 8,944 | 9,123 | 9,306 | 9,492 | 9,682 | 9,875 | 10,073 | 10,274 | 10,480 | 10,689 | 10,903 | 11,121 | 11,344 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
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---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-23-17 4:50 PM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA)
**Subject:** GA scenario

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Thanks,

John.

Y. John Kim
Director, Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

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**From:** John Kim
**To:** Shaine Kathirgamanathan; Gavin He
**Cc:** Salman Qadir; Adam Prokop
**Subject:** FW: GA scenario
**Date:** Wednesday, January 25, 2017 4:00:24 PM

Fyi….this should provide potential fiscal impact down side.

**From:** Christie, Tim (ENERGY) [mailto:Tim.Christie@ontario.ca]
**Sent:** Wednesday, January 25, 2017 3:59 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Justin Malecki (ENERGY) <Justin.Malecki@ontario.ca>
**Subject:** RE: GA scenario

John, here's the data you requested. Note that we have not included in-year interest costs (so any deferral doesn't start accumulating interest until the next year). We have since done it using a monthly schedule, but this is the version that was used in the deck. Let me know if you have any questions.

| **Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing *($ millions)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| Ratepayer GA Payment | 8,769 | 8,944 | 9,123 | 9,306 | 9,492 | 9,682 | 9,875 | 10,073 | 10,274 | 10,480 | 10,689 | 10,903 | 11,121 | 11,344 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
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**Subject:** GA scenario

Hi Tim,

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I left you a voicemail and wanted to clarify what I'm looking for. Would you have the accumulated debt figure, by year, for the 23bn scenario?

Thanks,

John.

Y. John Kim
Director, Electricity Finance Branch
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**From:** John Kim
**To:** Ronald Kwan
**Cc:** Salman Qadir; Gavin He
**Subject:** FW: GA scenario
**Date:** Thursday, January 26, 2017 4:58:31 PM
**Attachments:** GA Financing - Scenario 1a 1b v1.xlsx

Hi Ron,

Pls. see attached spreadsheet from Salman which ties in with the scenarios provided.

Thanks,

John.

---

**From:** Salman Qadir
**Sent:** Thursday, January 26, 2017 1:33 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: GA scenario

Apologies, there was a referencing error in the charting. Updated is attached.

Salman

---

**From:** Salman Qadir
**Sent:** Thursday, January 26, 2017 12:07 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: GA scenario

Hi John,

Attached is a few charts for the fiscal impact for each scenario. Note that the assumption is that the debt is drawn down at the end of the year and interest on that drawdown incurs the following year.

Salman

---

**From:** John Kim
**Sent:** Thursday, January 26, 2017 10:53 AM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: GA scenario

Hi Salman,

Would you mind doing a fiscal impact chart for each scenarios? Essentially, the bump up in the debt would potentially be fiscal impact on the downside.

Thanks,

John.

---

**From:** Malecki, Justin (ENERGY) [mailto:Justin.Malecki@ontario.ca]
**Sent:** Thursday, January 26, 2017 9:34 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Tim Christie (ENERGY) <Tim.Christie@ontario.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: GA scenario

Hello John,

Yes, the table Tim sent you yesterday is the 30-year financing version of scenario 1a. Below is the same table but for the 30-year financing version of scenario 1b. Don't hesitate to let us know if there is anything else you need.

Cheers,

Justin Malecki, PhD
Senior Advisor, Energy System Planning
Ontario Ministry of Energy
416-325-9372

| ***Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments ($ million)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
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**Annual Interest Rate = 5%**

## Scenario 1a

**Debt Borrowing/Payment Sched**
***($ millions)***

a
c = a*5%
b
d = a+b+c

## Fiscal Impact, Scenario 1a

Provided by Energy

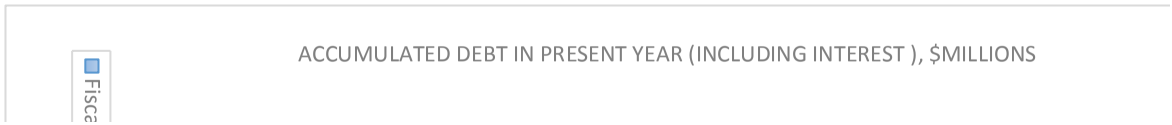
## Scenario 1b

**Debt Borrowing Payment Sched**
***($ million)***

a
c = a*5%
b
d = a+b+c

## Fiscal Impact, Scenario 1b

Provided by Energy


Fisca
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST ), $MILLIONS

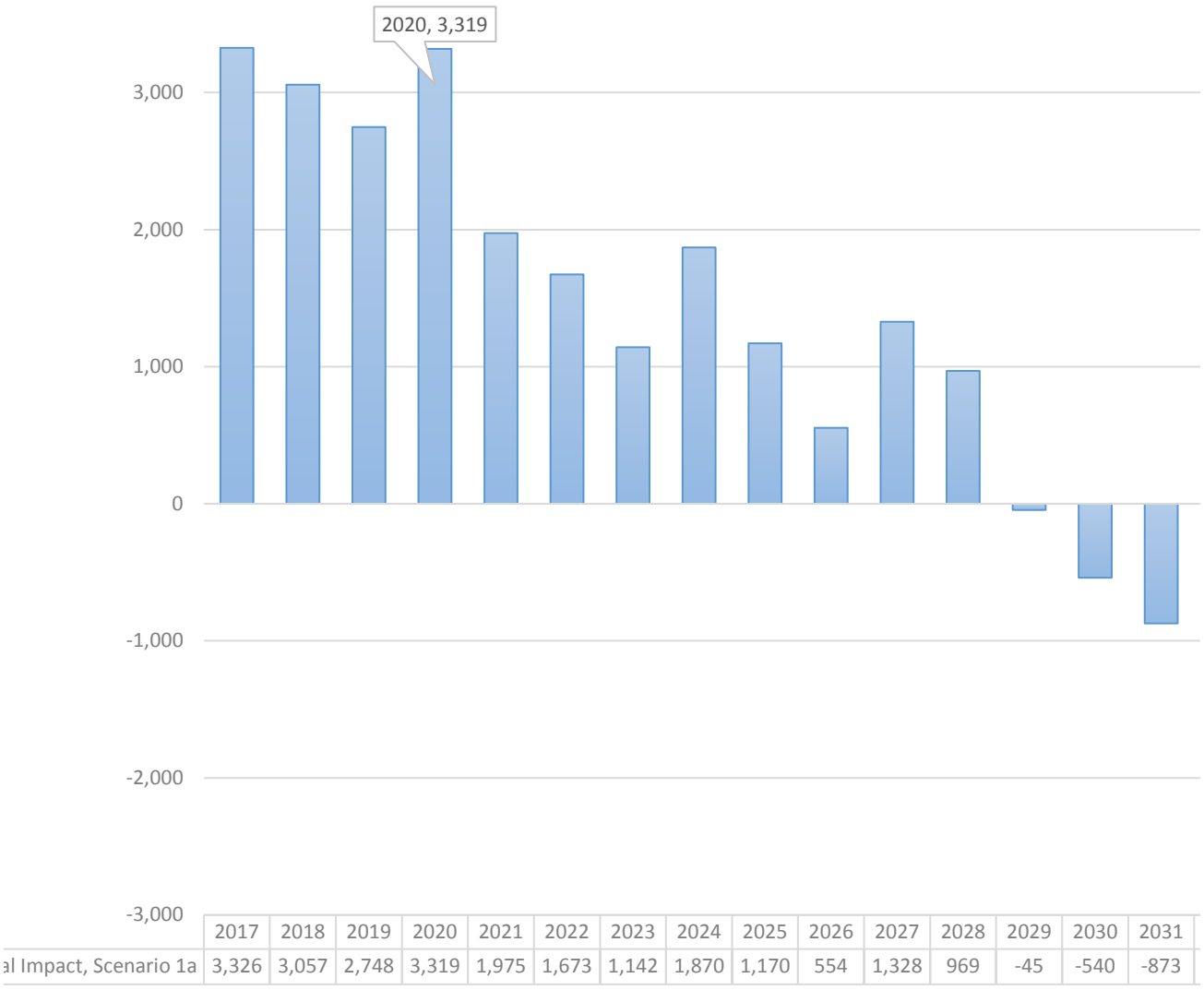
**Debt is drawn-down at end of Year**

| | 2017 | 2018 | 2019 |
|---|---|---|---|
| **dule for Scenario 1a. Moderate / GA Financing 30-year financing** | | | |
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 |
| Ratepayer GA Payment | 8,769 | 8,944 | 9,123 |
| GA Debt Requirement | 3,326 | 2,891 | 2,429 |
| Debt, Beginning of Year | 0 | 3,326 | 6,383 |
| *Interest Cost - Scenario 1a* | *0* | *166* | *319* |
| Additional GA Debt Drawdown, End of Year | 3,326 | 2,891 | 2,429 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 |
| | 3,326 | 3,057 | 2,748 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 |
| Errors | 0 | 0 | 0 |

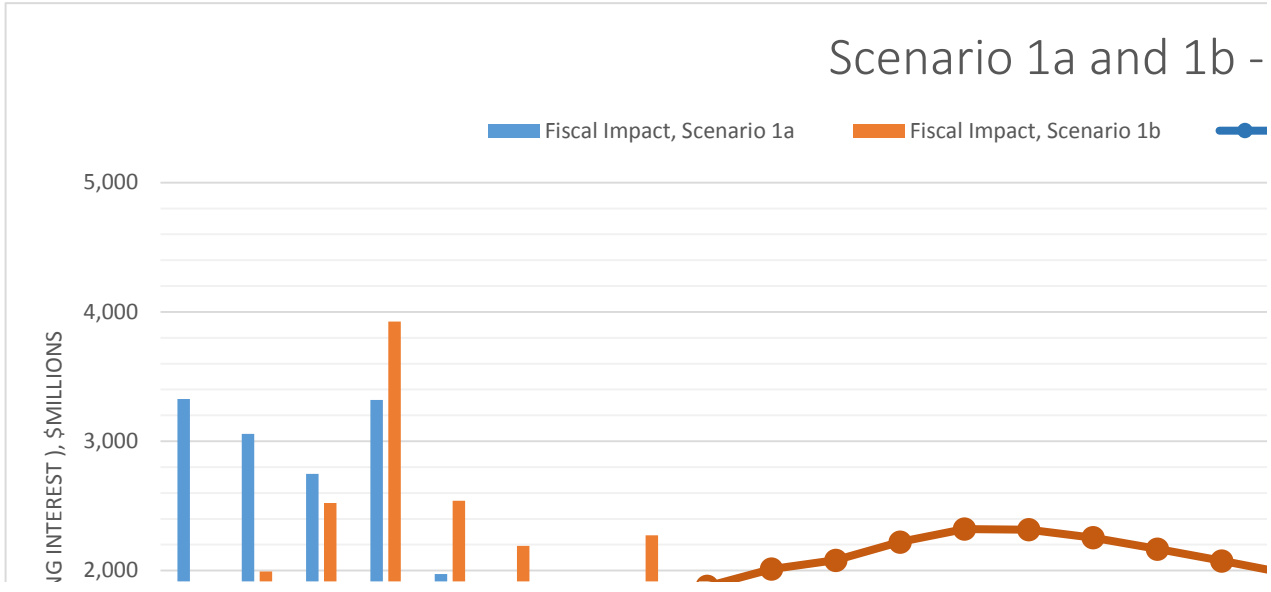
| | 2017 | 2018 | 2019 |
|---|---|---|---|
| **lule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments** | | | |
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 |
| Ratepayer GA Payment | 10,679 | 9,912 | 9,200 |
| GA Debt Requirement | 1,416 | 1,923 | 2,352 |
| Debt, Beginning of Year | 0 | 1,416 | 3,410 |
| *Interest Cost - Scenario 1b* | *0* | *71* | *170* |
| Additional GA Debt Drawdown, End of Year | 1,416 | 1,923 | 2,352 |
| Accumulated debt in present year (including 5% annual interest) | 1,416 | 3,410 | 5,932 |
| | 1,416 | 1,994 | 2,522 |
| Accumulated debt in present year (including 5% annual interest) | 1,416 | 3,410 | 5,932 |
| Errors | 0 | 0 | 0 |

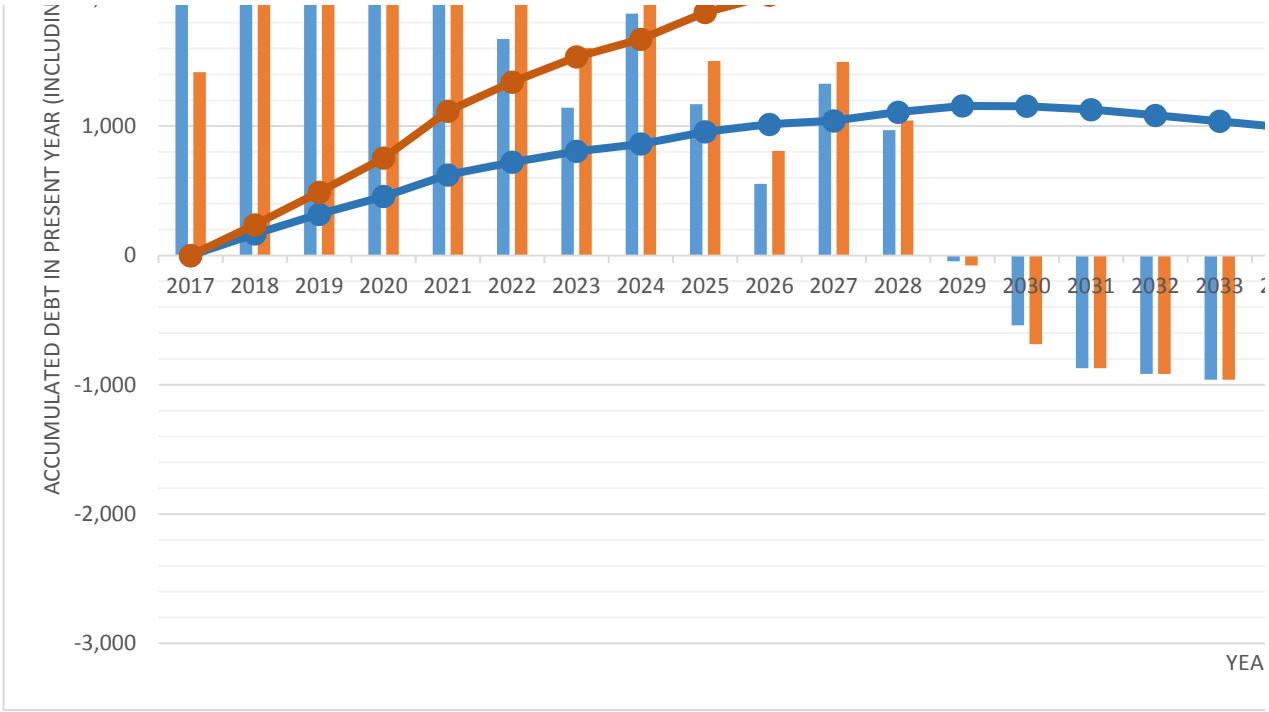
**Scenario 1a - F**

4,000




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| al Impact, Scenario 1a | 3,326 | 3,057 | 2,748 | 3,319 | 1,975 | 1,673 | 1,142 | 1,870 | 1,170 | 554 | 1,328 | 969 | -45 | -540 | -873 |

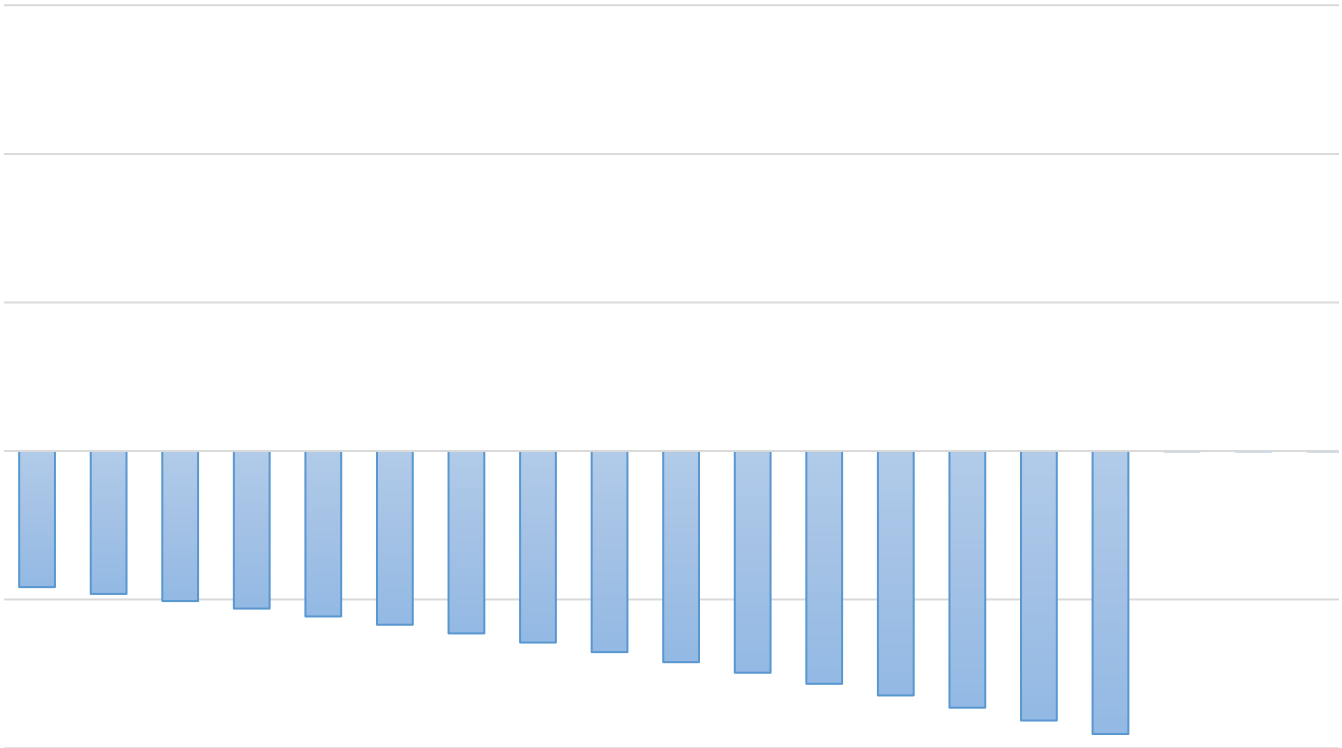



ACCUMULATED DEBT IN PRESENT YEAR (INCLUDIN
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
YEA

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|---|---|---|---|---|---|---|---|---|---|
| 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 |
| 9,306 | 9,492 | 9,682 | 9,875 | 10,073 | 10,274 | 10,480 | 10,689 | 10,903 | 11,121 |
| 2,862 | 1,352 | 952 | 337 | 1,008 | 215 | -460 | 286 | -139 | -1,202 |
| 9,131 | 12,450 | 14,425 | 16,098 | 17,240 | 19,110 | 20,280 | 20,834 | 22,162 | 23,131 |
| *457* | *623* | *721* | *805* | *862* | *955* | *1,014* | *1,042* | *1,108* | *1,157* |
| 2,862 | 1,352 | 952 | 337 | 1,008 | 215 | -460 | 286 | -139 | -1,202 |
| 12,450 | 14,425 | 16,098 | 17,240 | 19,110 | 20,280 | 20,834 | 22,162 | 23,131 | 23,085 |
| 3,319 | 1,975 | 1,673 | 1,142 | 1,870 | 1,170 | 554 | 1,328 | 969 | -45 |
| 12,451 | 14,425 | 16,098 | 17,240 | 19,111 | 20,281 | 20,836 | 22,164 | 23,133 | 23,087 |
| 1 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 2 |

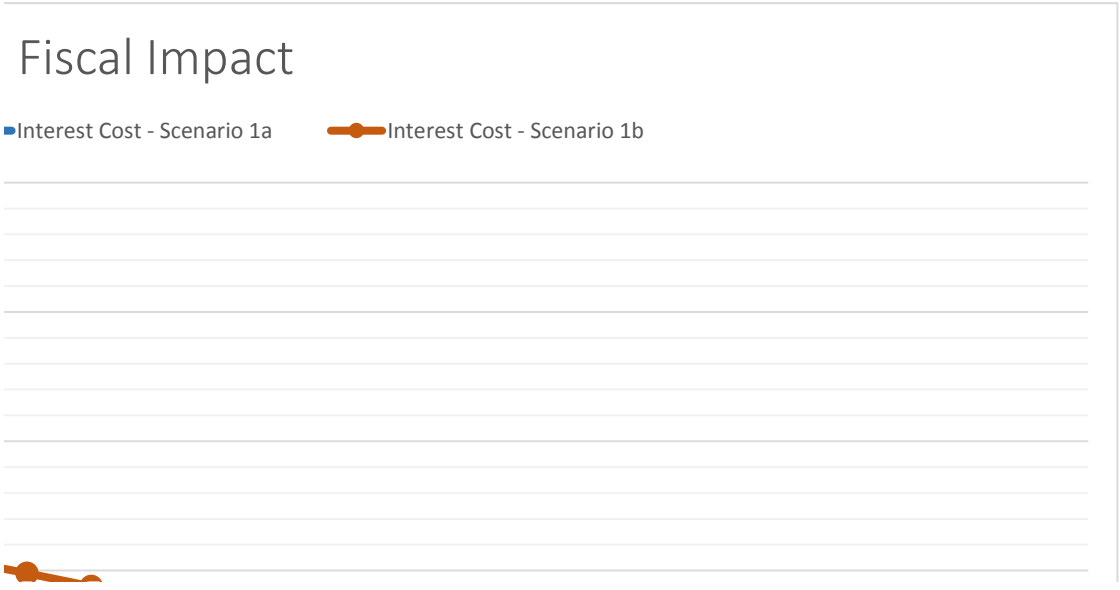
| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|---|---|---|---|---|---|---|---|---|---|
| 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 |
| 8,540 | 8,798 | 9,063 | 9,337 | 9,619 | 9,910 | 10,209 | 10,517 | 10,835 | 11,162 |
| 3,628 | 2,046 | 1,571 | 875 | 1,462 | 579 | -189 | 458 | -71 | -1,243 |
| 5,932 | 9,857 | 12,396 | 14,587 | 16,191 | 18,462 | 19,965 | 20,774 | 22,270 | 23,313 |
| *297* | *493* | *620* | *729* | *810* | *923* | *998* | *1,039* | *1,114* | *1,166* |
| 3,628 | 2,046 | 1,571 | 875 | 1,462 | 579 | -189 | 458 | -71 | -1,243 |
| 9,857 | 12,396 | 14,587 | 16,191 | 18,462 | 19,965 | 20,774 | 22,270 | 23,313 | 23,236 |
| 3,925 | 2,539 | 2,191 | 1,604 | 2,272 | 1,502 | 809 | 1,497 | 1,043 | -77 |
| 9,857 | 12,396 | 14,586 | 16,190 | 18,462 | 19,964 | 20,774 | 22,271 | 23,313 | 23,236 |
| 0 | 0 | -1 | -1 | 0 | -1 | 0 | 1 | 0 | 0 |

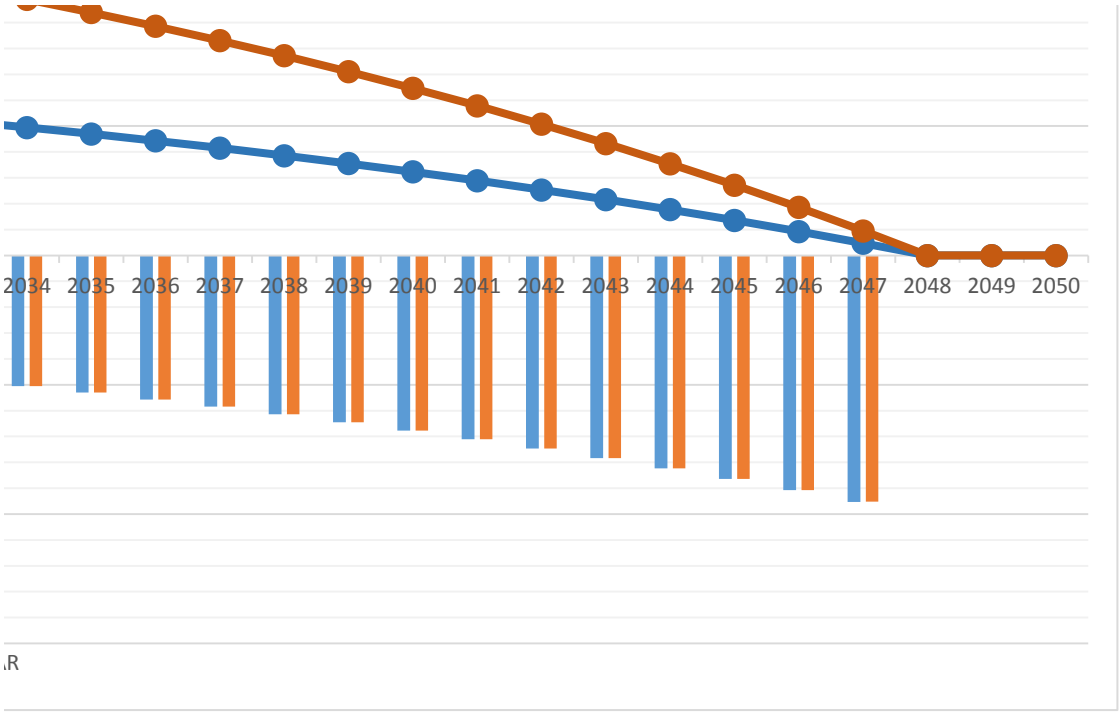
## Fiscal Impact



| 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 205 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 | -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | 0 | 0 | 0 |

YEAR




2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
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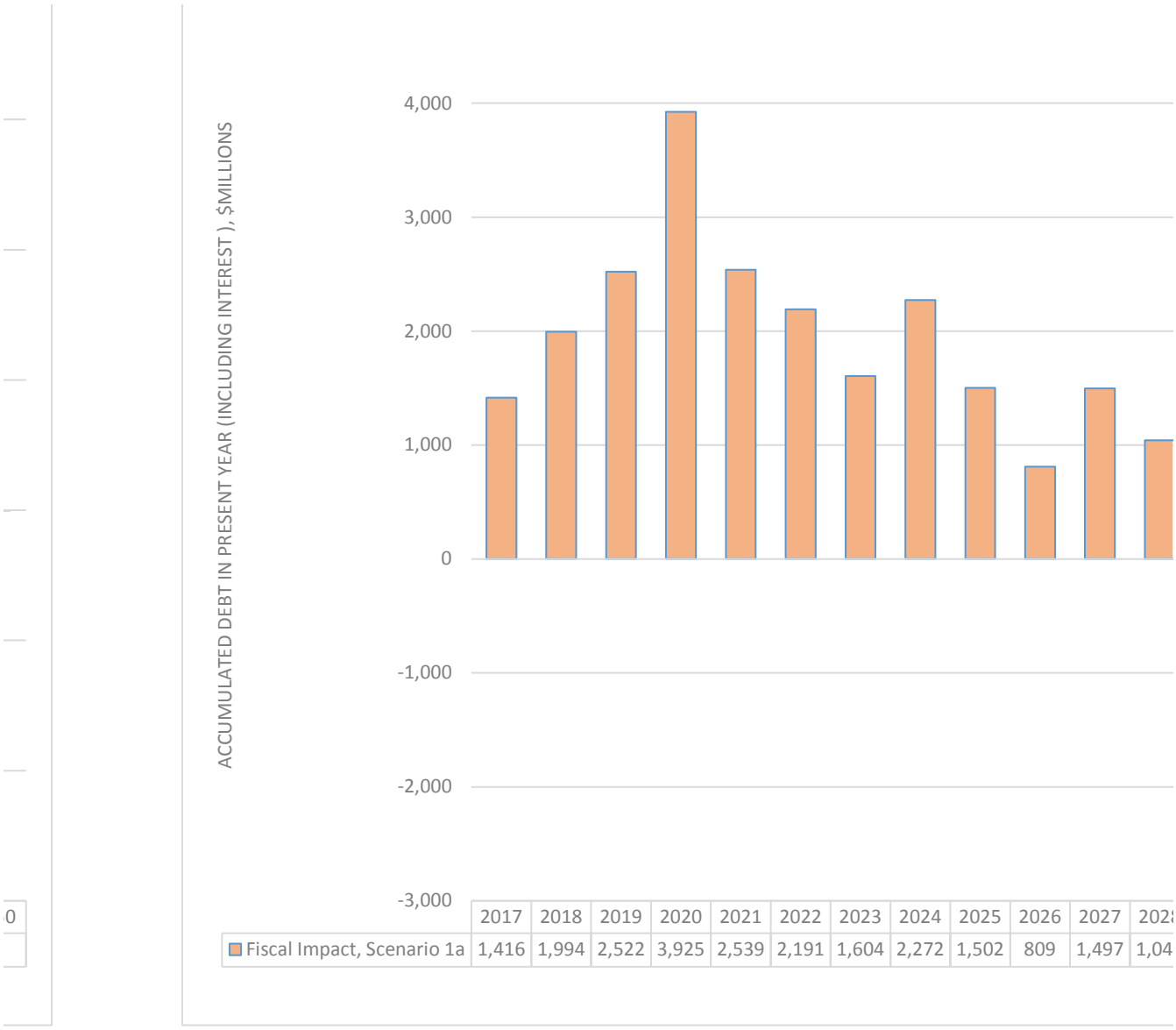
2048
2049
2050
AR

| 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
|---|---|---|---|---|---|---|---|---|---|
| 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 |
| 11,344 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 |
| -1,694 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 |
| 23,085 | 22,546 | 21,673 | 20,757 | 19,795 | 18,784 | 17,723 | 16,610 | 15,440 | 14,212 |
| *1,154* | *1,127* | *1,084* | *1,038* | *990* | *939* | *886* | *830* | *772* | *711* |
| -1,694 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 |
| 22,546 | 21,673 | 20,757 | 19,795 | 18,784 | 17,723 | 16,610 | 15,440 | 14,212 | 12,923 |
| -540 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 |
| 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 |
| 2 | 3 | 2 | 2 | 3 | 4 | 3 | 3 | 4 | 3 |

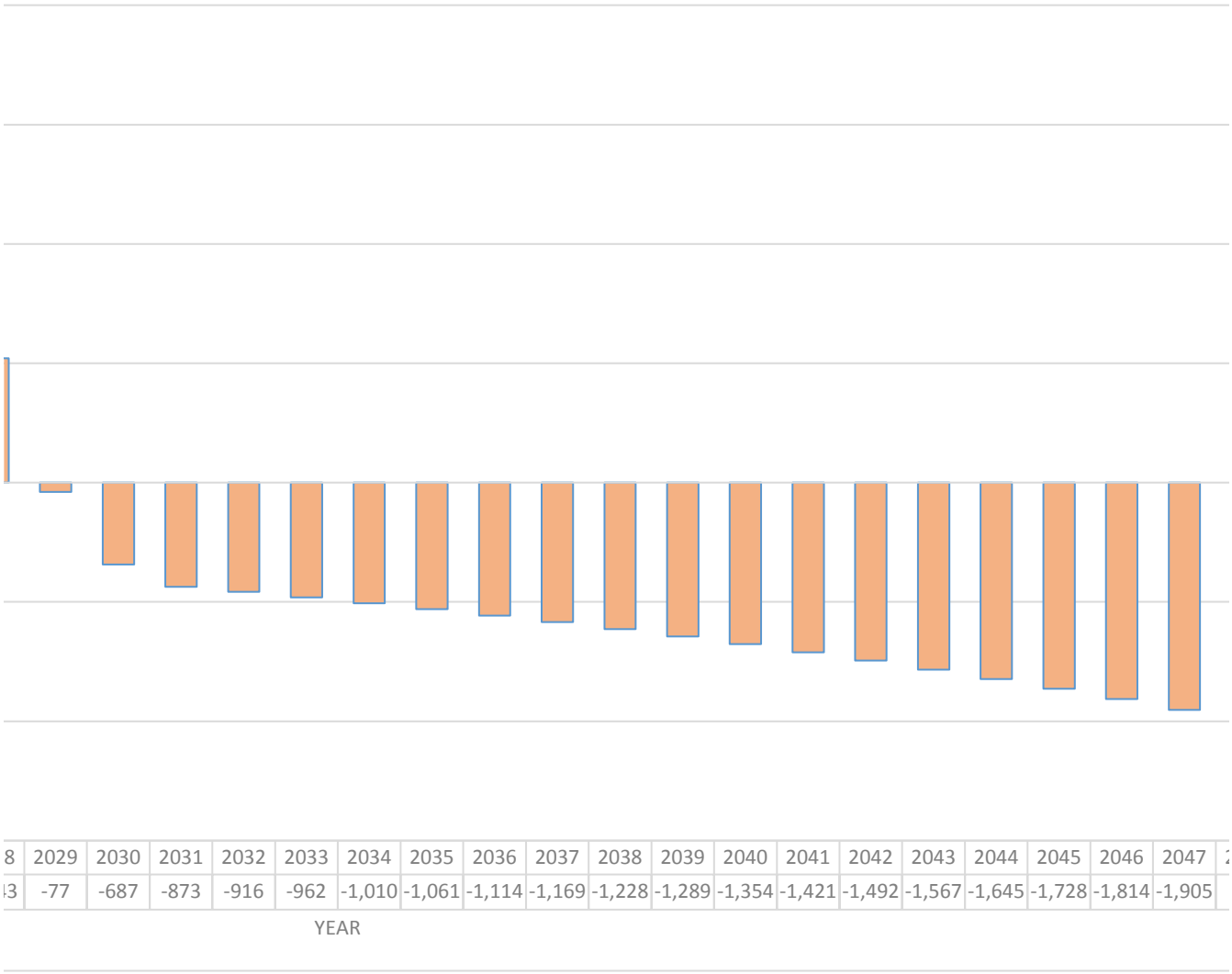
| 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
|---|---|---|---|---|---|---|---|---|---|
| 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 |
| 11,499 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 |
| -1,849 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 |
| 23,236 | 22,548 | 21,676 | 20,760 | 19,798 | 18,787 | 17,727 | 16,613 | 15,444 | 14,216 |
| *1,162* | *1,127* | *1,084* | *1,038* | *990* | *939* | *886* | *831* | *772* | *711* |
| -1,849 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 |
| 22,548 | 21,676 | 20,760 | 19,798 | 18,787 | 17,727 | 16,613 | 15,444 | 14,216 | 12,927 |
| -687 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,169 | -1,228 | -1,289 |
| 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 |
| 0 | 0 | -1 | -1 | 0 | 0 | 0 | -1 | 0 | -1 |


ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST ), $MILLIONS
4,000
3,000
2,000
1,000
0
-1,000
-2,000
-3,000
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027
Fiscal Impact, Scenario 1a 1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,272 1,502 809 1,497

| 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 |
|---|---|---|---|---|---|---|---|---|---|
| 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 |
| 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 |
| -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | 0 | 0 |
| 12,923 | 11,569 | 10,147 | 8,655 | 7,087 | 5,442 | 3,714 | 1,900 | -5 | -6 |
| *646* | *578* | *507* | *433* | *354* | *272* | *186* | *95* | *0* | *0* |
| -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | 0 | 0 |
| 11,569 | 10,147 | 8,655 | 7,087 | 5,442 | 3,714 | 1,900 | -5 | -6 | -6 |
| -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | 0 | 0 |
| 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 |
| 4 | 4 | 4 | 5 | 4 | 5 | 5 | 5 | 6 | 6 |

| 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 |
|---|---|---|---|---|---|---|---|---|---|
| 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 |
| 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 |
| -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | 0 | 0 |
| 12,927 | 11,573 | 10,152 | 8,659 | 7,092 | 5,447 | 3,719 | 1,905 | 1 | 1 |
| *646* | *579* | *508* | *433* | *355* | *272* | *186* | *95* | *0* | *0* |
| -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | 0 | 0 |
| 11,573 | 10,152 | 8,659 | 7,092 | 5,447 | 3,719 | 1,905 | 1 | 1 | 1 |
| -1,354 | -1,421 | -1,492 | -1,567 | -1,645 | -1,728 | -1,814 | -1,905 | 0 | 0 |
| 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 |
| 0 | -1 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | -1 |

## Scenario 1b - Fiscal Impact

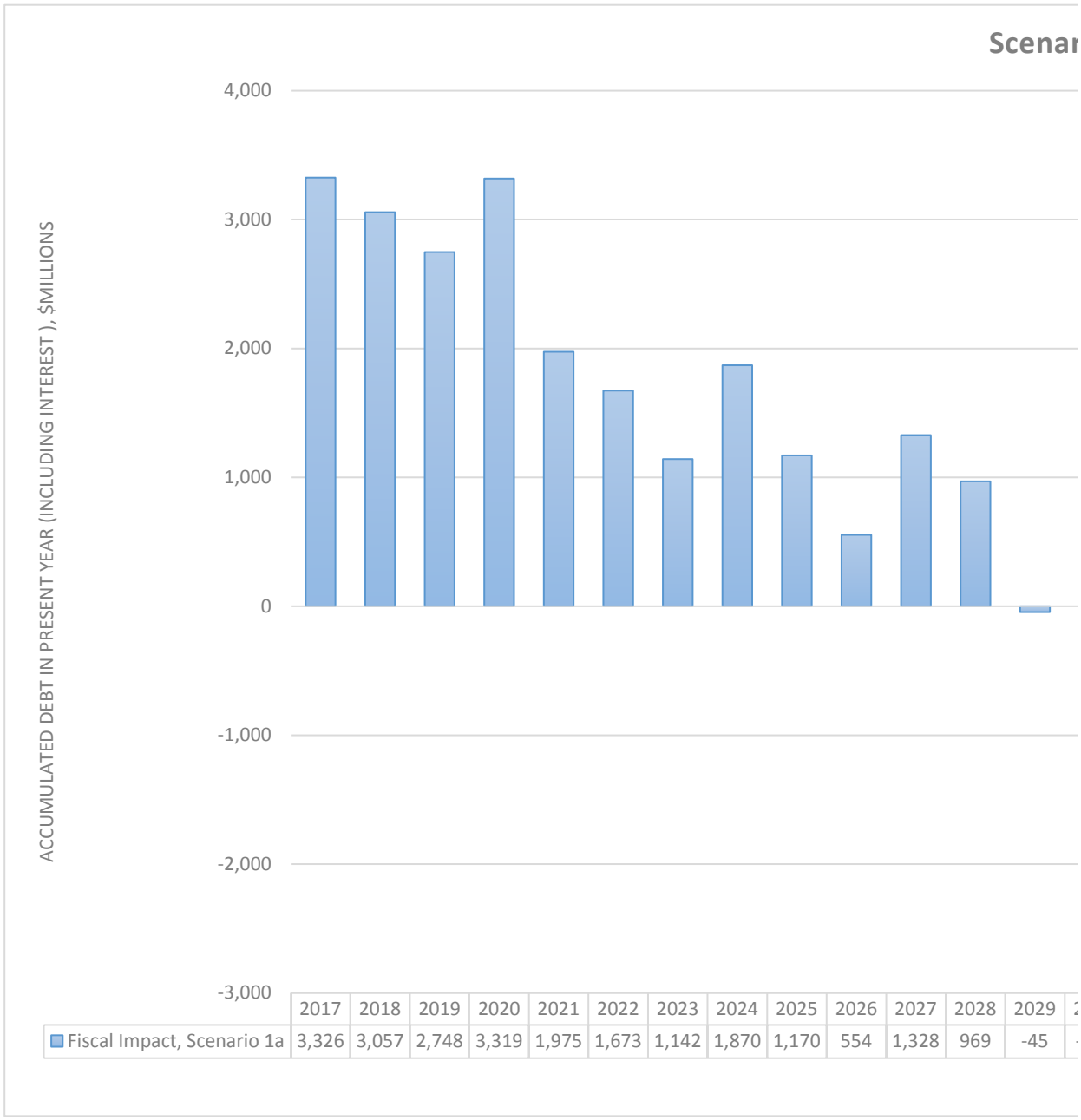


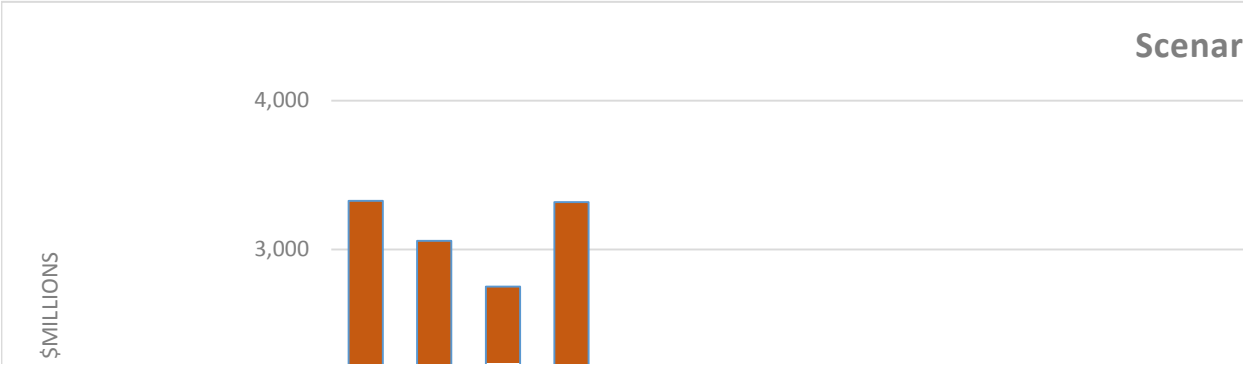
| 8 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | -77 | -687 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,169 | -1,228 | -1,289 | -1,354 | -1,421 | -1,492 | -1,567 | -1,645 | -1,728 | -1,814 | -1,905 | |

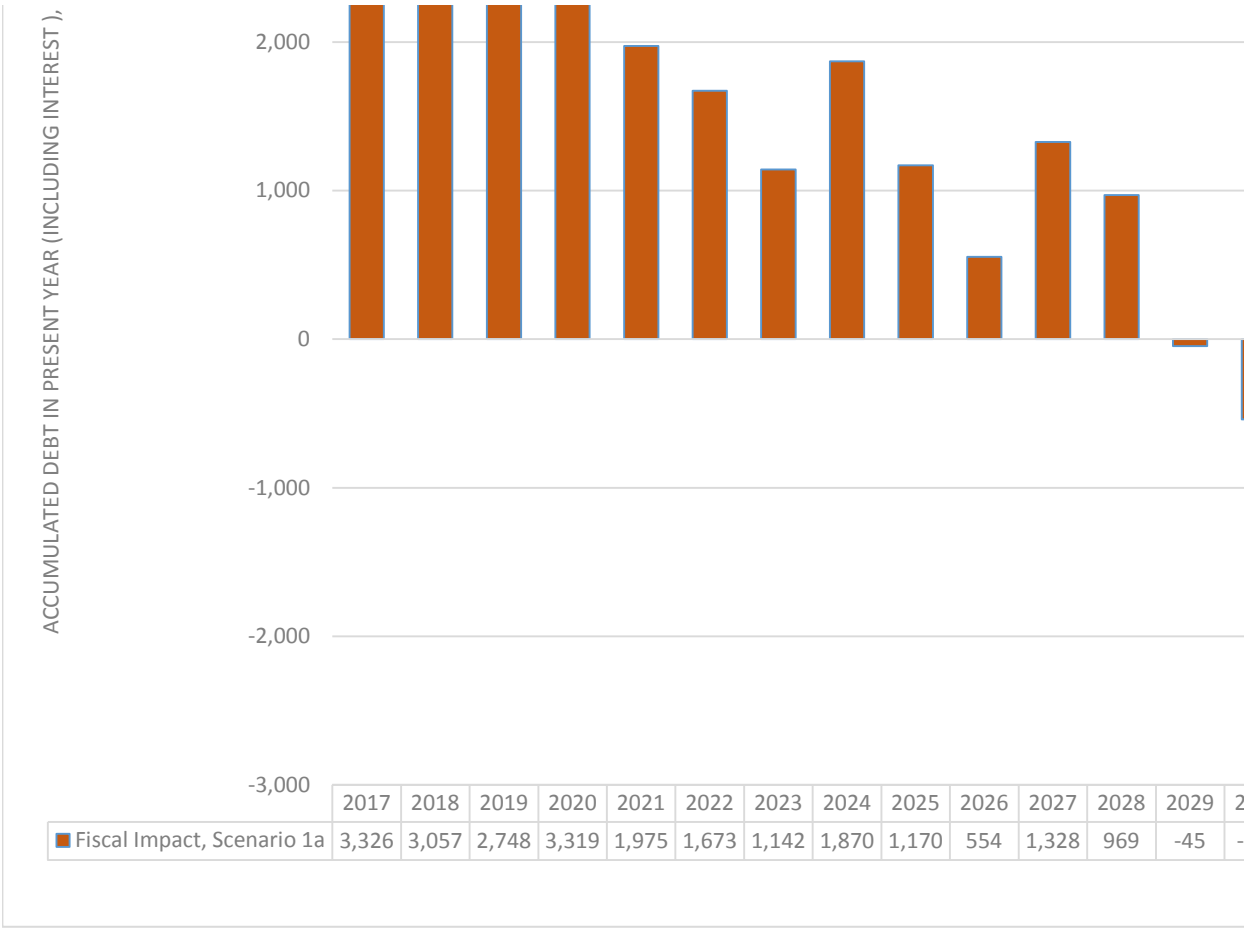
YEAR

| 2050 |
|---|
| |
| 2,616 |
| 2,616 |
| 0 |
| |
| -6 |
| *0* |
| 0 |
| -6 |
| |
| 0 |
| |
| 0 |
| 6 96 |
| |
| 2050 |
| |
| 2,616 |
| 2,616 |
| 0 |
| |
| 1 |
| *0* |
| 0 |
| 1 |
| |
| 0 |
| |
| 0 |
| -1 -10 |

| 2048 | 2049 | 2050 |
|---|---|---|
| 0 | 0 | 0 |

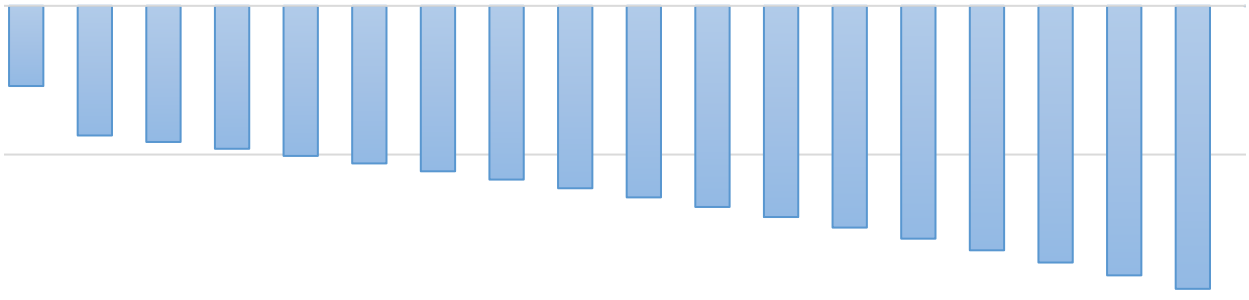

Scenar
4,000
3,000
2,000
1,000
0
-1,000
-2,000
-3,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST ), $MILLIONS
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029
Fiscal Impact, Scenario 1a 3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,170 554 1,328 969 -45


Scenar
4,000
3,000
$MILLIONS




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fiscal Impact, Scenario 1a | 3,326 | 3,057 | 2,748 | 3,319 | 1,975 | 1,673 | 1,142 | 1,870 | 1,170 | 554 | 1,328 | 969 | -45 | - |

## rio 1a - Fiscal Impact



| 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -540 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 | -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | |

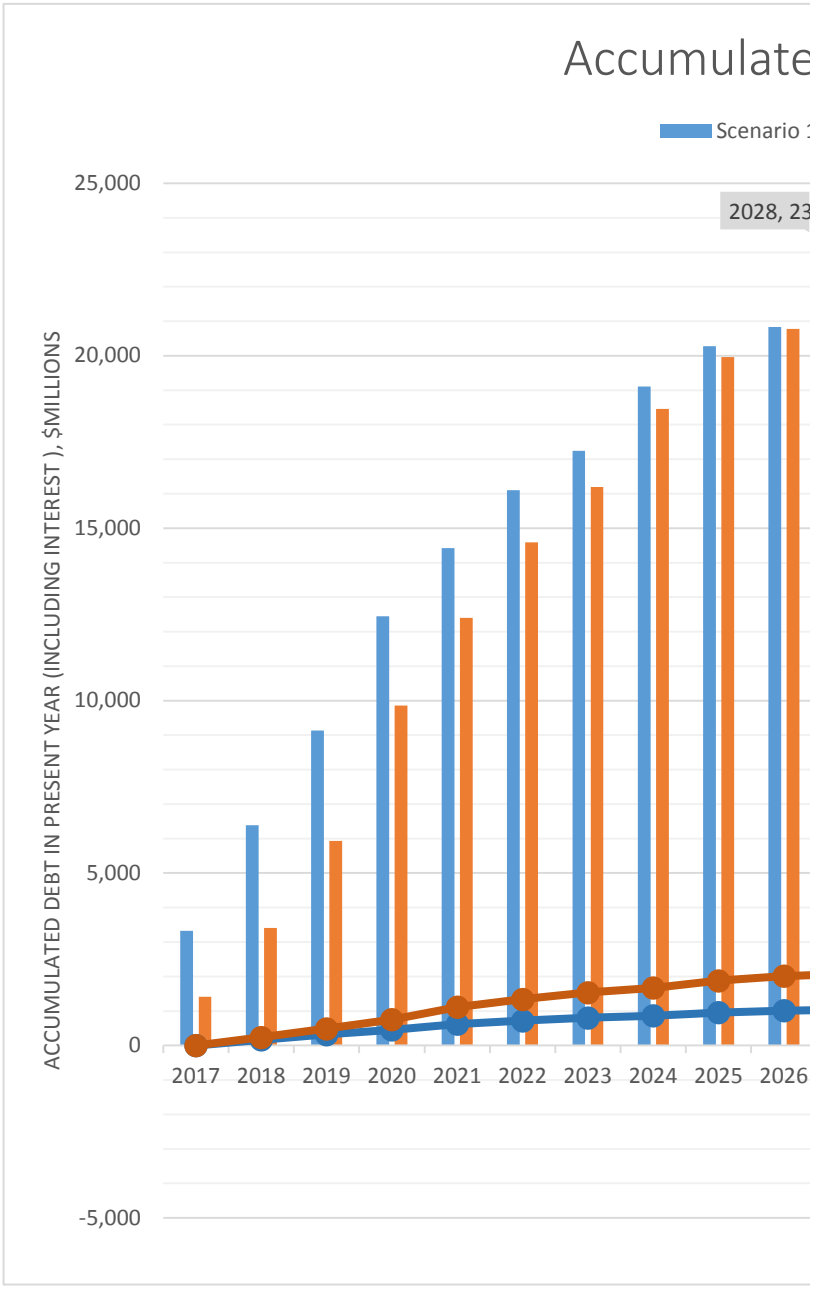
YEAR

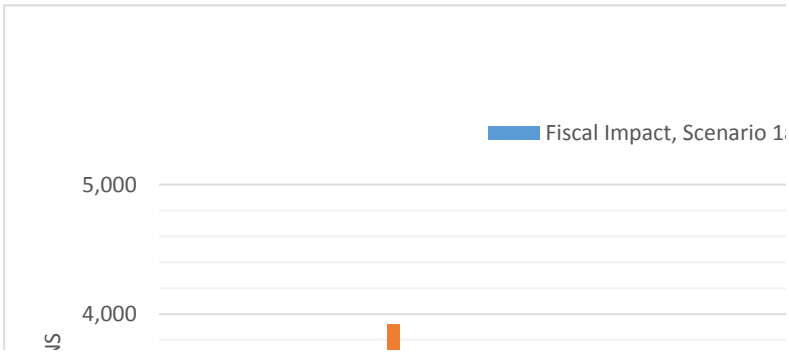
## io 1b - Fiscal Impact

| 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -540 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 | -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | |

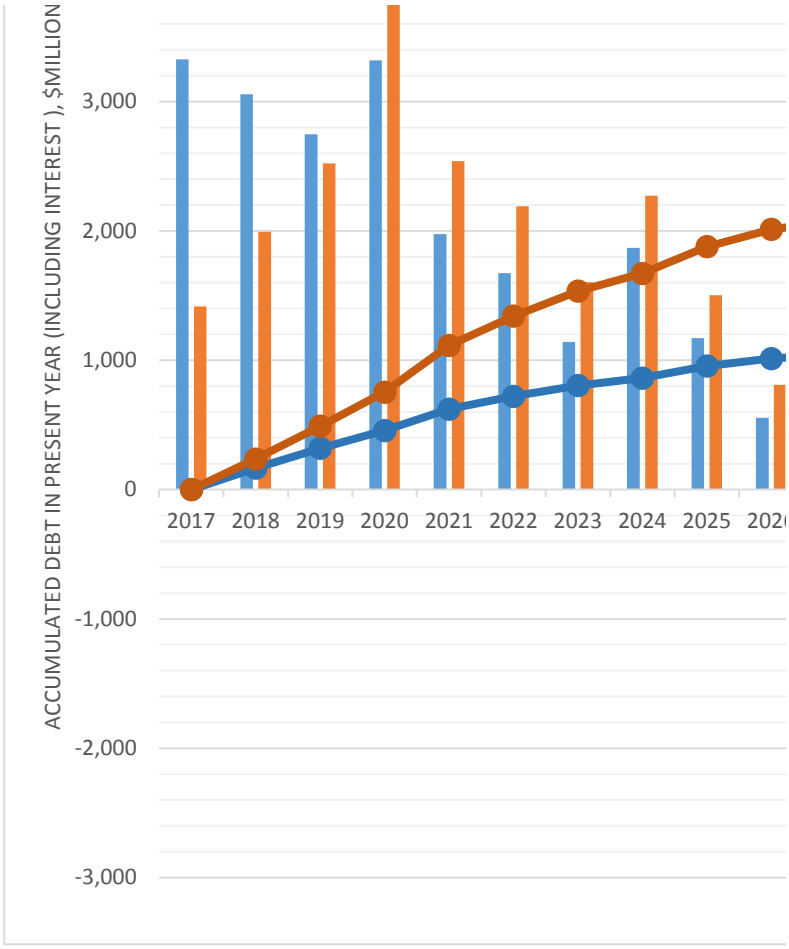
YEAR

| 2048 | 2049 | 2050 |
|---|---|---|
| 0 | 0 | 0 |

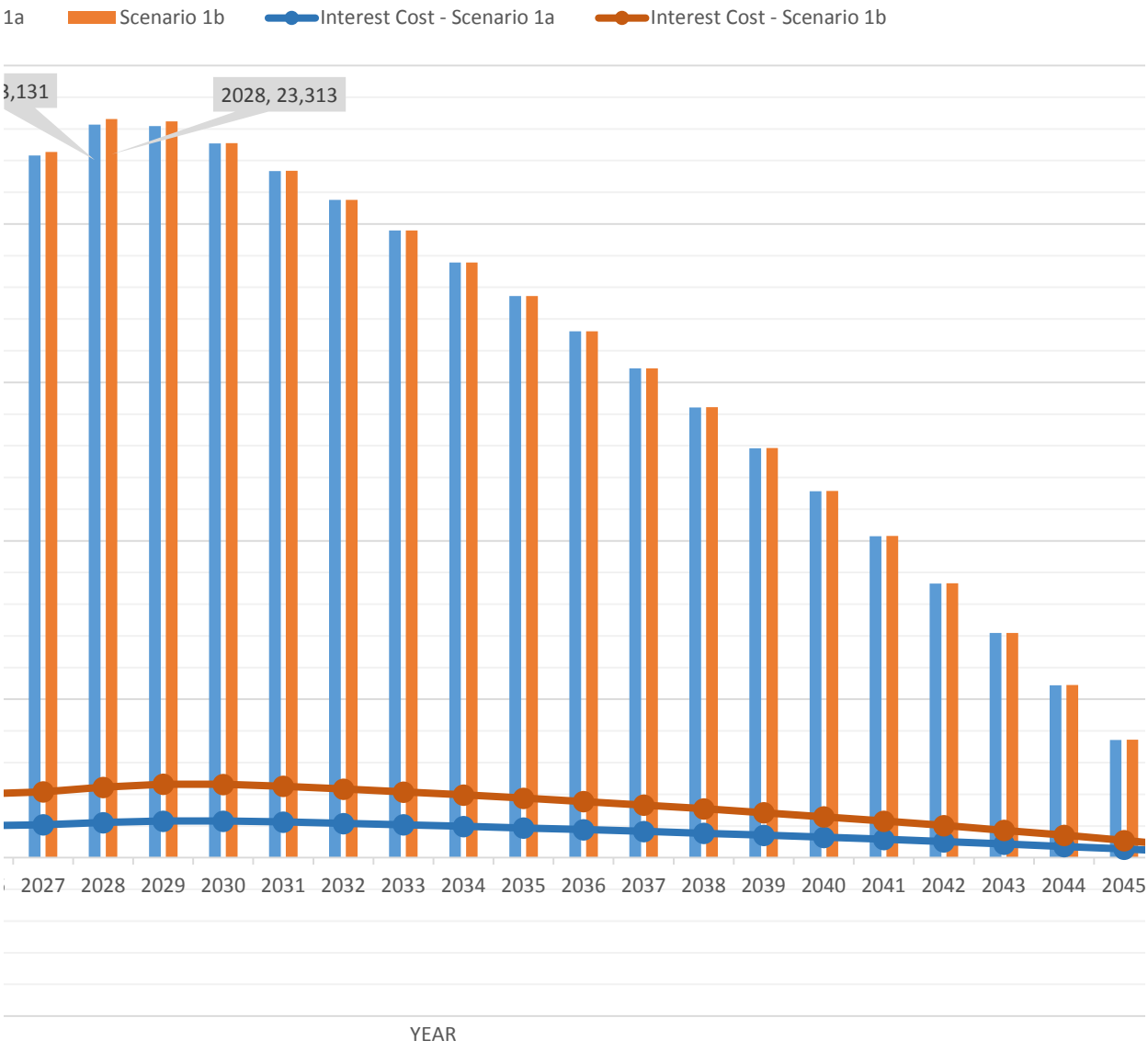


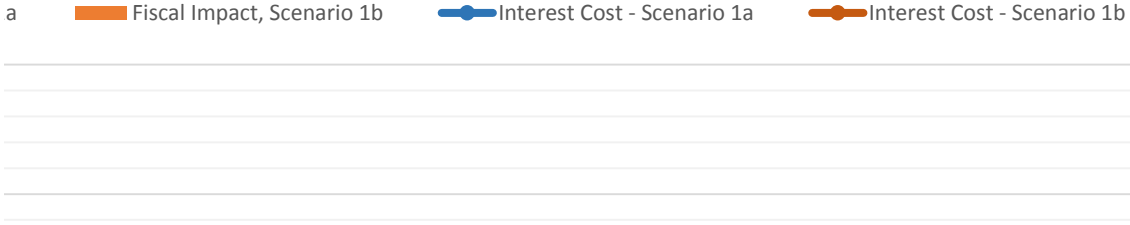
| 2048 | 2049 | 2050 |
|---|---|---|
| 0 | 0 | 0 |

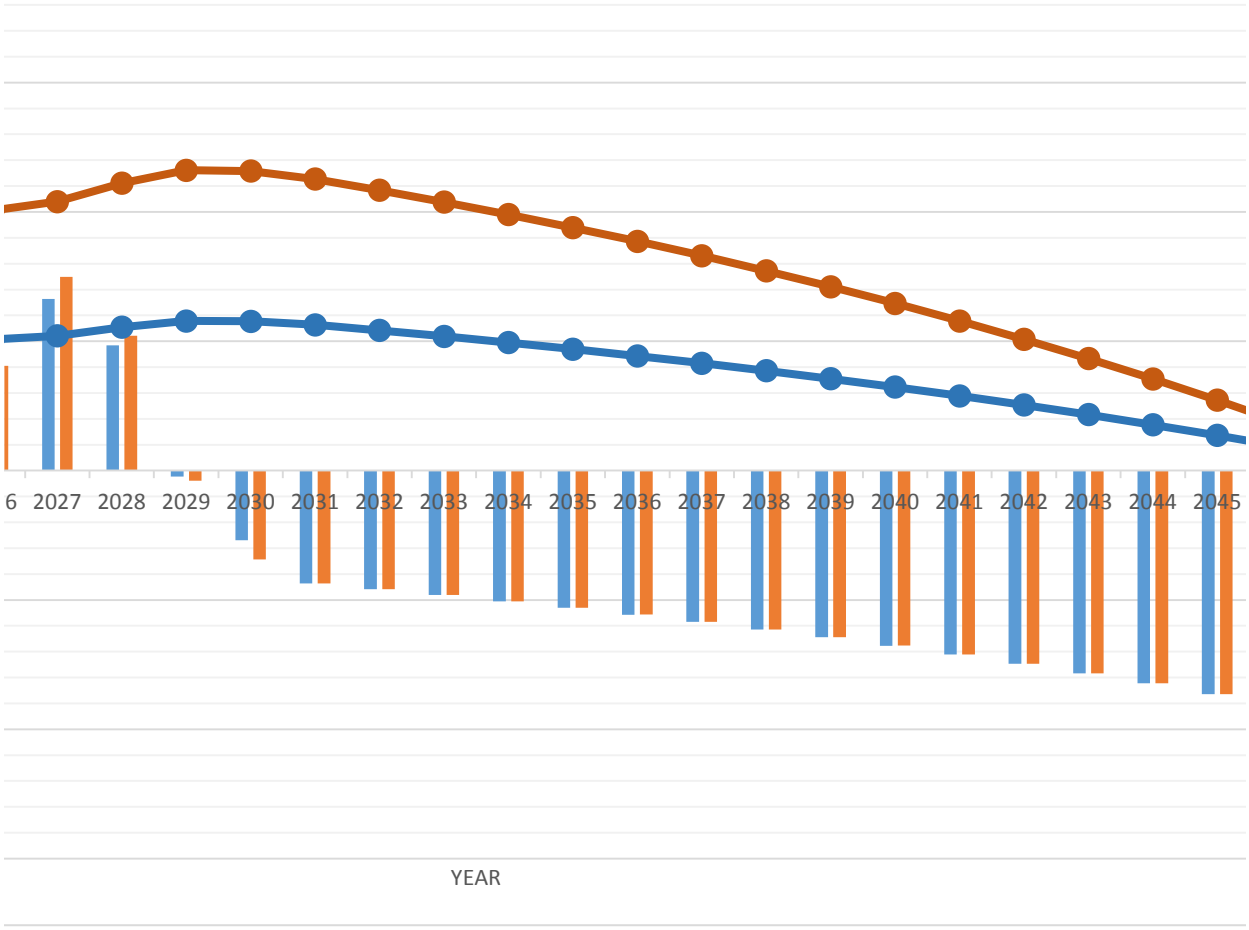


## ed debt in present year, with annual interest costs




## Scenario 1a and 1b - Fiscal Impact




6
2027
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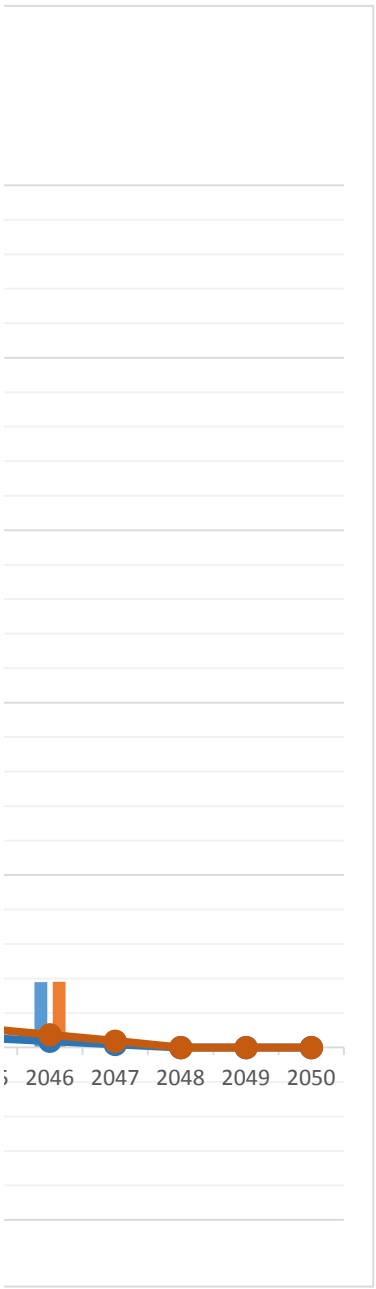
YEAR


2046
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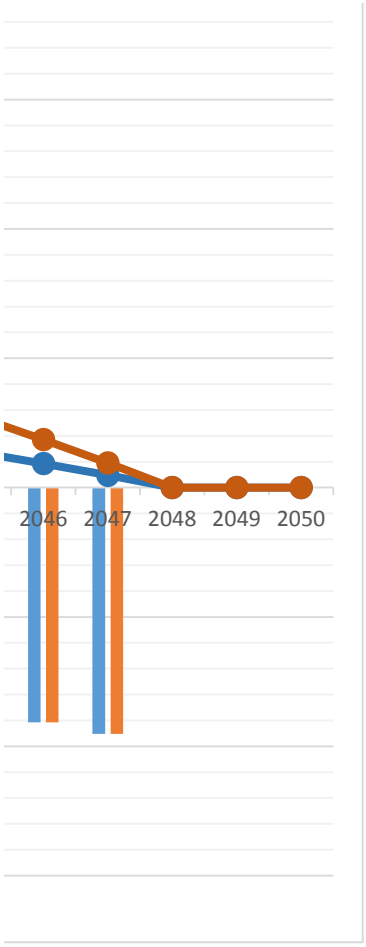
2050


2046
2047
2048
2049
2050

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Adam Prokop; Salman Qadir |
| **Cc:** | Gavin He |
| **Subject:** | FW: IESO and OPCD are having a call at 9am |
| **Date:** | Monday, January 23, 2017 8:50:45 AM |
| **Attachments:** | FW OPA Accounting Treatment for Regulatory Based Assets and Liabilities.msg<br>Electricity Price Mitigation teleconference MOE OFA IESO OPCD.docx.msg |

Could you review the material, especially the second one?

**From:** John Kim
**Sent:** Monday, January 23, 2017 8:48 AM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Subject:** IESO and OPCD are having a call at 9am

Fyi the attached materials.

Nadine called me to pick some information this morning ahead of the call.

I'll review the attachment but wanted to share the materials.

**From:** Petsche, Nadine (TBS) [Nadine.Petsche@ontario.ca]
**To:** John Kim [John.Kim@ofina.on.ca]
**Subject:** FW: OPA Accounting Treatment for Regulatory Based Assets and Liabilities
**Date:** Monday, January 23, 2017 09:37:56
**Attachment 1:** OPA Accounting Treatment for Regulatory Based Assets and Liabilities.docx

---

**Memorandum**

**To: File**
**Date:** March 22, 2012
**Re**: Accounting Treatment for OPA Charges, Other Financial Assets and Other Financial Liabilities

---

1. **Charges – Overview**

"Charges" are amounts incurred by the OPA to recover amounts paid or payable by the OPA to another person with respect to electricity.

The OPA has a legislated responsibility to record the transactions flowing through the global adjustment mechanism. The global adjustment and settlement accounts have been created for this purpose. The global adjustment and settlement accounts record charges that flow between the OPA and the IESO. The account flows include the amounts paid and received for: Demand Response 2 (DR2), Demand Response 3 (DR3), non-utility generation (NUG), regulated nuclear generation balancing amount (nuclear) and regulated hydro electric generation balancing amount (hydro). These accounts are settled simultaneously by the IESO. The account also records the amounts paid and received for OPA contracts (standard offer, generation and conservation/demand management, Feed-In Tariff and hydroelectric contract initiatives) which the OPA settles on a monthly basis with the IESO.

The DR3, NUG, nuclear, hydro, and OPA contract balances are offset in the global adjustment account eliminating the need for a flow of funds between the IESO and the OPA. The OPA records the effect of the transactions to meet its legislated responsibility. The OPA's generation contracts are estimated each month and settled on the actual amount owing in the following month. This gives rise to timing differences. The settlement dates can cross calendar months, creating a monthly balance in the account. Differences created from timing or settlement dates are reclassified into accounts receivable at month end.

The OPA is entitled under legislation to recover eligible charge amounts, as per section 25.2 (3) of the Electricity Act:
*(3) For greater certainty, the OPA may, subject to the regulations, establish and impose charges to recover from consumers its costs and payments under procurement contracts.*

### 1.1 Accounting Treatment for OPA Contract and Conservation Charges

Charges are currently recorded as accounts receivable from the IESO in the OPA's financial statements, as they represent current assets that are recoverable within 1 year. Specifically, charges represent financial assets, as per **PS.S.1000.40** below and are only recorded as receivable once they have been incurred by the OPA. Under legislation, the OPA has a contractual right to receive cash from another party (in this case the IESO via the Global

Adjustment Mechanism) with respect to amounts incurred for eligible charge amounts. This concept is consistent with criteria (c) of the definition below:

*.**40*** *A financial asset is any asset that is:*

*(a) cash;*
*(b) a realizable asset that is convertible to cash;*
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*(e) an equity instrument of another entity;*
*(f) an investment in a government business enterprise or government business partnership;*
*(g) a financial claim on an outside organization or individual; or*
*(h) an inventory or item for sale that meets the criteria in FINANCIAL STATEMENT PRESENTATION, paragraph* **Error! Hyperlink reference not valid.***. [Former paragraph* **Error! Hyperlink reference not valid.** *retained in Archived Pronouncements]*

**Amounts Payable**

Amounts payable arise for OPA contract charges when the value of HOEP exceeds the value of the suppliers' contract price. In this case, the charges would become an OPA liability to the market in the form of charges payable to the IESO (which, in turn, must be returned to the market via the Global Adjustment). Such charges payable to the market meet the criteria for recognition as a liability, as outlined below:

**PS.3200.03**

*Liabilities should be recognized in the financial statements when:*

*(a) there is an appropriate basis of measurement; and*

*(b) a reasonable estimate can be made of the amount involved.* [SEPT. 2004]

---

## 2. Other financial assets and liabilities

Other financial assets and liabilities are made up of retailer settlement amounts, government procurements and regulated price plan variance amounts.

### 2.1 Other Financial Assets - Retailer Settlements and Government Procurements - Overview

Legislative provisions ensure that electricity retailers are made whole by the OPA for contracts with low-volume and designated consumers that were entered into before prices were frozen by legislation effective November 11, 2002. The OPA and retailers settling any differences between the HOEP and the contract price for each contract meet these provisions. When HOEP is greater than the contract price, the OPA receives payments from the retailers and records a financial liability. When HOEP is less than the contract price, the OPA pays the retailer and records a financial asset. The OPA tracks these variances in the retailer contract settlement deferral accounts. The retailer contract discount settlement account captures the funds related to the retailer incentives existing at the creation of the RPP. The retailer incentives captured are

held in a separate deferral account for settlement concurrent with the retailer settlement deferral accounts.

The OPA began amortizing these costs over the period of 2009-2011 to reflect the recovery of these amounts through its annual usage rate approved by the OEB. As at December 31, 2011, the balances of the retailer settlements are nil and have been recovered in full.

The OPA reimburses the government for costs incurred for electricity procurement and records the costs as a financial asset. Any subsequent balances are included in future revenue requirement submissions. The OPA began amortizing the government procurement costs in 2009 on a straight-line basis, and as at December 31, 2011, the balance to recover for these costs is nil.

### 2.2 Accounting Treatment – Retailer Settlements and Government Procurements

Under PSAS, retailer settlements and government procurements are treated as other financial assets in the OPA's financial statements. As they are normally not recovered within one year, they are categorized as non-current assets. As per **PS.S.1000**, retailer settlement and government procurement balances qualify as financial assets as per criteria (c) below:

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> *(i) cash;*
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The OPA is required to carry the balance related to retailer settlement variances between the HOEP and contract price, as per legislation. The OPA is also entitled to recover these balances through legislative provisions, which represent a contractual right to receive cash or another financial asset from another party, as per criteria (c) above. Where retailer settlements fall into a liability balance, they would be categorized as other financial liabilities, as they would meet the criteria for recognition of a liability, as outlined in section 3.1 below.

## 3. Other Financial Liabilities – Regulated Price Plan (RPP) Variance - Overview

While prices for RPP consumers are set every six months by the OEB based upon a forecast of the cost of power over the next year, it is likely that there will be a difference between the actual and forecast cost of supplying electricity to all RPP consumers. When the hourly Ontario

energy price (HOEP) is greater than the RPP, the OPA pays the excess amount and records a financial asset as the electricity market funds paid are receivable from the market. When the HOEP is less than the RPP, the OPA receives the difference and records a financial liability as the funds received will be returned to the market. The OPA tracks this variance in the RPP variance account.

### 3.1 Accounting Treatment – RPP

RPP variance amounts are recorded by the OPA as other financial liabilities in the financial statements, as they meet the liability criteria outlined below:

**PS. S.1000**

***.45*** *Liabilities have three essential characteristics:*

*(a) they embody a duty or responsibility to others, leaving a government little or no discretion to avoid settlement of the obligation;*

*(b) the duty or responsibility to others entails settlement by future transfer or use of assets, provision of goods or services, or other form of economic settlement at a specified or determinable date, on occurrence of a specified event, or on demand; and*

*(c) the transactions or events obligating the government have already occurred.*

Under legislation, the OPA is required to fund RPP variances where the HOEP is less than the RPP, which implies a duty or responsibility that the OPA has little to no discretion to avoid, as per criteria (a). For instances where the HOEP exceeds the RPP rate, the OPA would record a financial asset, as this circumstance would meet the criterion of **PS.S.1000.40** (financial asset), outlined in section 2.2 above.

**External Auditor Approval of Accounting Treatment**

The accounting treatment of OPA charges, retailer settlement, government procurement and RPP balances has been consistent since the OPA's inception and is approved by the OPA's external auditors on an annual basis. Based on governing legislation, the external auditors agree that these balances represent true assets and liabilities to the OPA. The signed auditors' report, along with the OPA's audited annual financial statements, can be found on the OPA website in the MD&A section of the OPA annual report.

**From:** Petsche, Nadine (TBS) [Nadine.Petsche@ontario.ca]
**To:** John Kim [John.Kim@ofina.on.ca]
**Subject:** Electricity Price Mitigation teleconference MOE OFA IESO OPCD.docx
**Date:** Monday, January 23, 2017 09:20:42
**Attachment 1:** Electricity Price Mitigation teleconference MOE OFA IESO OPCD.docx

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Hi John,

In advance of our meeting, just sharing a draft summary I prepared based on what I heard on the call. There are likely many errors as I joined the call late. Can you perhaps suggest edits based on your understanding (in track changes mode). Thanks. N

**Electricity Price Mitigation**
**Teleconference call summary**
**January 20, 2017**
**Participants: IESO (Kim Marshall), KPMG (Michel Picard), Cindy Veinot & N. Petsche (OPCD), Steen Hume (MOE), Ronald Kwan (OEFC/OFA)**

| General: | CFS | IESO | |
|---|---|---|---|
| | Notes | Notes | Actions |
| Variance accounts are not all recognized on the CFS? In order to have an asset recognized on the books, need to have a receivable (amounts billed), unless an asset can be established another way (through legislation)<br><br>Current vs. future IESO role: if move from current settlement related role, and have to negotiate and manage the debt then it will seem more like the OFA. Option to use another party to provide this advice, and not have OFA hold the debt. | - Questionable whether any receivable reflected on the Province's f/s would be sufficiently supportable from the AG's perspective under PSAB.<br>- Consider if might be off-balance sheet financing based if debt acquired through 3rd party vs. OFA.<br>- Want to understand why the debt for the GA is not on the Province's books. (Q from MOE…why would it be assumed that cash flows related to the rate base would be consolidated on the Province's books and intermingled with cash flows related to tax base) | - Issue: 4 M Consumers wouldn't have a liability on their books that would correspond with a recoverable (one to many scenario with no amounts billed)<br>- Strategically difficult to pass along the recoverable to the LDCs as it would impact the d/e ratios; uncertain how many follow IFRS without rate regulated accounting; LDCs also don't have the credit capacity to absorb the debt<br>- Current IESO role: used as a settlement system to support the market (sets | - Considering creating a receivable through legislation (vs. direct contracts or billing)<br>- Need an 'authorized' expenditure in order to be recoverable. Assess on what basis we can create an asset which is recoverable. All extra costs need to be recognized as being recoverable (even interest)<br>- Since need legal authority to recover, presumably you would also need legal authority to defer and collect in the future but need to address the proposed change in role of the IESO<br>- Consider who would hold debt (OFA or third party) . Would be |

| | | | |
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| | | HOEP every 5 mins, matches supply and demand, collects through GA for costs of reliable T,D, generation)<br>- As a successor company to previous Ontario Hydro, the IESO would borrow from the OEFC; OPA is a new construct so would borrow from the OFA if needed.<br>- IESO's original accounting was established as an agent for settlement purposes. Legacy contracts were for cash to suppliers which were recovered through the GA. John and Adrian were involved with est of the OPA and est of the RPP variance acct. Was never a GA var. OPA always reported the RPP act (1 set of books) – entered into 3500+ contracts with generating | higher rates? Would be provincial guarantee? OPA had AA credit rating and contracts entered into and debt borrowed based on that rating (one ranking lower than the province)<br>- James (legal) asked by Steen Hume to help to id what the new legislative responsibilities of the IESO might look like. |

| | | | |
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| | | entities (40B) which NEVER appeared on the Province's books (no rev/exp or debt. These were considered executory contracts, or contractual obligations but NOT liabs of the OPA.<br>- On a monthly basis any GA amounts are settled through the GA; no liability reflected on the IESO's books – currently $10B of recoverable amounts not reflected on the IESO's books (no legal obligation, just an agent for settlement). Seen as a conduit to collect the monies paid to producers, even if does take possession.<br>- Proposal is that the RPP accounts which normally had a term of 6-12 months for recovery would be extended to 25 years | |

| | | | |
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| | | - 2 sets of books (operating/market vs. financial)<br>- Amounts recoverable through GA NOT reflected on IESO's b/s as a flow through – no impact on the p&l<br>- Currently, the only debt that shows on the IESO's books is related to its operations, NOT MARKET DEBT | - IESO/KPMG to provide background supporting accounting for GA recoveries off book |
| ON vs. MB – legislates that all people of the province must be rate payers (cannot opt out of paying rates). ON doesn't have this requirement, but has a strong ratebase now so reasonable recoverability of costs through rates (the GA). Lenders rely upon this reasonable probability of recovery (AA rating) as basis to lend money to IESO to cover the time gap w.r.t. billings for GA. | | - The OEB has oversight and determines rates. If a regulator agreed that costs could be recovered, would meet requirements of rate regulated asset; but PSAB doesn't recognize rate regulated assets/liabs<br>- regulatory assets normally recovered over 5 years, so 25 years would have to be defended and proven as collectible<br>- would need certainty of recoverability to be an | |

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| | | asset (OEB would consider intergenerational equity) in assessing recoverability | |
| Noted that 25 year period for rate mitigation is not the same as a longer term recovery period for capital refurbishment (intergenerational equity considerations)<br>Noted that other jurisdictions might have longer contract periods (wind and solar>20), and that operating period >20 in reality, so future costs likely lower to consumers. AB wind contracts>25 years. Justification for change → contract periods are too short | | | |
| | | | |
| Policy considerations:<br>1) Argument for rate mitigation deferral period (contracts to short; precedents)<br>2) IESO's changing role (James to consider)<br>3) Legislative requirements to allow for deferral (which costs would be authorized as recoverable)<br><br>Accounting considerations<br>4) How to create an asset (accounting vs. legislation) Would legislation create an asset on the IESO's books?<br>5) Off balance sheet financing (3rd party vs. OFA) and related accounting on IESO and CFS | | | |
| | | | |

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|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan |
| **Subject:** | FW: IESO and OPCD are having a call at 9am |
| **Date:** | Monday, January 23, 2017 10:50:19 AM |
| **Attachments:** | FW OPA Accounting Treatment for Regulatory Based Assets and Liabilities.msg<br>Electricity Price Mitigation teleconference MOE OFA IESO OPCD.docx.msg |

Fyi, take a look when you have time.

---

**From:** John Kim
**Sent:** Monday, January 23, 2017 8:51 AM
**To:** Adam Prokop <Adam.Prokop@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: IESO and OPCD are having a call at 9am

Could you review the material, especially the second one?

---

**From:** John Kim
**Sent:** Monday, January 23, 2017 8:48 AM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Subject:** IESO and OPCD are having a call at 9am

Fyi the attached materials.

Nadine called me to pick some information this morning ahead of the call.

I'll review the attachment but wanted to share the materials.

**From:** Petsche, Nadine (TBS) [Nadine.Petsche@ontario.ca]
**To:** John Kim [John.Kim@ofina.on.ca]
**Subject:** FW: OPA Accounting Treatment for Regulatory Based Assets and Liabilities
**Date:** Monday, January 23, 2017 09:37:56
**Attachment 1:** OPA Accounting Treatment for Regulatory Based Assets and Liabilities.docx

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**Memorandum**

**To: File**
**Date:** March 22, 2012
**Re**: Accounting Treatment for OPA Charges, Other Financial Assets and Other Financial Liabilities

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1. **Charges – Overview**

"Charges" are amounts incurred by the OPA to recover amounts paid or payable by the OPA to another person with respect to electricity.

The OPA has a legislated responsibility to record the transactions flowing through the global adjustment mechanism. The global adjustment and settlement accounts have been created for this purpose. The global adjustment and settlement accounts record charges that flow between the OPA and the IESO. The account flows include the amounts paid and received for: Demand Response 2 (DR2), Demand Response 3 (DR3), non-utility generation (NUG), regulated nuclear generation balancing amount (nuclear) and regulated hydro electric generation balancing amount (hydro). These accounts are settled simultaneously by the IESO. The account also records the amounts paid and received for OPA contracts (standard offer, generation and conservation/demand management, Feed-In Tariff and hydroelectric contract initiatives) which the OPA settles on a monthly basis with the IESO.

The DR3, NUG, nuclear, hydro, and OPA contract balances are offset in the global adjustment account eliminating the need for a flow of funds between the IESO and the OPA. The OPA records the effect of the transactions to meet its legislated responsibility. The OPA's generation contracts are estimated each month and settled on the actual amount owing in the following month. This gives rise to timing differences. The settlement dates can cross calendar months, creating a monthly balance in the account. Differences created from timing or settlement dates are reclassified into accounts receivable at month end.

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### 1.1 Accounting Treatment for OPA Contract and Conservation Charges

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**Amounts Payable**

Amounts payable arise for OPA contract charges when the value of HOEP exceeds the value of the suppliers' contract price. In this case, the charges would become an OPA liability to the market in the form of charges payable to the IESO (which, in turn, must be returned to the market via the Global Adjustment). Such charges payable to the market meet the criteria for recognition as a liability, as outlined below:

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## 2. Other financial assets and liabilities

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**PS. S.1000**

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**Subject:** Electricity Price Mitigation teleconference MOE OFA IESO OPCD.docx
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| | | | |
|---|---|---|---|
| | | asset (OEB would consider intergenerational equity) in assessing recoverability | |
| Noted that 25 year period for rate mitigation is not the same as a longer term recovery period for capital refurbishment (intergenerational equity considerations)<br>Noted that other jurisdictions might have longer contract periods (wind and solar>20), and that operating period >20 in reality, so future costs likely lower to consumers. AB wind contracts>25 years. Justification for change → contract periods are too short | | | |
| | | | |
| Policy considerations:<br>1) Argument for rate mitigation deferral period (contracts to short; precedents)<br>2) IESO's changing role (James to consider)<br>3) Legislative requirements to allow for deferral (which costs would be authorized as recoverable)<br><br>Accounting considerations<br>4) How to create an asset (accounting vs. legislation) Would legislation create an asset on the IESO's books?<br>5) Off balance sheet financing (3rd party vs. OFA) and related accounting on IESO and CFS | | | |
| | | | |

**From:** Shajee Kathirgamanathan
**To:** John Kim
**Subject:** FW: Latest Electricity Note for Chair"s briefing
**Date:** Wednesday, September 07, 2016 1:24:43 PM
**Attachments:** RAN Electricity Price Mitigation v6 2016 09 07 - EFBv1.doc

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Hi John,

Just a few minor edits, attached. Also found here: S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\TB Note\RAN Electricity Price Mitigation v6 2016 09 07 - EFBv1.doc

Thanks
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

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**From:** Fung, Felix (TBS) [mailto:Felix.Fung@ontario.ca]
**Sent:** Wednesday, September 07, 2016 12:46 PM
**To:** Jenarra DeSouza (MEDTE/MRI) <Jenarra.DeSouza@ontario.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>; Ann Langleben (MOF) <Ann.Langleben@ontario.ca>
**Cc:** James Strang (MOF) <James.Strang@ontario.ca>; Madeleine Morgenstern (PPAGS) <Madeleine.Morgenstern@ontario.ca>
**Subject:** Latest Electricity Note for Chair's briefing

Hi everyone,

Here's the latest electricity price TB assessment note for Chair's briefing today. We made some changes based on the Minister's comments yesterday but we will continue to make changes as we get more information over the coming days. Can I ask that you please track-change any changes back to us should you have any further comments?

Please note that Chair's briefing for this item is at 2:30 pm - please join us for the briefing.

Thanks,
Felix

Tab 12

**TREASURY BOARD / MANAGEMENT BOARD OF CABINET**
**REQUEST ASSESSMENT NOTE**

| | |
|---|---|
| **Ministry:** | Energy |
| **Meeting Date:** | September 13, 2016 |
| **Agenda Class:** | Major |
| **Last reviewed by:** N/A | **Tracking to:** Cabinet - September 14, 2016 |

**SUBMISSION TITLE:** Electricity Price Mitigation

**FINALIZED ~~NO~~ MATERIALS NOT YET RECEIVED – BASED ON DRAFT POLICY SUBMISSION**

## I. DECISION BEFORE THE BOARD

The Ministry of Energy is requesting approval of a suite of initiatives providing relief to various electricity consumer classes.

## II. RECOMMENDATIONS:

| | |
|---|---|
| • Approve a suite of initiatives to provide relief to various electricity consumer classes (pending Cabinet policy approval):<br>– Providing a pre-tax 8% rebate to Regulated Price Plan consumers;<br>– Expanding the Industrial Conservation Initiative;<br>– Updating the Rural ~~and~~ or Remote Rate Protection program; and,<br>– Using $270M in cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade (A 1% reduction in rates). Balance of proceeds, $60M, intended for electricity relief through the Climate Change Action Plan could provide some fiscal offsets.<br>• Approve in principle an expenditure increase estimated at $261M in 2016-17 for the Electricity Price Mitigation, offset from the Treasury Board Contingency Fund. [estimate subject to refinement from the Ministry]<br>• Direct the Ministry to report back to TB/MBC with implementation details, including confirmation of financial implications, and required TB/MBC approvals to implement.<br>• Recommend to Cabinet that the Ministry proceed to Cabinet with the proposed legislation (TBD).<br>• | *Board Judgment* |

## III. FINANCIAL SUMMARY

| **$ Millions** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|
| Initiative cost requested | 261.0 | 1006.0 | 1004.0 |
| Initiative cost recommended | 261.0 | 1006.0 | 1004.0 |
| Recommended program base | 261.0 | 1006.0 | 1004.0 |

| | | | |
|---|---|---|---|
| Offset Recommended – Applies if cap and trade proceeds diverted to in-plan initiatives | 0.0 | 60.0 (TBD) | 60.0 (TBD) |
| Total Fiscal Impact | 261.0 | 946.0 | 944.0 |

## IV. KEY COMMENTS AND CONSIDERATIONS

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online. Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period. Appendix C provides supporting background information.

As part of the 2016 Budget, the government committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. This included a commitment to provide a modest benefit of up to $2 per month, on average, to residential consumers. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable for residential and industrial consumers.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the CCAP commitment and additional price mitigation, the Ministry of Energy has developed price mitigation options that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

The Ministry is proposing the following to mitigate electricity prices for consumers (Appendix D provides more information on each item below):

- Provide an 8% rebate on the pre-tax cost of electricity to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms), equivalent to the provincial portion of HST
- Expand Industrial Conservation Initiative (ICI) eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial)
- Update the Rural ~~and~~ or Remote Rate Protection (RRRP) program, to provide relief to rural customers
- Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest (1%) reduction in rates

Public high-profile communications would coincide with introduction of legislation (September

2016). Currently, the 8% rebate would be available starting January 1, 2017 (it could be prescribed earlier), along with updating the RRRP. Expanding ICI won't be added to bills until 2018 due to the time required to implement the expansion and for billing changes. Recycling cap and trade proceeds would commence in 2017.

The following tables provide an overview of the four initiatives, recipients, projected financial impact, grouping them based on whether taxpayers or ratepayers cover the costs:

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Taxpayers cover the costs (Potential to impact the Province's Fiscal Plan)** | | | |
| **1.** | 8% Rebate to Regulated Price Plan | Fiscal $1B* | Residential, small business and small farms, and other small users |
| **2a.** | Use cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates. (Implementation details under development). | ($270M) in cap and trade proceeds to offset $270M in costs of reducing rates by 1%.<br><br>No Fiscal Impact | For the 2016 Budget, cap and trade proceeds were projected at $330M/year.<br><br>See item 2b. regarding the residual amount of cap and trade proceeds ($330M - $270M = $60M) |
| **2b.** | The 8% rebate above allows for a portion of cap and trade proceeds to be redirected to other GHG reduction initiatives already in the fiscal plan. | ($60M) | Provides Fiscal Plan flexibility of $60M only if these proceeds are diverted to offset costs of other existing in-plan initiatives that reduce GHG emissions. |
| | **Total Fiscal Impact** | $946M | Matches Financial Summary on page 1 for 2017-18 |

* Annual numbers from ENERGY.

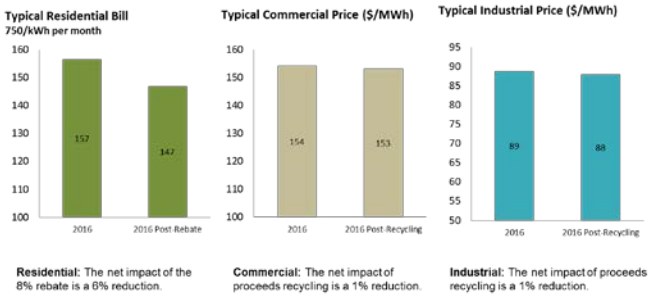
| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Ratepayers cover the costs (No impact to the Province's Fiscal Plan)** | | | |
| **3** | Expanding ICI eligibility to customers above 1MW in all sectors | Rate base ($47M/$82M)** | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors |
| **4.** | Updating Rural ~~and~~ or Remote Rate Protection | Rate base ($110M) | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. |

** Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.

Due to the nature of the ICI Global Adjustment mechanism and cost recovery of RRRP, the rate base proposals (#3 and #4) above benefit the targeted recipients, but come at a cost to all

other electricity rate payers in Ontario.

The graphic from the Ministry on the following page highlights the bill impacts by electricity consumer class.




The residential net impact of the 8% rebate is a 6% reduction due to the costs of RRRP and ICI expansion being factored in after the 8% pre-tax rebate is calculated and applied. The original HST amount is then added in. The net benefit for residential is the 8% rebate less the cost of RRRP and ICI expansion.

Fiscal Impact

~~The most recent Electricity Price Mitigation Options deck notes that~~ "ENERGY estimates that proceeding with an 8% Regulated Price Plan (RPP) rebate without a cap would cost an estimated $1 billion per year".

**Commented [SK21]:** Suggest deleting. We've received decks after this.

The $1 billion figure is a 2017 to 2020 calendar year average of cost estimates developed by Ministry of Energy staff, as follows:

| *$ millions* | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|
| | 1,003 | 1,014 | 975 | 1,049 |
| Avg. 2017-20 | 1,010 | | | |

- On a fiscal year basis, the above estimates become:

| *$ millions* | **2016-17** | **2017-18** | **2018-19** | **2019-20** |
|---|---|---|---|---|
| | 261 | 1,006 | 1,004 | 994 |
| 3-Year Avg. | 1,001 | | | |

The Ministry also indicates the current proposal would provide recycling of cap and trade proceeds to commercial and industrial consumers on a volumetric basis. This would require an estimated $60 million less per year in proceeds than previously estimated (i.e., providing fiscal plan flexibility of about $60M per year to commit to other GHG reduction initiatives in the fiscal plan).

There are no details as this point if the $261M in 2016-17 would be offset from the Treasury Board Contingency Fund or provided through supplementary estimates.

Cap and Trade Proceeds

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers (on average). While residential and other consumers would benefit from the 8% pre-tax rebate, this does not apply to non-Regulated Price Plan consumers (larger industrial, commercial, and other consumers). As such, the Ministry is proposing to direct a portion of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to go beyond mitigating cap and trade impacts and provide a 1% bill impact (shown in the graphic at top of page 4).

To be characterized as a regulatory charge under the cap and trade program, auction proceeds need to be spent on programs that are reasonably likely to reduce or support the reduction of greenhouse gases. It is unclear from current materials whether this proposal meets this requirement.

Considerations – Implementation

At this point, the Ministry has presented a high level overview of major implementation pieces:

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010. If passed, the legislation would require a general regulation. Amendments would also be required to various regulations to expand ICI and RRRP.
- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. The Ministry indicates it will consult with LDCs (possibly through Ontario Energy Board) to accurately assess these impacts once the program has been announced. In the past, LDCs have asked for at least six months' notice when implementing billing system changes. Timing concerns may be alleviated by allowing LDCs to provide retroactive payments rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- Detailed messaging on bills could be implemented (A bill mock-up is pending from the Ministry). The rebate would not be directly linked to HST. With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.
- The Ministry will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

Legal Considerations

8% Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):

- Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):

- To establish that the charge is legitimate, it must be established that the purpose and

effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural ~~and~~ or remote customers):

- Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):

- To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

Other Considerations

- This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets.
- The 8% rebate would provide a typical residential consumer about an $11 per month benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average cap and trade commitment. Also, the budget committed to offsetting the impact of cap and trade on industrial and commercial consumers, a 1% reduction is being proposed using cap and trade proceeds, which could be recycled elsewhere on GHG reduction initiatives.
- Reduction in electricity prices that does not consider consumption amounts (e.g., without the cap in the previous OCEB program) does not promote electricity conservation and may be seen as unaligned with climate change objectives.
- There is potentially a need for supplementary estimates as the existing vote (2905) Electricity Price Mitigation does not include a separate item for the 8% rebate (2905 was used for the Ontario Clean Energy Benefit and currently includes the Northern Ontario Energy Credit).
- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
  - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
  - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
  - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

| | | | |
|---|---|---|---|
| **Name of analyst:** | James Strang<br>With input from TPD and OFA | **Phone number:** | 416-327-2071 |

| | | | |
|---|---|---|---|
| **Date:** | September 6, 2016 | **Log number:** | |
| **Branch / Division:** | GGPR/ PEMD/ Treasury Board Secretariat<br>Tax Policy Division/ Ministry of Finance<br>Ontario Financing Authority/ Ministry of Finance | | |

## APPENDIX A: PROPOSED MINUTE
## UNDER DEVELOPMENT

## APPENDIX B: FINANCIAL TABLES

| FINANCIAL IMPACTS: CHANGES TO EXPENSE AND REVENUE | | | | | TABLE B1 |
|---|---|---|---|---|---|
| | | *Fiscal Plan Basis* | | | *Appropriations Basis* |
| **$ Millions** | | **2016-17** | **2017-18** | **2018-19** | **2016-17** |
| Initiative cost recommended | | 0.0000 | 0.0000 | 0.0000 | |
| *Expense changes:* | | | | | |
| Operating item | Oper | 261.0000 | 1006.0000 | 1004.0000 | 261.0 |
| Operating Offset | Oper | 0.0000 | 0.0000 | 0.0000 | 00000 |
| | | | | | |
| | | | | | |
| *Revenue changes:* | | | | | |
| Revenue Increase/ Offset | | 0.0000 | 60.0000 | 60.0000 | |
| Revenue decrease | | 0.0000 | 0.0000 | 0.0000 | |
| **Total Fiscal Impact (draw from c-funds)** | | **261.0000** | **946.0000** | **944.0000** | **261.0000** |

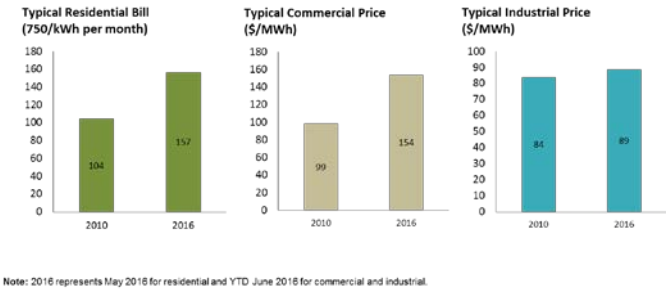
## APPENDIX C: ELECTRICITY SECTOR BACKGROUND

The Ministry has provided the following information to provide electricity sector context this item.

There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period.




Note: 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

Existing Rate Mitigation efforts are on-going:

- Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs.
  - For example, Northern Ontario residential electricity consumers receive tax credits in recognition of higher electricity costs in the north and rural consumers receive a subsidy funded through the rate-base due to the higher cost of delivering power to rural areas.
  - As of 2016, the government removed the Debt Retirement Charge (DRC) from residential electricity bills. While this saves a typical residential electricity ratepayer about $60 per year, it is less than the benefit previously provided through the Ontario Clean Energy Benefit (OCEB).
  - OCEB provided a tax-base rebate of 10% rebate on the total cost of electricity charges related to electricity consumption on eligible bills between 2011 and 2015.
- Because electricity costs must be fully recovered from electricity consumers, rate mitigation funded through the rate-base often represents a shifting of costs from one consumer group to another (i.e., industrial to residential and commercial consumers).

- Rate-based initiatives are generally associated with incenting changes in behaviour that provide electricity system benefits (i.e., shifting electricity consumption from on-peak to off-peak periods).

- The following slides provide an overview of the programs currently available to different electricity consumer classes along with the cost shift associated with several of the programs:

| Program | Consumer Type | Rate/Tax -based | Description |
|---|---|---|---|
| Northern Ontario Energy Credit | **Residential** | Tax | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year. |
| Ontario Energy and Property Tax Credit | | Tax | Also delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families. |
| Ontario Electricity Support Program | | Rate | Provides ongoing assistance directly on the bills of eligible low-income electricity consumers. |
| Rural or Remote Rate Protection | | Rate | Provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas. |
| saveONenergy Conservation Programs (including Home Assistance Program for low income customers) | | Rate | Delivered by LDCs which provide financial incentives for electricity-saving measures like LEDs, ENERGYSTAR certified ceiling fans, baseboard programmable thermostats, clotheslines, and advanced powerbars. |
| saveONenergy Conservation Programs (including Retrofit Program for Buildings and other programs) | **Commercial** | Rate | saveONenergy suite of electricity conservation programs for commercial customers offered by local distribution companies (LDCs) help businesses save energy to better manage their electricity consumption and reduce their annual electricity costs. See Appendix for more information. |
| Industrial Conservation Initiative | **Industrial** | Rate | Encourages Ontario's largest consumers to reduce consumption during peak periods to save on average 25% on their electricity bills. |
| Industrial Accelerator Program | | Rate | Provides financial incentives of up to $10 million to transmission-connected electricity consumers, to invest in energy-efficiency or self-generation which would reduce the amount of electricity withdrawn from the provincial grid. |
| Industrial Electricity Incentive | | Rate | Provides reduced electricity rates for companies starting or expanding operations in Ontario. |
| Northern Industrial Electricity Rate Program | | Tax | Provides $20 megawatt per hour (MWh) rebate for qualifying large northern industrial consumers. |
| Demand Response | | Rate | Provides payments to businesses and industry to shift consumption at times when the electricity system is stressed. DR currently provides ~500 MW of capacity to the system. |

Ontario has implemented several programs that have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial). The table below shows the estimated cost shifts in the province's electricity system that result from three existing government programs (i.e., ICI, RRRP and OESP):

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

A number of actions have and are being taken to reduce overall electricity system costs. Despite these actions to reduce system costs, electricity rates continue to increase for consumers:

- Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
- Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
- Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.

- Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
- Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

## APPENDIX D: FURTHER INFORMATION SUPPORTING PROPOSED INITIATIVES

he following information has been provided by the Ministry.

1. **Provide an 8% rebate to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms), equivalent to the provincial portion of HST**

   The Ministry is proposing to introduce legislation/regulation to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit. This would be equivalent to the provincial portion of the HST.

   - Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).
   - An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

| **Eligible for the 8% rebate** (< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate** (> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>– Coffee / snack retailer<br>– Convenience store<br>– Apparel store<br>– Hair salon<br>– Small insurance office | • Class A consumers<br>– Manufacturer<br>– Large grocery store<br>– Mines<br>– Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>– Commercial offices (low rise)<br>– Hotel<br>– General warehousing |

2. **Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial)**

   Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers). Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

   ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:

   - Reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods;
   - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
   - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

| | **Benefit to New ICI Participants** | **System Benefit** | **Financial Impact** | **Residential Bill Impact** |
|---|---|---|---|---|
| | **Bill Savings** | **Peak Demand Reduction (MW)** | **GA shifted to Class B ($M)** | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility. The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating. Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.

### 3. Update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers

The Ministry is proposing to provide an additional $110M in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

RRRP is a rate-based funded subsidy program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.

- Today, RRRP is a $175M program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
- The majority of the program funding ($125.5M) provides a subsidy to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a monthly subsidy for R2 customers of $31.50.
- RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

An additional $110Mn in program funding would see an increased subsidy of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.

- This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
- The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the subsidy remains constant.

### 4. Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.

- To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).
- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $240M over the first four year compliance period).

The following table identifies the illustrative impacts.

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Impact | | Class B (Commercial) Impact | Class A (Industrial) Impact | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural** (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion | $270 million annually | -$10/ month<br>(-6%) | -$45/ month<br>(-20%) | -$1/MWh<br>(-1%) | -$1/ MWh<br>(-1%) | Up to -$52/MWh<br>(-34%) |

***Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

****Note**: Rural customers refers to customers of Hydro One eligible to receive RRRP (R2 rate class customers)

## APPENDIX E: PROPOSED POLICY MINUTE

CABINET AGREED THAT:

1. THE MINISTRY OF ENERGY (ENERGY), WITH SUPPORT FROM THE MINISTRY OF FINANCE (MOF), SHALL PREPARE LEGISLATION THAT WOULD PROVIDE AN EIGHT PERCENT (8%) REBATE ON THE PRE-TAX COST OF ELECTRICITY FOR THE FOLLOWING CLASSES OF CONSUMERS:
   A. ALL CONSUMERS ELIGIBLE TO BE BILLED UNDER THE ONTARIO ENERGY BOARD'S REGULATED PRICE PLAN; AND
   B. ANY OTHER CONSUMERS WHO WERE ELIGIBLE FOR FINANCIAL ASSISTANCE UNDER THE *ONTARIO CLEAN ENERGY BENEFIT ACT, 2010* (OCEBA) DURING THE PERIOD THAT PROGRAM WAS IN PLACE.

2. THE LEGISLATION SHALL BE GENERALLY MODELLED UPON THE OCEBA, AND WOULD INCLUDE THE FOLLOWING ELEMENTS:
   A. THE REBATE WOULD BE AVAILABLE STARTING JANUARY 1, 2017 AND BEFORE SUCH DATE AS MAY BE PRESCRIBED;
   B. THE REBATE WOULD NOT BE SUBJECT TO A CAP UNLESS A CAP IS PRESCRIBED;
   C. THE LEGISLATION WOULD SPECIFY THE TYPES OF COSTS TO WHICH THE REBATE WOULD OR WOULD NOT BE APPLIED, WITH AUTHORITY TO MAKE CHANGES BY REGULATION;
   D. THE LEGISLATION WOULD ADDRESS INVOICING REQUIREMENTS, INCLUDING AUTHORITY TO PRESCRIBE HOW THE REBATE IS TO APPEAR ON CONSUMER ELECTRICITY BILLS;
   E. THE LEGISLATION WOULD INCLUDE AUTHORITY TO PRESCRIBE THE WAY IN WHICH THE REBATE IS TO BE FLOWED THROUGH TO CONSUMERS, AND THE WAY IN WHICH ELECTRICITY VENDORS PROVIDING THE REBATE ARE TO BE REIMBURSED;
   F. THE LEGISLATION WOULD INCLUDE RECORD-KEEPING REQUIREMENTS FOR ELECTRICITY VENDORS AND ANY OTHER PRESCRIBED PERSONS; AND
   G. THE LEGISLATION WOULD INCLUDE INSPECTION POWERS FOR INSPECTORS APPOINTED BY THE MINISTER OF FINANCE, INCLUDING POWERS RELATED TO RECOVERY OF OVERPAYMENTS.
3. ENERGY AMEND O. REG. 429/04 (ADJUSTMENTS UNDER SECTION 25.33 OF THE ACT) MADE UNDER THE ELECTRICITY ACT, 1998 TO EXPAND ELIGIBILITY FOR CLASS A CONSUMERS AND CLASS A MARKET PARTICIPANTS UNDER THE INDUSTRIAL CONSERVATION INITIATIVE (ICI) TO ALL ELECTRICITY CONSUMERS AND MARKET PARTICIPANTS WITH A PEAK DEMAND ABOVE AN AVERAGE OF ONE MEGAWATT (1MW) WITH NO SECTORAL RESTRICTIONS ON PARTICIPATION.
4. ENERGY AMEND O. REG 442/01 (RURAL OR REMOTE ELECTRICITY RATE PROTECTION) MADE UNDER THE ONTARIO ENERGY BOARD ACT, 1998 TO INCREASE THE TOTAL AMOUNT OF RATE PROTECTION AVAILABLE TO LOW DENSITY HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE RATE PROTECTION PROGRAM BY $110 MILLION, EFFECTIVE JANUARY 1, 2017.
5. ENERGY CONSIDER AND, IF APPROPRIATE, UTILIZE A MECHANISM TO PERIODICALLY ADJUST THE TOTAL ANNUAL AMOUNT OF RATE PROTECTION AVAILABLE TO HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE ELECTRICITY RATE PROTECTION REGULATION / PROGRAM, EFFECTIVE JANUARY 1, 2018.
6. ENERGY TO RECYCLE UP TO AN AVERAGE OF $270 MILLION OF CAP AND TRADE AUCTION PROCEEDS FROM THE GREENHOUSE GAS REDUCTION ACCOUNT PER YEAR OVER THE FIRST COMPLIANCE PERIOD (2017-2020) TO COMMERCIAL AND INDUSTRIAL ELECTRICITY CONSUMERS.
7. ENERGY AND MOF TO WORK WITH CABINET OFFICE (CO) AND PREMIER'S OFFICE (PO) ON COMMUNICATIONS PLAN.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan |
| **Subject:** | FW: Major Projects this week |
| **Date:** | Friday, September 09, 2016 5:05:56 PM |
| **Attachments:** | Cabinet Submission - Electricity Price Mitigation - CLEAN TPD comment.pptx |

---

**From:** Tomasz Bugajski
**Sent:** Friday, September 09, 2016 4:15 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** FW: Major Projects this week

FYI

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

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**From:** DeSouza, Jenarra (MOF) [mailto:Jenarra.DeSouza@ontario.ca]
**Sent:** Friday, September 09, 2016 4:00 PM
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>; Ghufran Tarin (MOF) <Ghufran.Tarin@ontario.ca>; Shannon Lewis (MOF) <Shannon.Lewis@ontario.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>; Brian Lewis (MOL) <Brian.Lewis@ontario.ca>; Michael Waterston (MOF) <Michael.Waterston@ontario.ca>; Sriram Subrahmanyan (MOF) <Sriram.Subrahmanyan@ontario.ca>
**Subject:** FW: Major Projects this week

Attached are TPD comments for the Electricity CabSub

Could you pls review and let me know if your areas have any comments
TPD can coordinate and send back for MOF

Cheers
Bernice

- for Jenarra DeSouza

---

**From:** Lawson, Lynn (MOF)
**Sent:** September 9, 2016 3:23 PM
**To:** Subrahmanyan, Sriram (MOF); DeSouza, Jenarra (MOF)

**Cc:** Waterston, Michael (MOF); Langleben, Ann (MOF); Patel, Lesley (MOF); Lone, Dianne (MOF); Kennedy, Marta (MOF); Lam, Linda (MOF); Boxen, Simone (MOF); Diomin, Svetlana (MOF); Lewis, Shannon (MOF)
**Subject:** RE: Major Projects this week

The Cab Sub would benefit from some edits. We have comments on slides 10, 13, 14, 24, 26, 29 and Appendix slide 34. Please see attached

The wording of the Cabinet Minute in this Cab Sub is preferred over the stand-alone wording in the excerpt they provided.

---

**From:** Subrahmanyan, Sriram (MOF)
**Sent:** September 8, 2016 10:59 PM
**To:** Waterston, Michael (MOF); Lone, Dianne (MOF); Patel, Lesley (MOF); Langleben, Ann (MOF); Lawson, Lynn (MOF)
**Cc:** DeSouza, Jenarra (MOF)
**Subject:** Fw: Major Projects this week

Sent from my BlackBerry 10 smartphone on the Rogers network.

---

**From:** Young, Gwendolynne (MOF) <Gwendolynne.Young@ontario.ca>
**Sent:** Thursday, September 8, 2016 10:07 PM
**To:** Subrahmanyan, Sriram (MOF); DeSouza, Jenarra (MOF); Baig, Saad (MOF); Nguyen, Marianne (MOF); Schuurman, Tim (MOF); Kwan, Ronald (OFA); Pearce, Christopher (MOF); Birks, Ryan (MOF)
**Cc:** McLean, David (MOF)
**Subject:** Fw: Major Projects this week

Hi All - attached are updated materials from ENERGY.

Sent from my BlackBerry 10 smartphone on the Rogers network.

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**From:** McLean, David (MOF) <David.McLean@ontario.ca>
**Sent:** Thursday, September 8, 2016 8:32 PM
**To:** Young, Gwendolynne (MOF)
**Subject:** FW: Major Projects this week

FYI

---

**From:** Katona, Keley (ENERGY)
**Sent:** September 8, 2016 8:32 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB); Moore, Karen (CAB)
**Subject:** RE: Major Projects this week

Hi,
Attached is the latest iteration of the Cabinet submission, including an updated minute. This is with our MO for review but wanted to keep you updated so you can continue to revise your TB / CAB notes. Note that some of the numbers have changed to remain consistent with methodology throughout the submission.
Keley

**From:** Katona, Keley (ENERGY)
**Sent:** September-08-16 12:22 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

For your records, attached is what was circulated at Major Projects today.

---

**From:** Katona, Keley (ENERGY)
**Sent:** September-07-16 3:38 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

We're making edits based on comments from our MO. Could be this evening or tomorrow morning.

---

**From:** Kwamena, Boafoa (CAB)
**Sent:** September-07-16 3:33 PM
**To:** Katona, Keley (ENERGY); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

Hi

Will be likely receive material  later today or tomorrow?

Thanks

---

**From:** Katona, Keley (ENERGY)
**Sent:** September-07-16 10:12 AM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** Re: Major Projects this week

Sorry, disregard, we'll make it work on our end. Thanks.

---

**From:** Katona, Keley (ENERGY)
**Sent:** Wednesday, September 7, 2016 10:06 AM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

Hi Boafoa,

Wondering if it's possible for the electricity item to be last on the agenda tomorrow. We have a Minister's briefing which conflicts with Major Projects, involving the same staff and it would be very helpful if we could be on at 11am.

Thanks,

Keley

---

**From:** Kwamena, Boafoa (CAB)
**Sent:** September-06-16 5:29 PM
**To:** Katona, Keley (ENERGY); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** Major Projects this week

Hi Keley/David

We will be adding the Electricity Pricing Mitigation item to Major Projects this Thursday. This will be an opportunity to ensure everyone is on the same page in advance of the TB trip next week. Major Projects is scheduled from 10:30 to 11:30 on Thursday. This item will be the first–10:30 to 11:00. Please let me know if this time doesn't work or if there are any concerns.

Thanks
Boafoa

Boafoa Kwamena
Special Advisor
Office of the Secretary of the Cabinet
Cabinet Office
416-325-4400
Boafoa.kwamena2@ontario.ca

# Electricity Price Mitigation

## Ministry of Energy

## WORKING DRAFT

## Date: September 12, 2016

Minister

Deputy Minister

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

- Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables.
  - This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%.

- Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online.

- The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers.

# Electricity Consumer Classes

- There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

**** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

# Current Rate Base Mitigation Programs

- Ontario has implemented several programs to help electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers;
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs; and
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- These programs have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial) as shown in the table below:

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

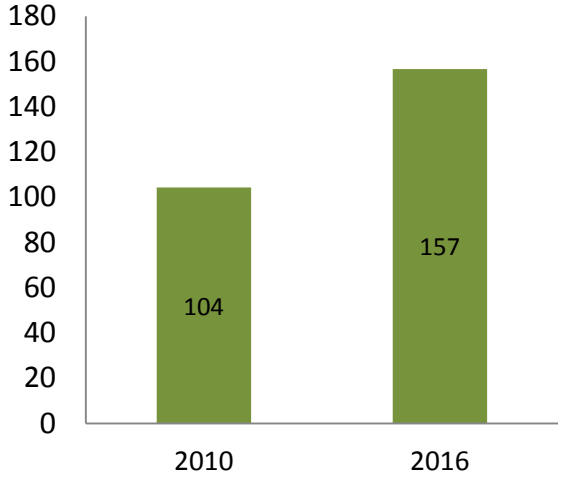
**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

# Prices by Electricity Consumer Class

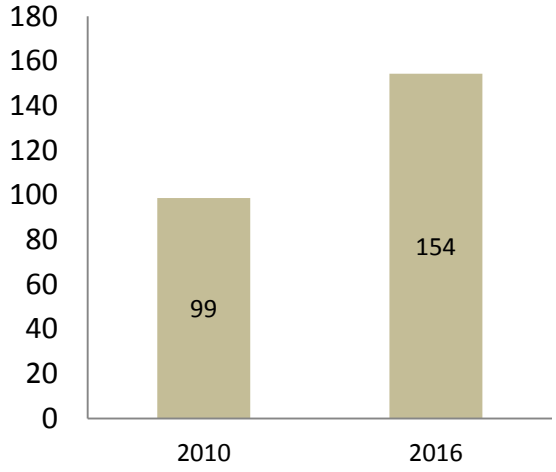
- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.

- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers.

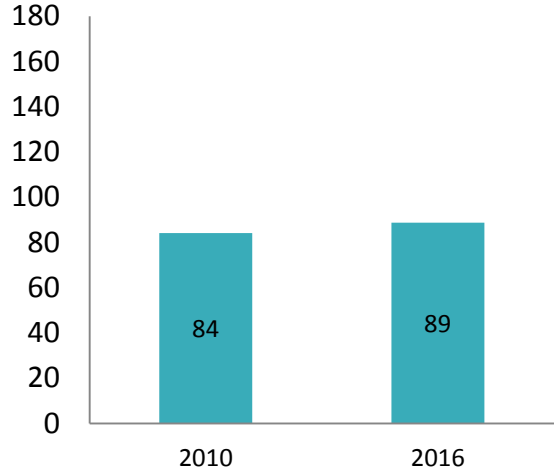
**Typical Residential Bill (750/kWh per month)**




**Typical Class B (Commercial) Price ($/MWh)**




**Typical Class A (Industrial) Price ($/MWh)**



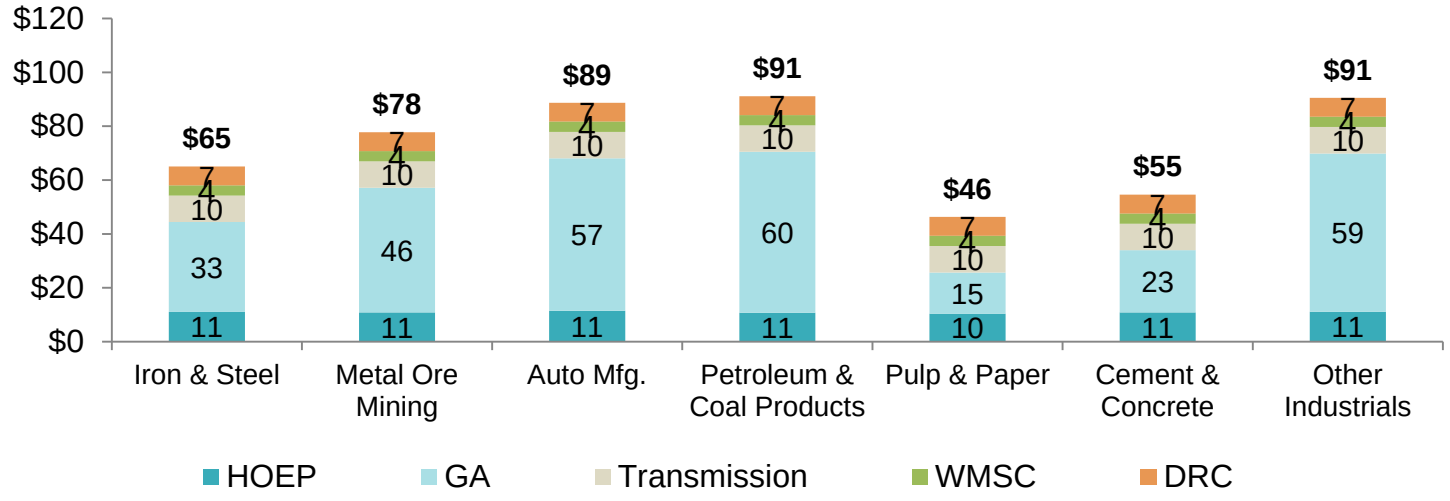

**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

# Industrial Electricity Prices Vary by Sector

- While Class A (industrial consumers) benefit from participation in the ICI program, there is a significant amount of variability in the ability to shift away from peak periods across customer classes, impacting the savings achieved.

- The below chart shows the prices paid in 2015 across a number of industrial sectors. Consumers in the north that receive rebates under the Northern Industrial Electricity Rate Program (NIERP) achieve rates that are $20/MWh lower than the below.

**Average all-in Class A, Transmission-connected Electricity Prices by Industrial Sector (estimated $/MWh), Year-to-Date June 2016**




**Note:** HOEP = Hourly Ontario Energy Price, GA = Global Adjustment, WMSC = Wholesale Market Service Charges, DRC = Debt Retirement Charge

# Recent Actions to Bend the Cost Curve

- Since 2013, a number of actions have been taken to reduce overall electricity system costs:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

# Rate Mitigation

- The 2016 Budget committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) committed $1.3 billion from the Greenhouse Gas Reduction Account (GGRA) over the first compliance period (2017-2020).

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:

  - **Tax-based Lever:**
    - Provide an on-bill rebate funded from the tax-base to all consumers or specific classes of consumers (i.e., the Ontario Clean Energy Benefit (OCEB) provided a rebate for eligible electricity consumers).

  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.

  - **Cap and Trade Proceeds Lever:**
    - Redirect cap and trade proceeds to offset the cost of existing initiatives that help reduce greenhouse gas (GHG) emissions (i.e., the CCAP committed to offset the impact of cap and trade and to keep electricity rates affordable).

# Rate Mitigation Proposal

- The Ministry of Energy is proposing to implement the following electricity price mitigation initiatives. The approach identified below would provide relief across all electricity consumer classes:

  1) Provide an 8% rebate equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms) and update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers; and

  2) Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial) and redirect cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

- The following slides provide additional information on the above initiatives.

***Note:** Eligibility for the 8% rebate would be similar to OCEB and include some customers not on the Regulated Price Plan (RPP), such as Independent Power Authority consumers and consumers that have opted-out of RPP.

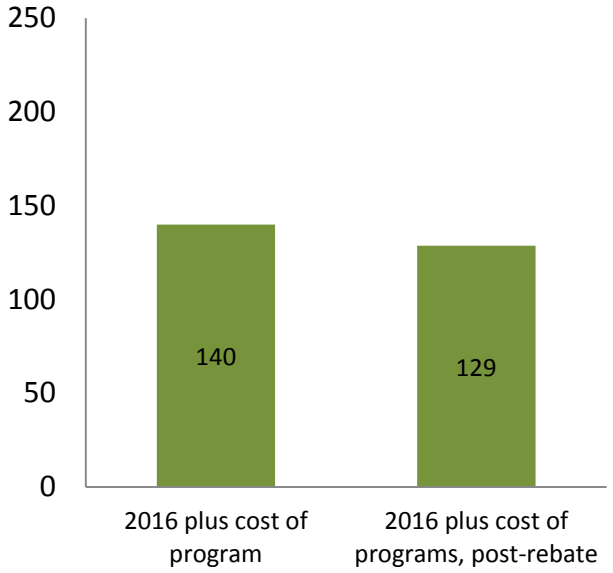
# Rate Mitigation Proposal – Illustrative Benefits*

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Benefit | | Class B (Commercial) Benefit | Class A (Industrial) Benefit | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural*** (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br><br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br><br>(-8%) | -$45/ month<br><br>(-20%) | -$3/MWh<br><br>(-2%) | -$3/ MWh<br><br>(-3%) | Up to -$52/MWh<br><br>(-34%) |

- **Notes:** The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh. The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. Proceeds recycling is an estimated average over the first compliance period (2017-2020).

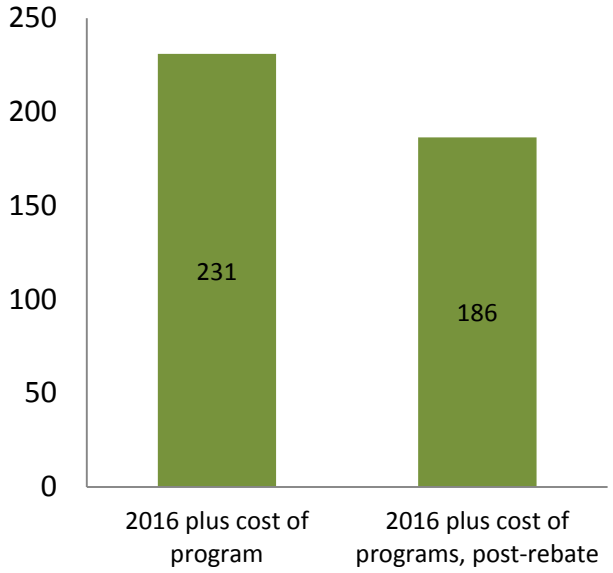
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class

**Typical Residential Bill**
**750 kWh per month, 8% only**




The pre-tax impact is a 8% reduction.

**Rural (R2) Residential Bill**
**1,000 kWh per month, 8% and RRRP Update**

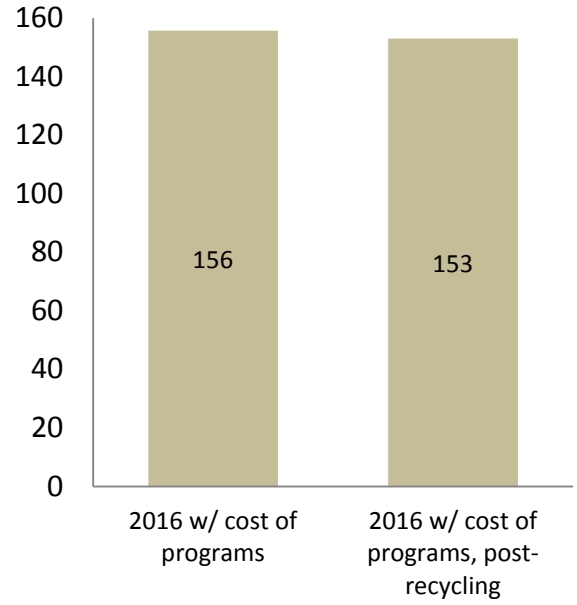



The pre-tax impact of the rate mitigation initiatives is a 20% reduction.

**Note:** Residential bills reflect electricity rates as per the Regulated Rate Plan (RRP) which came into effect on May 1, 2016.

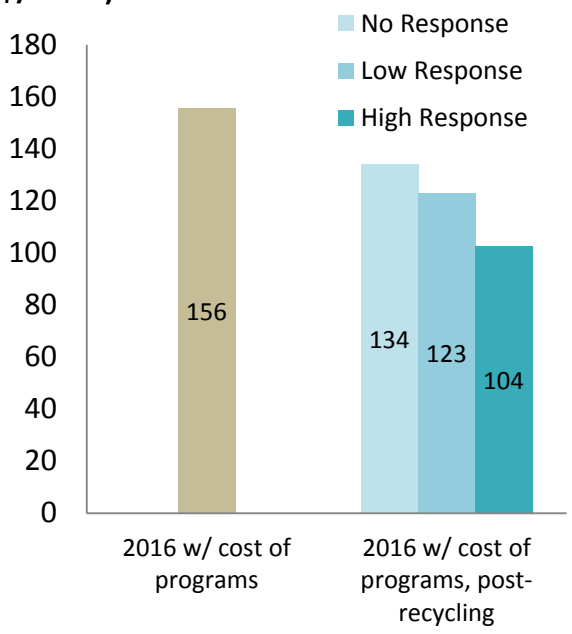
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class (cont'd)

**Typical Class B (Commercial) Price ($/MWh)**



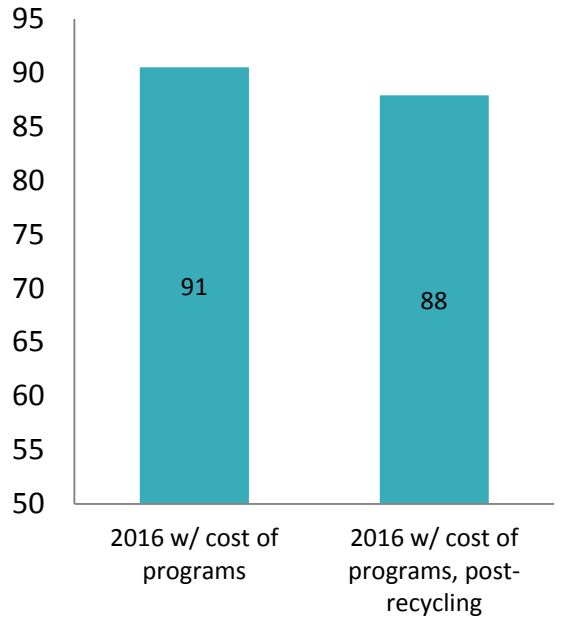

**Class B:** The benefit is a 2% reduction.

**Typical New Class A Price ($/MWh)**




**New Class A:** The benefit is a reduction of 14% to 34%.

**Typical Class A (Industrial) Price ($/MWh)**




**Existing Class A:** The benefit of the rate mitigation initiatives is a 3% reduction.

**Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

# 1) Regulated Price Plan Eligible Consumers and Rural or Remote Rate Protection Update

# 8% Rebate to Regulated Price Plan Eligible Consumers

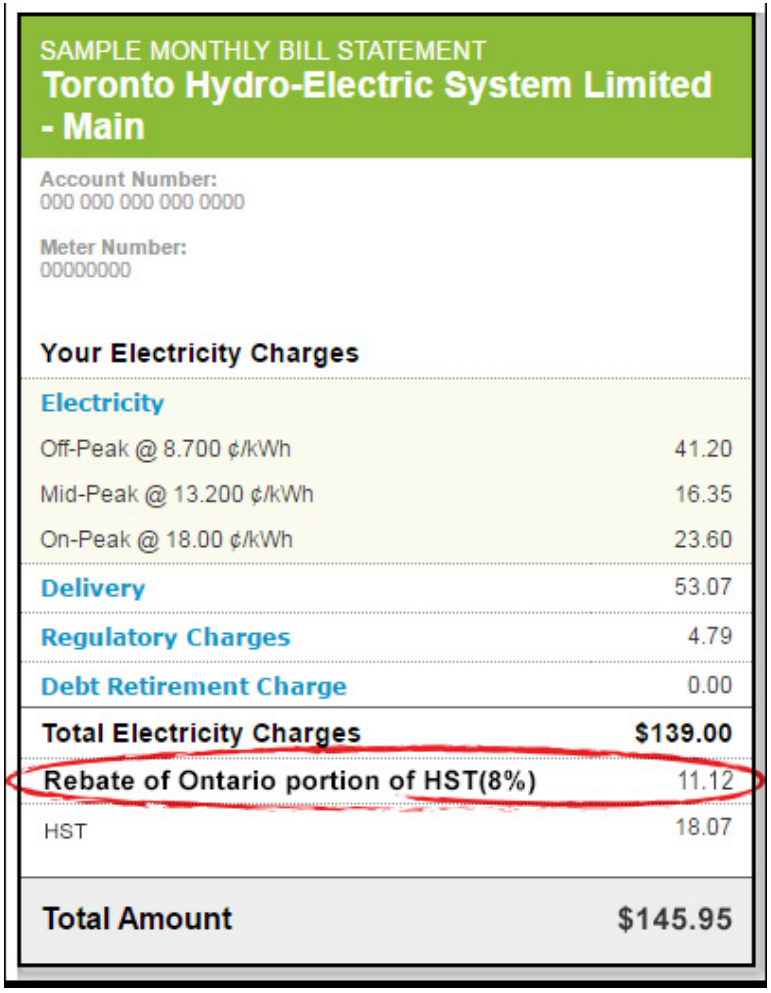
- Legislation/regulation will be introduced to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit.
  - This would be equivalent to the provincial portion of the HST*.

| **Eligible for the 8% rebate**<br>(< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate**<br>(> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>  − Coffee / snack retailer<br>  − Convenience store<br>  − Apparel store<br>  − Hair salon<br>  − Small insurance office | • Class A consumers<br>  − Manufacturer<br>  − Large grocery store<br>  − Mines<br>  − Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>  − Commercial offices (low rise)<br>  − Hotel<br>  − General warehousing |

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).

***Note:** An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

# Illustrative Electricity Bill Mock-Up



SAMPLE MONTHLY BILL STATEMENT

**Toronto Hydro-Electric System Limited - Main**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| **Rebate of Ontario portion of HST(8%)** | 11.12 |
| HST | 18.07 |
| **Total Amount** | **$145.95** |

**Note:** Final bill presentment pending submission to LRC.

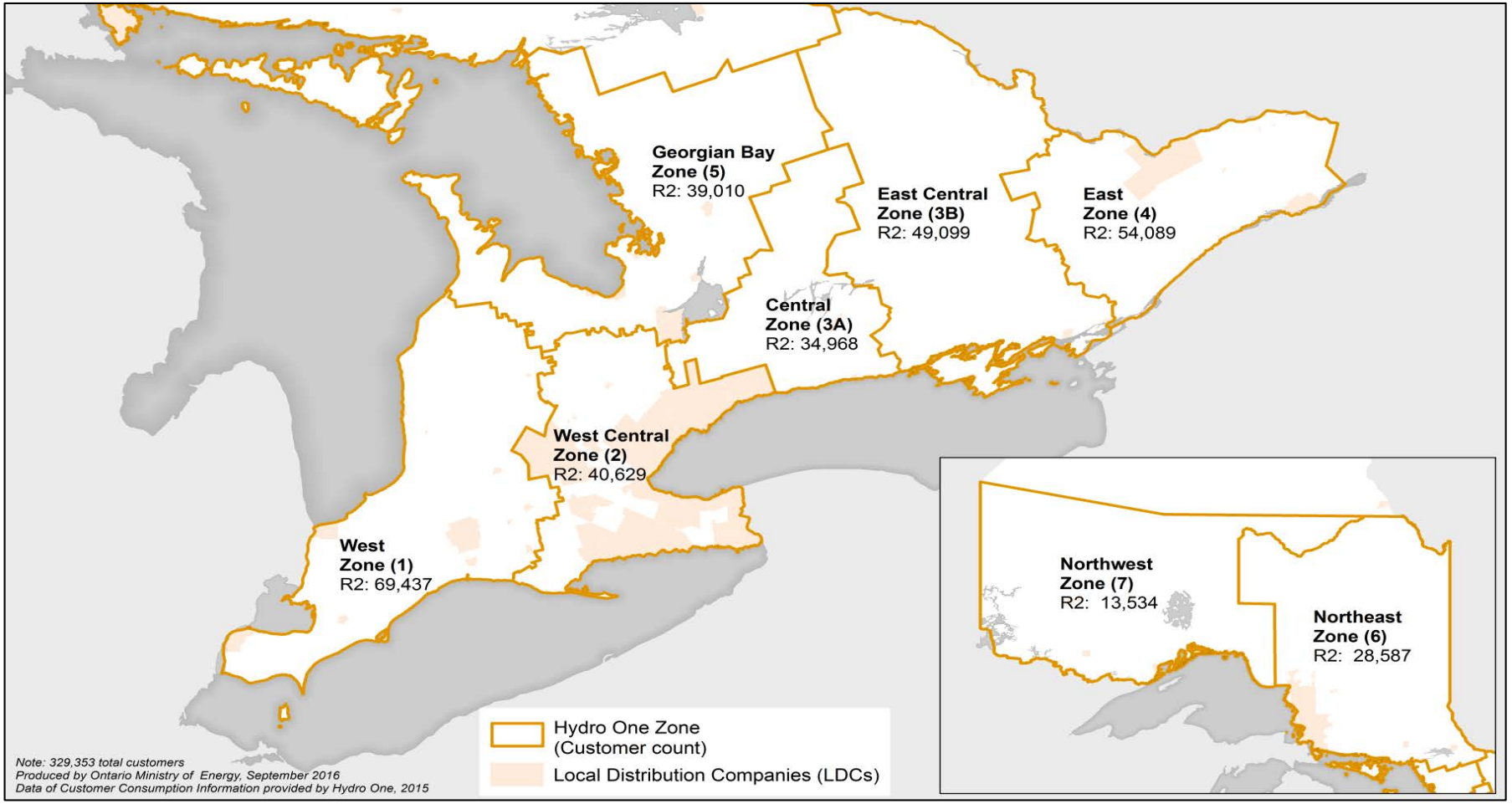
# Rural or Remote Rate Protection (RRRP) Update

- ENERGY is proposing to amend O.Reg 442/01 to provide an additional $110 million in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

- RRRP is a rate-based funded program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.
  - Today, RRRP is a $175-million program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
  - The majority of the program funding ($125.5 million) is provided to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a rebate of $31.50. The proposed update to the program would increase the benefit to $60/month.
  - RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

- An additional $110 million in program funding would see an increased benefit of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.
  - This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
  - The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the benefit remains constant.

# Rural or Remote Rate Protection (RRRP) Update – R2 Customers by Region



## 2) Expand Industrial Conservation Initiative and Redirect Cap and Trade Proceeds

# Industrial Conservation Initiative (ICI) Expansion

- ENERGY is proposing to amend O. Reg. 429/04 to expand ICI eligibility. The base setting period for the expanded program would begin in 2017, with the benefit seen by consumers starting in 2018.

- Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers).
  - Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

- ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:
  - Reduce electricity peak demand and electricity system costs by incenting more consumers to lower their electricity demand during peak periods;
  - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
  - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

# ICI Expansion – Projected Impact

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

- The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility
  - Short-term refers to the expected impact once ICI billing begins for new Class A consumers (one year after expanded eligibility takes place).
  - Long-term is the expected impact once new Class A consumers have had time to significantly change their behaviour and investment decisions in response to the ICI.

- The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating.

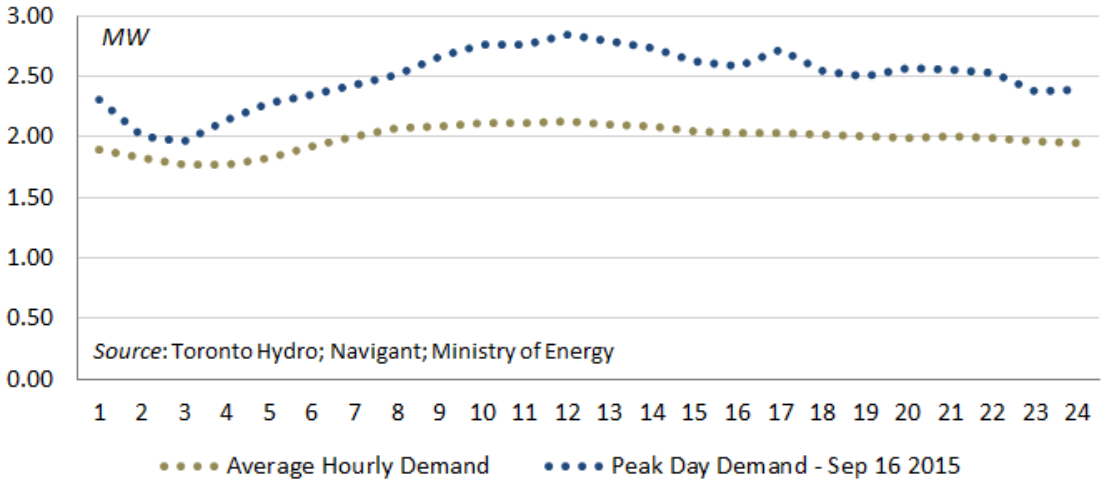
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.

# ICI Expansion – Illustrative Example of Newly Eligible Consumer

- Plastics manufacturers, such as Poly Five Plastics in Toronto, are among the consumers that would become eligible if the threshold was lowered.
- Such manufacturers fall under NAICS* code 32 and have relatively flat load profiles, reflecting around the clock production. This means they would be beneficiaries of ICI even with no change in consumption behaviour.
- Companies like Poly Five Plastics could expect to see greater savings if they are willing and able to respond to the higher prices during high demand hours.

**Typical Demand Profile, 2-3 MW Consumer**

*Manufacturer, NAICS Code 32 - Nov 2014 to Oct 2015*




**Illustrative Bill Savings, 2-3 MW Consumer**

| | *Status Quo* | *No Price Response* | *Short Term Response* | *Long Term Response* |
|---|---|---|---|---|
| | **Class B** | **Class A** | **Class A** | **Class A** |
| GA | 75.26 | 58.06 | 43.55 | 32.03 |
| Total bill | **126.28** | **109.09** | **94.58** | **83.06** |
| *Savings* | | *-14%* | *-25%* | *-34%* |

Source: Navigant; Ministry of Energy

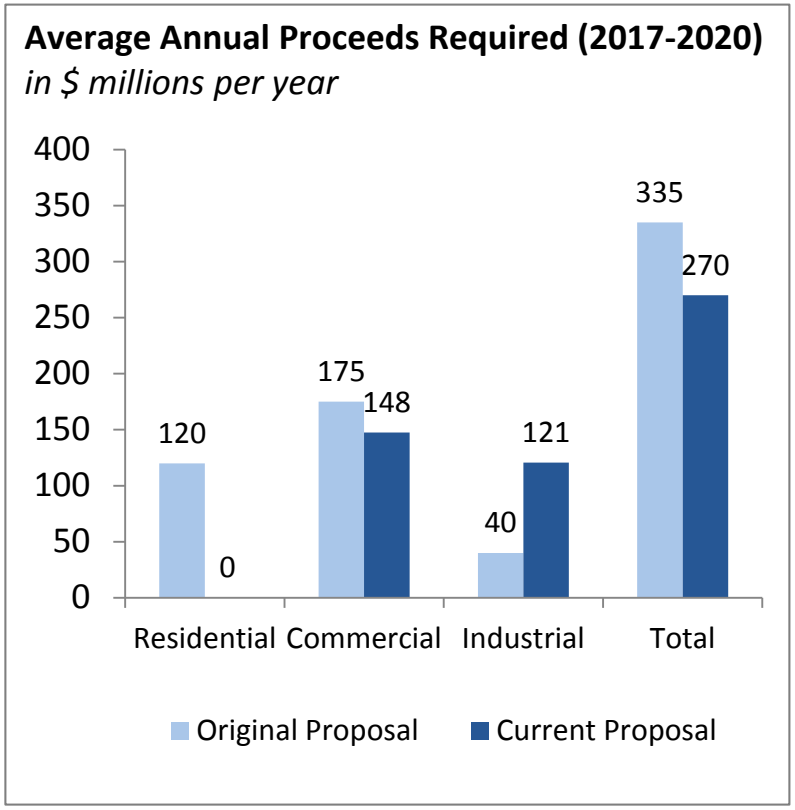
*** Note:** North American Industry Classification System (NAICS) is the standard used by statistical agencies in classifying business establishments.

# Redirect Cap and Trade Proceeds Recycling

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.
  - To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).

- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

- The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $0.24 billion over the first compliance period).




**Note:** The original proposal was to offset the impact of cap and trade via GA to the average industrial, and would provide a benefit to commercial and residential consumers. Current proposal would recycle proceeds volumetrically to industrial and commercial consumers.

# Redirect Cap and Trade Proceeds Recycling

- Redirecting cap and trade auction proceeds to lower the cost of electricity would offset consumers' contributions to non-emitting generation.

- Redirecting helps pay for committed investments/initiatives which reduce GHGs (e.g., non-emitting generation and conservation programs).
  - Due to the long-term nature (typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period. These costs will continue well beyond the timelines described in the CCAP.

- Redirecting cap and trade auction proceeds volumetrically to Class B (commercial) and Class A (industrial) consumers maintains the incentive to shift consumption from on-peak to off-peak hours.

- Using cap and trade auction proceeds to lower the cost of electricity would make it more competitive with traditionally cheaper fossil fuels.

- By using the proceeds to lower the cost of electricity, there is potential to incent fuel-switching away from fossil fuels toward much cleaner grid-connected electricity and support CCAP goals of electrification.

# Considerations

# Implementation

- On September 15, 2016, ENERGY is proposing to introduce the *Ontario Rebate for Electricity Consumers Act, 2016*.
  - If passed, the legislation would require a general regulation.
  - Amendments would also be required to various regulations to expand ICI and RRRP.

- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. ENERGY (possibly through Ontario Energy Board) will consult with LDCs to accurately assess these impacts once the program has been announced.
  - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - Timing concerns may be alleviated by allowing LDCs to provide retroactive rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.

- Detailed messaging on bills (for "low-volume" consumer bills ) could be implemented by amending O. Reg. 275/04 (made under the Ontario Energy Board Act, 1998).
  - The rebate would not be directly linked to HST.
  - With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.

- While the impact of cap and trade would be added to electricity bills as of January 2017, the offsetting effect of proceeds recycling may not occur immediately depending on implementation and potential alignment with the first auction expected in March 2017.
  - Should there be low demand for carbon allowances, auction proceeds would be less than the amount projected in the CCAP. This could mean a short-fall for proceeds recycling as proposed. However, natural gas utilities are expected to purchase allowances quarterly equal to their emissions.

- ENERGY will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

# Fiscal

- The Climate Change Action Plan (CCAP) committed about $1.3 billion over four years for electricity mitigation for industrial, commercial and residential consumers from GGRA proceeds.
  - The current rate mitigation proposal requires approximately 20% less in proceeds, saving approximately $0.24 billion relative to the CCAP commitment over the first compliance period (2017-2020).

- The 8% rebate is expected to cost about $1 billion per year (i.e., $4 billion from 2017-2020), representing an additional pressure on the fiscal plan.
  - Consideration could be given to allocating the $0.24 billion in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset.
  - If cap and trade auctions are under-subscribed, the $0.24 billion may not be available for reallocation to the fiscal plan.

- In the absence of any offset strategies, the full cost of the rate mitigation approach would add to the pressures and risks that need to be managed in order for the government to balance the budget in 2017-18 and stay balanced in 2018-19 and beyond.

# Legal

- In order to avoid characterization as an unconstitutional tax, a non-tax levy must have a sufficient nexus between those who pay and the regulatory scheme in the sense that those who pay have caused the need for or benefit from the regulatory scheme. Although the case law is not developed on the extent to which some regulated actors can be required to subsidize others, risk is reduced to the extent that any cross-subsidization serves true regulatory goals rather than revenue re-distribution goals.

- ~~HST~~ 8% Rebate of the pre-tax electricity costs (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):
  - Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

- ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):
  - Shifting costs to some consumers to lower rates for others without more carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

- RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):
  - Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

- Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):
  - To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

# Communications

- Public high-profile communications would coincide with introduction of legislation (September 2016).
  - Stakeholder outreach/technical briefings with LDCs, Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.
  - Echo public announcements in southwest and north; proactive provincial/local media.

- **Positioning:**
  - A fiscally prudent plan to benefit all ratepayers in a lasting, meaningful way.
  - Rural customers will receive the largest single rate relief ever.
  - Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.

- **Issues Considerations:**
  - Significant benefit for rural and remote residential customers; net gain for all residential customers.
  - More complex to communicate, but can be presented as a full plan that includes reforms and improvements to the system.
  - Consistent with cap-and-trade commitment that no business sector will be left worse off, though small businesses outside ICI will benefit the least.

Pending Update

Ontario

# Key Messages

- We are taking unprecedented action to help people in their everyday lives.
- Residential ratepayers and other RPP eligible ratepayers will receive an eight per cent rebate on their electricity bill, equivalent to the provincial portion of the HST.
- Modernizing the RRRP will benefit 330,000 families in rural Ontario with significant reductions to their electricity bills – $28 a month, in addition to the eight per cent rebate.
- Over a thousand more Ontario businesses will be eligible to benefit from the ICI program, helping them stay competitive and grow.
- These actions will assist over five million families, farms and small businesses across Ontario.
- These actions today join our many existing initiatives too help keep electricity in Ontario clean, reliable and affordable.

# Proposed Cabinet Minute

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

   i. Provide a rebate of 8% ~~on~~ of the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

   ii. Increase the total amount of rate protection available to R2 low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2004.

   iii. Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

   iv. Expand eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

# Proposed Cabinet Minute (cont'd)

2. ENERGY seek necessary TB/MBC approvals. **[TBD]**

3. ENERGY seek approvals for the proposed *Ontario Rebate for Electricity Consumers Act, 2016* which would, subject to the Legislature's approval of the Act, include the following elements:
   i. The rebate would be available starting January 1, 2017;
   ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
   iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers' electricity bills;
   iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way in which electricity vendors providing the rebate are to be reimbursed;
   v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;
   vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments; and
   vii. The legislation would include consequential amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*; and
   viii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date

# Proposed Cabinet Minute (cont'd)

4. ENERGY to report back to LRC and Cabinet for approval of any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments.

5. ENERGY notes the following amendments:

   i. Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the *Electricity Act, 1998* to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

   ii. Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density electricity customers and provide for a periodic adjustment mechanism.

6. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

7. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan

# Proposed Cabinet Minute (cont'd)

Cabinet approved version of the proposed *Ontario Rebate for Electricity Consumers Act, 2016* for introduction, subject to the following:

1. The Office of Legislative Counsel is authorized to prepare a French version and to make minor adjustments to the English version, for the purpose of ensuring consistency between the two versions and making other improvements or correcting mistakes discovered in the translation process.

# Appendix

# Illustrative Bill Impacts

| | Current Bill (after cost of new programs, before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (after cost of new programs, before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $140 /month | N/A | 8% ~~pre-tax~~ rebate: - $11 | $129 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $231 /month | RRRP: –$32 | 8% ~~pre-tax~~ rebate + Updated RRRP: - $45 | $186 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $102 /month | OESP: -$38 | 8% ~~pre-ta~~x rebate: - $8 | $94 /month |
| Small Business (Toronto – 403,200 kWh/month) | $150 /MWh | N/A | 8% ~~pre-tax~~ rebate: - $12/MWh | $138 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $204 /MWh | N/A | 8% ~~pre-ta~~x rebate: - $16/MWh | $188 /MWh |

***Note:** Some residential consumers ~~can~~ may also receive relief for sales tax on home energy of up to $224 for 2016 through the ~~tax credits based on income, age and geography (Northern Ontario Energy Credit and~~ Ontario Energy and Property Tax Credit~~)~~. People who live in the North may receive additional relief for home energy costs of up to $224 for 2016 through the Northern Ontario Energy Credit. These credits are delivered through the Ontario Trillium Benefit ~~Tax Credit and can be as high as $1,332 per year for a family~~.
** income of less than $28,000, family of 4.

Totals may not add due to rounding.

# Illustrative Bill Impacts (cont'd)

| | Current Rate | Current Rate mitigation initiatives* | Cost of new initiatives (RRRP and ICI) | New Rate Mitigation initiatives | Net Impact, | New Rate, |
|---|---|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | -$0.90 /MWh (-1%) | $107 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI + NIERP: -$69/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $68 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling + ICI: -$53.90/MWh | -$52 /MWh (-34%) | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $151 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh | $153 /MWh |

**Notes:**

1) There is the potential for a consumer eligible for the Regulated Price Plan to opt-out of the Regulated Price Plan to opt-in to Class A and receive all three benefits (i.e., Regulated Price Plan, ICI and proceeds recycling).

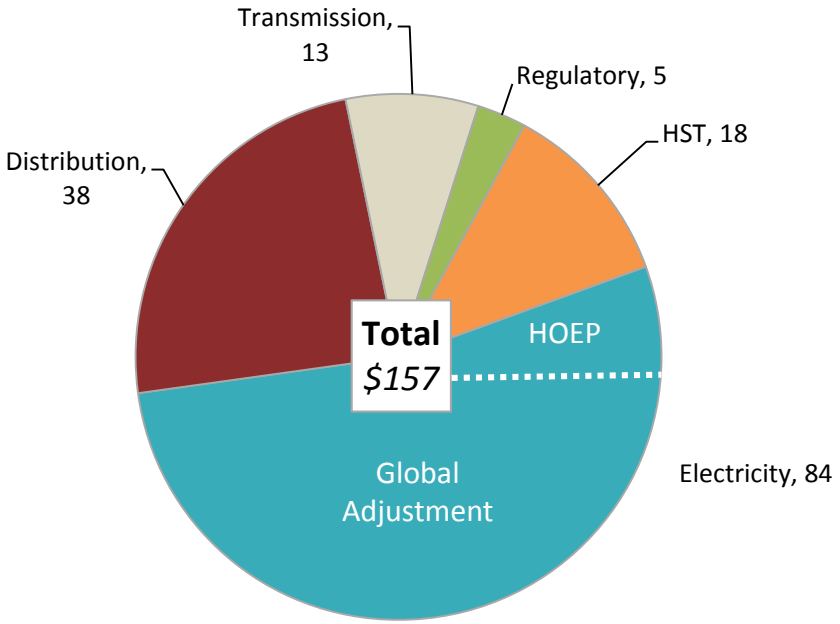
2) The impact of cap and trade would not be added to electricity bills until 2017 and varies per year over the course of the first compliance period. For illustrative purposes, the estimated average benefit of proceeds recycling is shown above.

# Residential Electricity Prices

- There are approximately 5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of May 1, 2016 (750 kWh/month)*




*Source*: OEB, Toronto Hydro

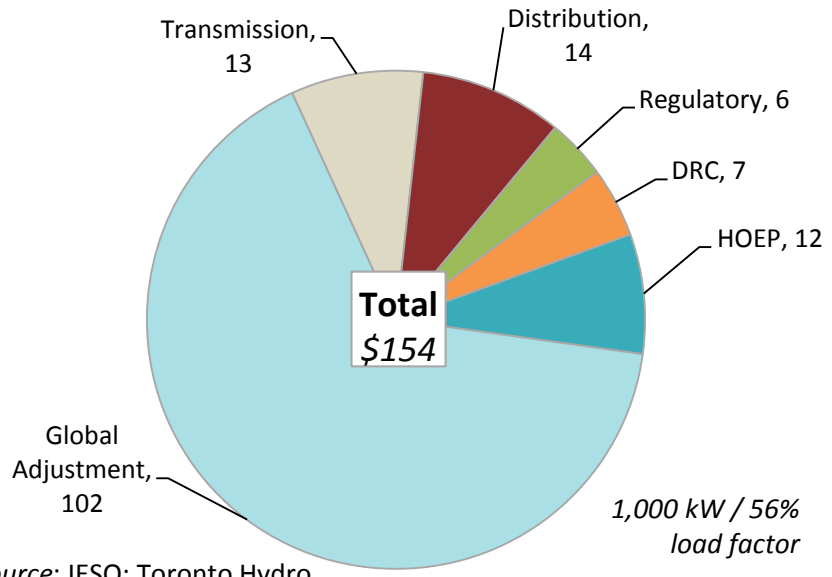
# Commercial Electricity Prices

- There are approximately 400,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.

- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




*Source*: IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.

- Targeted pricing programs are currently not available for Class B consumers.

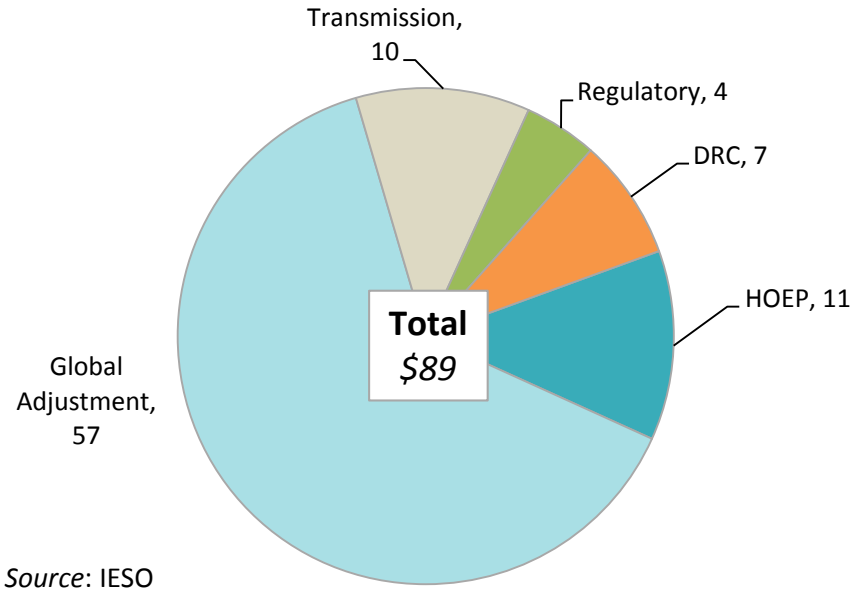
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*




*Source*: IESO

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $64/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Sales Tax Treatment in Other Jurisdictions

| Jurisdiction | Tax | Tax Paid by Business Consumers | Tax Paid by Residential Consumers | Comment |
|---|---|---|---|---|
| **British Columbia** | PST | Yes – 7% | No | • PST does not apply to residential energy, including electricity, acquired solely for residential use in a residential dwelling<br>• BC's carbon tax does not apply to electricity bills. |
| **Alberta** | None | N/A | N/A | • Alberta does not have a provincial sales tax. |
| **Saskatchewan** | PST | Yes – 5%<br>Except for electricity purchased to heat a building. | No | • PST does not apply to electricity purchased for use in a residential dwelling.<br>• PST does not apply to electricity purchased for use in heating a building that is heated solely by the electricity. |
| **Manitoba** | PST | Yes – 8%<br>Reduced rate of 1.6% applies to electricity used by a qualifying business to operate machinery | Yes – 8%<br>Electricity purchased for mixed use, 80% of which is home heating, has a reduced rate of 1.4%. Electricity solely to heat the purchaser's home is exempt. | • Winnipeg also applies a tax of 2.5% on residential and 5% on commercial. |
| **Ontario** | HST | Yes (less ITC (input tax credits)) | Yes – 8% | |
| **Quebec** | QST | Yes (less ITCs) | Yes – 9.975% | |
| **Nova Scotia** | HST | Yes (less ITCs) | Yes – 10% less provincially administered rebate. | • Rebate is equal to the provincial portion of the HST, and is administered similar to OCEB, but applies to many energy sources. |
| **New Brunswick** | HST | Yes (less ITCs) | Yes – 10% | |
| **Prince Edward Island** | HST | Yes (less ITCs) | Yes – 9% (10% beginning Oct 1, 2016) | |
| **Newfoundland and Labrador** | HST | Yes (less ITCs) | Yes – 10% | • Had a provincially administered Home Heating Rebate program until July 2015. |
| **Federal** | GST | Yes (less ITCs) | Yes – 5% | |

| | |
|---|---|
| **From:** | Tomasz Bugajski |
| **To:** | John Kim |
| **Cc:** | Ronald Kwan |
| **Subject:** | FW: Major Projects this week |
| **Date:** | Friday, September 09, 2016 4:15:07 PM |
| **Attachments:** | Cabinet Submission - Electricity Price Mitigation - CLEAN TPD comment.pptx |

FYI

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

**From:** DeSouza, Jenarra (MOF) [mailto:Jenarra.DeSouza@ontario.ca]
**Sent:** Friday, September 09, 2016 4:00 PM
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>; Ghufran Tarin (MOF) <Ghufran.Tarin@ontario.ca>; Shannon Lewis (MOF) <Shannon.Lewis@ontario.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>; Brian Lewis (MOL) <Brian.Lewis@ontario.ca>; Michael Waterston (MOF) <Michael.Waterston@ontario.ca>; Sriram Subrahmanyan (MOF) <Sriram.Subrahmanyan@ontario.ca>
**Subject:** FW: Major Projects this week

Attached are TPD comments for the Electricity CabSub

Could you pls review and let me know if your areas have any comments
TPD can coordinate and send back for MOF

Cheers
Bernice

- for Jenarra DeSouza

**From:** Lawson, Lynn (MOF)
**Sent:** September 9, 2016 3:23 PM
**To:** Subrahmanyan, Sriram (MOF); DeSouza, Jenarra (MOF)
**Cc:** Waterston, Michael (MOF); Langleben, Ann (MOF); Patel, Lesley (MOF); Lone, Dianne (MOF); Kennedy, Marta (MOF); Lam, Linda (MOF); Boxen, Simone (MOF); Diomin, Svetlana (MOF); Lewis, Shannon (MOF)
**Subject:** RE: Major Projects this week

The Cab Sub would benefit from some edits. We have comments on slides 10, 13, 14, 24, 26, 29 and Appendix slide 34. Please see attached

The wording of the Cabinet Minute in this Cab Sub is preferred over the stand-alone wording in the excerpt they provided.

**From:** Subrahmanyan, Sriram (MOF)
**Sent:** September 8, 2016 10:59 PM
**To:** Waterston, Michael (MOF); Lone, Dianne (MOF); Patel, Lesley (MOF); Langleben, Ann (MOF); Lawson, Lynn (MOF)
**Cc:** DeSouza, Jenarra (MOF)
**Subject:** Fw: Major Projects this week

Sent from my BlackBerry 10 smartphone on the Rogers network.

**From:** Young, Gwendolynne (MOF) <Gwendolynne.Young@ontario.ca>
**Sent:** Thursday, September 8, 2016 10:07 PM
**To:** Subrahmanyan, Sriram (MOF); DeSouza, Jenarra (MOF); Baig, Saad (MOF); Nguyen, Marianne (MOF); Schuurman, Tim (MOF); Kwan, Ronald (OFA); Pearce, Christopher (MOF); Birks, Ryan (MOF)
**Cc:** McLean, David (MOF)
**Subject:** Fw: Major Projects this week

Hi All - attached are updated materials from ENERGY.

Sent from my BlackBerry 10 smartphone on the Rogers network.

**From:** McLean, David (MOF) <David.McLean@ontario.ca>
**Sent:** Thursday, September 8, 2016 8:32 PM
**To:** Young, Gwendolynne (MOF)
**Subject:** FW: Major Projects this week

FYI

**From:** Katona, Keley (ENERGY)
**Sent:** September 8, 2016 8:32 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB); Moore, Karen (CAB)
**Subject:** RE: Major Projects this week

Hi,
Attached is the latest iteration of the Cabinet submission, including an updated minute. This is with our MO for review but wanted to keep you updated so you can continue to revise your TB / CAB notes. Note that some of the numbers have changed to remain consistent with methodology throughout the submission.
Keley

**From:** Katona, Keley (ENERGY)
**Sent:** September-08-16 12:22 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

For your records, attached is what was circulated at Major Projects today.

**From:** Katona, Keley (ENERGY)
**Sent:** September-07-16 3:38 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

We're making edits based on comments from our MO. Could be this evening or tomorrow morning.

---

**From:** Kwamena, Boafoa (CAB)
**Sent:** September-07-16 3:33 PM
**To:** Katona, Keley (ENERGY); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

Hi

Will be likely receive material  later today or tomorrow?

Thanks

---

**From:** Katona, Keley (ENERGY)
**Sent:** September-07-16 10:12 AM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** Re: Major Projects this week

Sorry, disregard, we'll make it work on our end. Thanks.

---

**From:** Katona, Keley (ENERGY)
**Sent:** Wednesday, September 7, 2016 10:06 AM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

Hi Boafoa,

Wondering if it's possible for the electricity item to be last on the agenda tomorrow. We have a Minister's briefing which conflicts with Major Projects, involving the same staff and it would be very helpful if we could be on at 11am.

Thanks,
Keley

---

**From:** Kwamena, Boafoa (CAB)
**Sent:** September-06-16 5:29 PM
**To:** Katona, Keley (ENERGY); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** Major Projects this week

Hi Keley/David

We will be adding the Electricity Pricing Mitigation item to Major Projects this Thursday. This will be an opportunity to ensure everyone is on the same page in advance of the TB trip next week. Major Projects is scheduled from 10:30 to 11:30 on Thursday. This item will be the first–10:30 to 11:00. Please let me know if this time doesn't work or if there are any concerns.

Thanks
Boafoa

Boafoa Kwamena
Special Advisor
Office of the Secretary of the Cabinet
Cabinet Office
416-325-4400
Boafoa.kwamena2@ontario.ca

# Electricity Price Mitigation

## Ministry of Energy

## WORKING DRAFT

## Date: September 12, 2016

Minister

Deputy Minister

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

- Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables.
  - This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%.

- Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online.

- The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers.

# Electricity Consumer Classes

- There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

**** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

# Current Rate Base Mitigation Programs

- Ontario has implemented several programs to help electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers;
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs; and
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- These programs have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial) as shown in the table below:

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

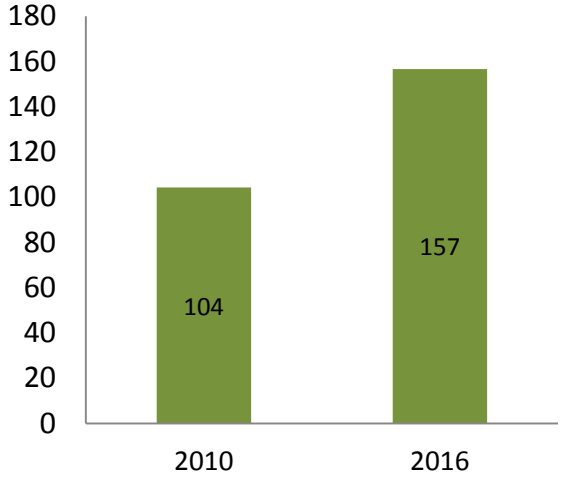
**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

# Prices by Electricity Consumer Class

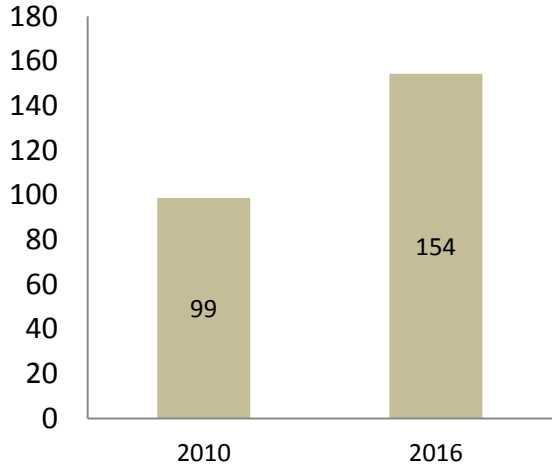
- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.

- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers.

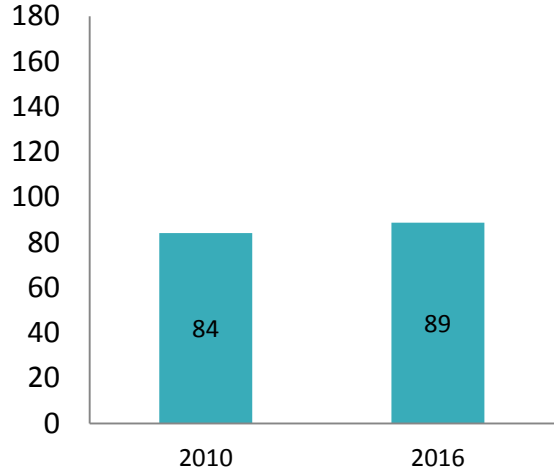
**Typical Residential Bill (750/kWh per month)**




**Typical Class B (Commercial) Price ($/MWh)**




**Typical Class A (Industrial) Price ($/MWh)**



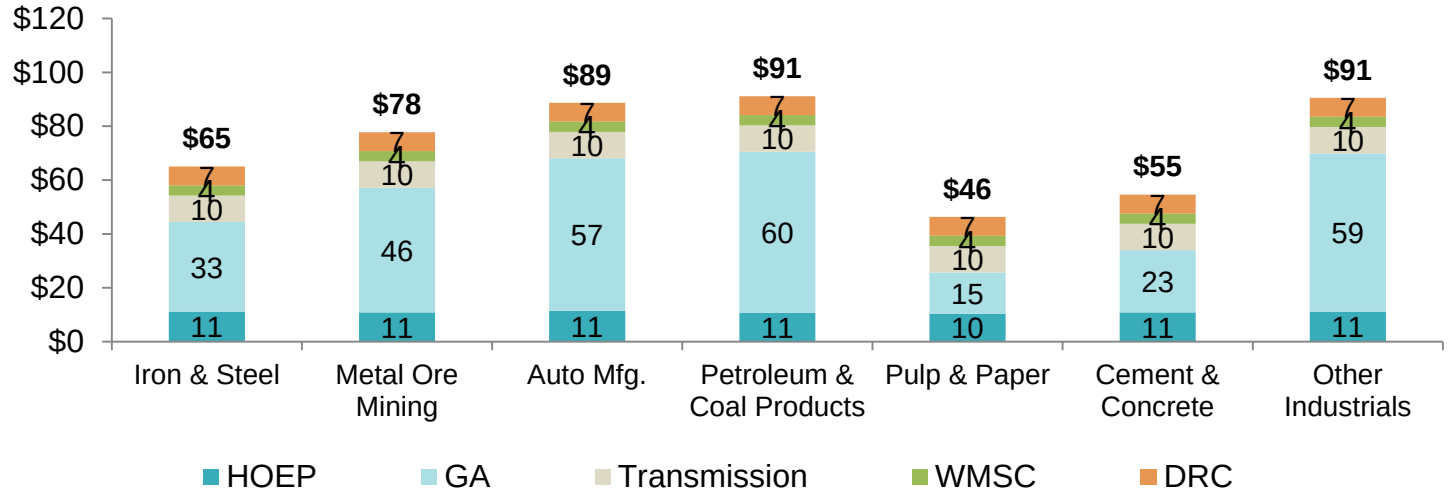

**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

# Industrial Electricity Prices Vary by Sector

- While Class A (industrial consumers) benefit from participation in the ICI program, there is a significant amount of variability in the ability to shift away from peak periods across customer classes, impacting the savings achieved.

- The below chart shows the prices paid in 2015 across a number of industrial sectors. Consumers in the north that receive rebates under the Northern Industrial Electricity Rate Program (NIERP) achieve rates that are $20/MWh lower than the below.

**Average all-in Class A, Transmission-connected Electricity Prices by Industrial Sector (estimated $/MWh), Year-to-Date June 2016**




**Note:** HOEP = Hourly Ontario Energy Price, GA = Global Adjustment, WMSC = Wholesale Market Service Charges, DRC = Debt Retirement Charge

# Recent Actions to Bend the Cost Curve

- Since 2013, a number of actions have been taken to reduce overall electricity system costs:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

# Rate Mitigation

- The 2016 Budget committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) committed $1.3 billion from the Greenhouse Gas Reduction Account (GGRA) over the first compliance period (2017-2020).

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:

  - **Tax-based Lever:**
    - Provide an on-bill rebate funded from the tax-base to all consumers or specific classes of consumers (i.e., the Ontario Clean Energy Benefit (OCEB) provided a rebate for eligible electricity consumers).

  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.

  - **Cap and Trade Proceeds Lever:**
    - Redirect cap and trade proceeds to offset the cost of existing initiatives that help reduce greenhouse gas (GHG) emissions (i.e., the CCAP committed to offset the impact of cap and trade and to keep electricity rates affordable).

# Rate Mitigation Proposal

- The Ministry of Energy is proposing to implement the following electricity price mitigation initiatives. The approach identified below would provide relief across all electricity consumer classes:

  1) Provide an 8% rebate equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms) and update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers; and

  2) Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial) and redirect cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

- The following slides provide additional information on the above initiatives.

***Note:** Eligibility for the 8% rebate would be similar to OCEB and include some customers not on the Regulated Price Plan (RPP), such as Independent Power Authority consumers and consumers that have opted-out of RPP.

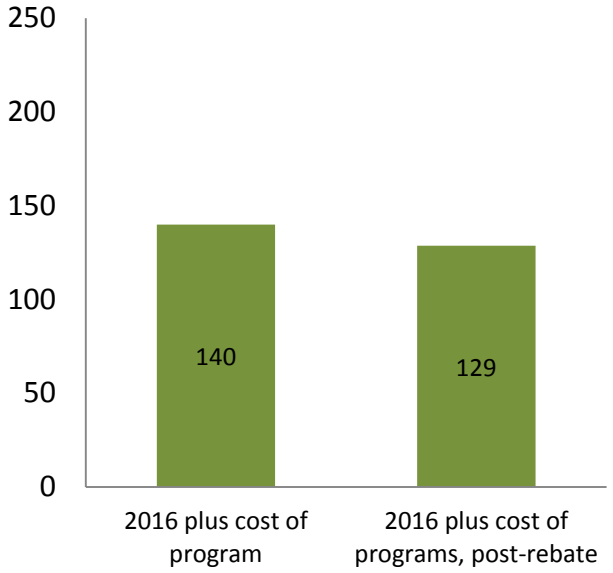
# Rate Mitigation Proposal – Illustrative Benefits*

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Benefit | | Class B (Commercial) Benefit | Class A (Industrial) Benefit | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural*** (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br><br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br><br>(-8%) | -$45/ month<br><br>(-20%) | -$3/MWh<br><br>(-2%) | -$3/ MWh<br><br>(-3%) | Up to -$52/MWh<br><br>(-34%) |

- **Notes:** The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh. The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. Proceeds recycling is an estimated average over the first compliance period (2017-2020).

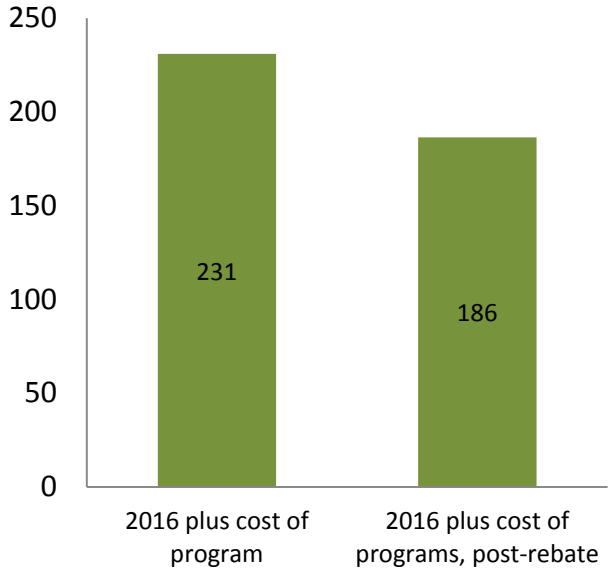
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class

**Typical Residential Bill**
**750 kWh per month, 8% only**




The pre-tax impact is a 8% reduction.

**Rural (R2) Residential Bill**
**1,000 kWh per month, 8% and RRRP Update**

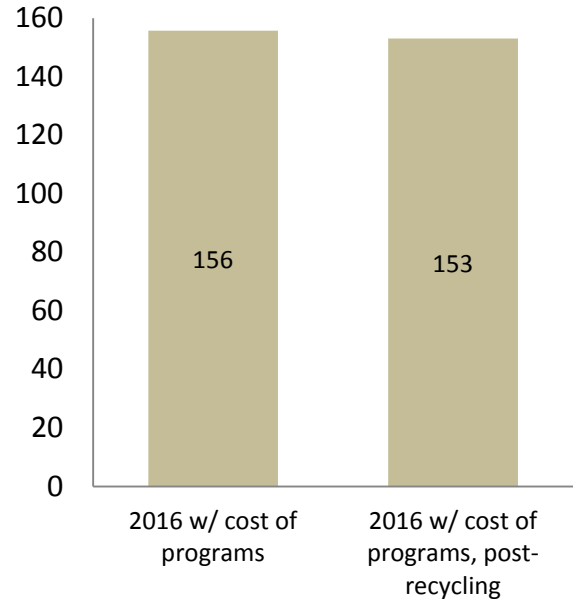



The pre-tax impact of the rate mitigation initiatives is a 20% reduction.

**Note:** Residential bills reflect electricity rates as per the Regulated Rate Plan (RRP) which came into effect on May 1, 2016.

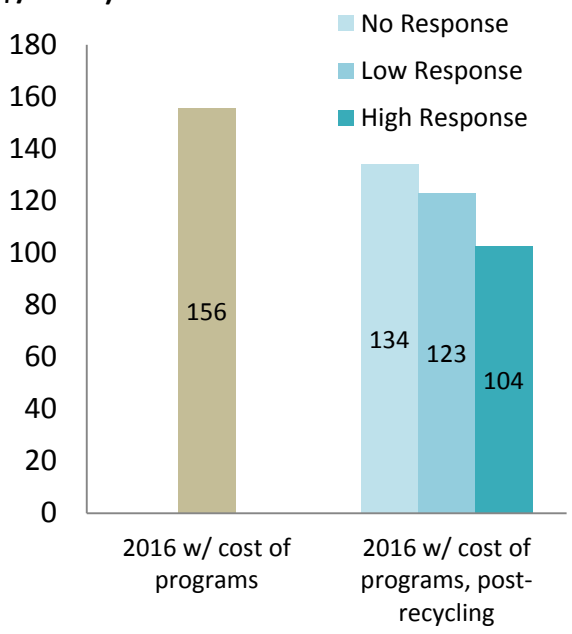
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class (cont'd)

**Typical Class B (Commercial) Price ($/MWh)**



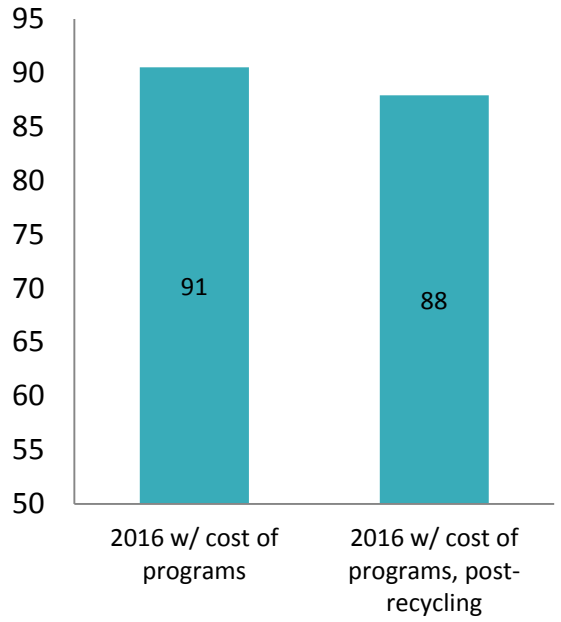

**Class B:** The benefit is a 2% reduction.

**Typical New Class A Price ($/MWh)**




**New Class A:** The benefit is a reduction of 14% to 34%.

**Typical Class A (Industrial) Price ($/MWh)**




**Existing Class A:** The benefit of the rate mitigation initiatives is a 3% reduction.

**Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

# 1) Regulated Price Plan Eligible Consumers and Rural or Remote Rate Protection Update

# 8% Rebate to Regulated Price Plan Eligible Consumers

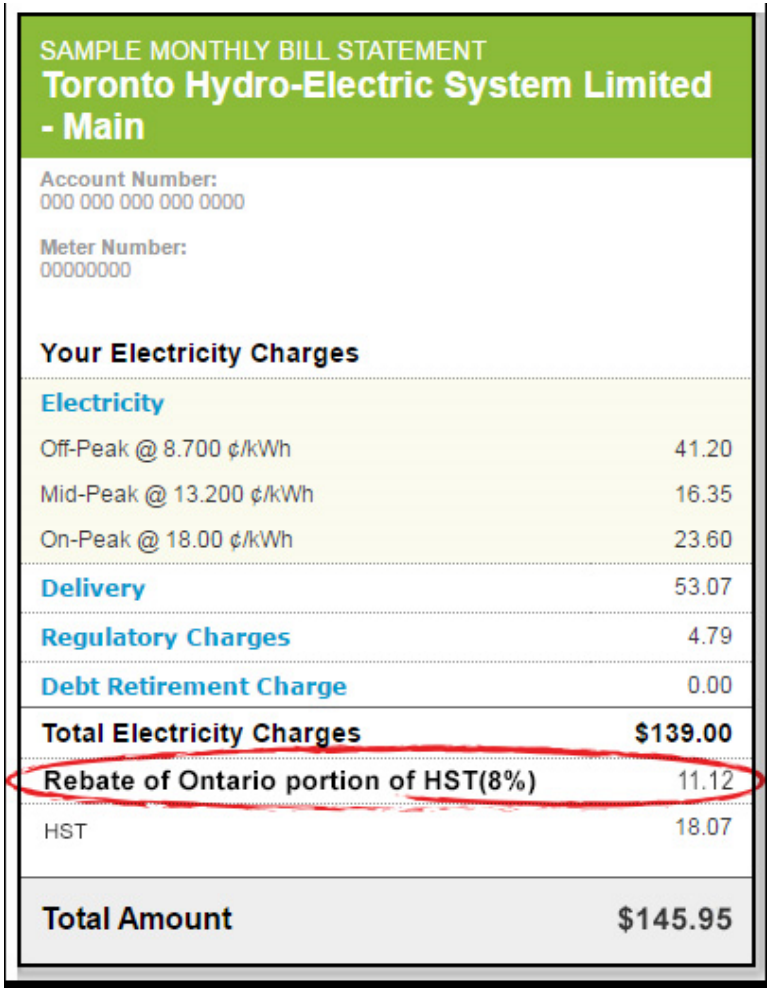
- Legislation/regulation will be introduced to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit.
  - This would be equivalent to the provincial portion of the HST*.

| **Eligible for the 8% rebate**<br>(< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate**<br>(> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>  − Coffee / snack retailer<br>  − Convenience store<br>  − Apparel store<br>  − Hair salon<br>  − Small insurance office | • Class A consumers<br>  − Manufacturer<br>  − Large grocery store<br>  − Mines<br>  − Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>  − Commercial offices (low rise)<br>  − Hotel<br>  − General warehousing |

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).

***Note:** An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

# Illustrative Electricity Bill Mock-Up



SAMPLE MONTHLY BILL STATEMENT

**Toronto Hydro-Electric System Limited - Main**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| **Rebate of Ontario portion of HST(8%)** | 11.12 |
| HST | 18.07 |
| **Total Amount** | **$145.95** |

**Note:** Final bill presentment pending submission to LRC.

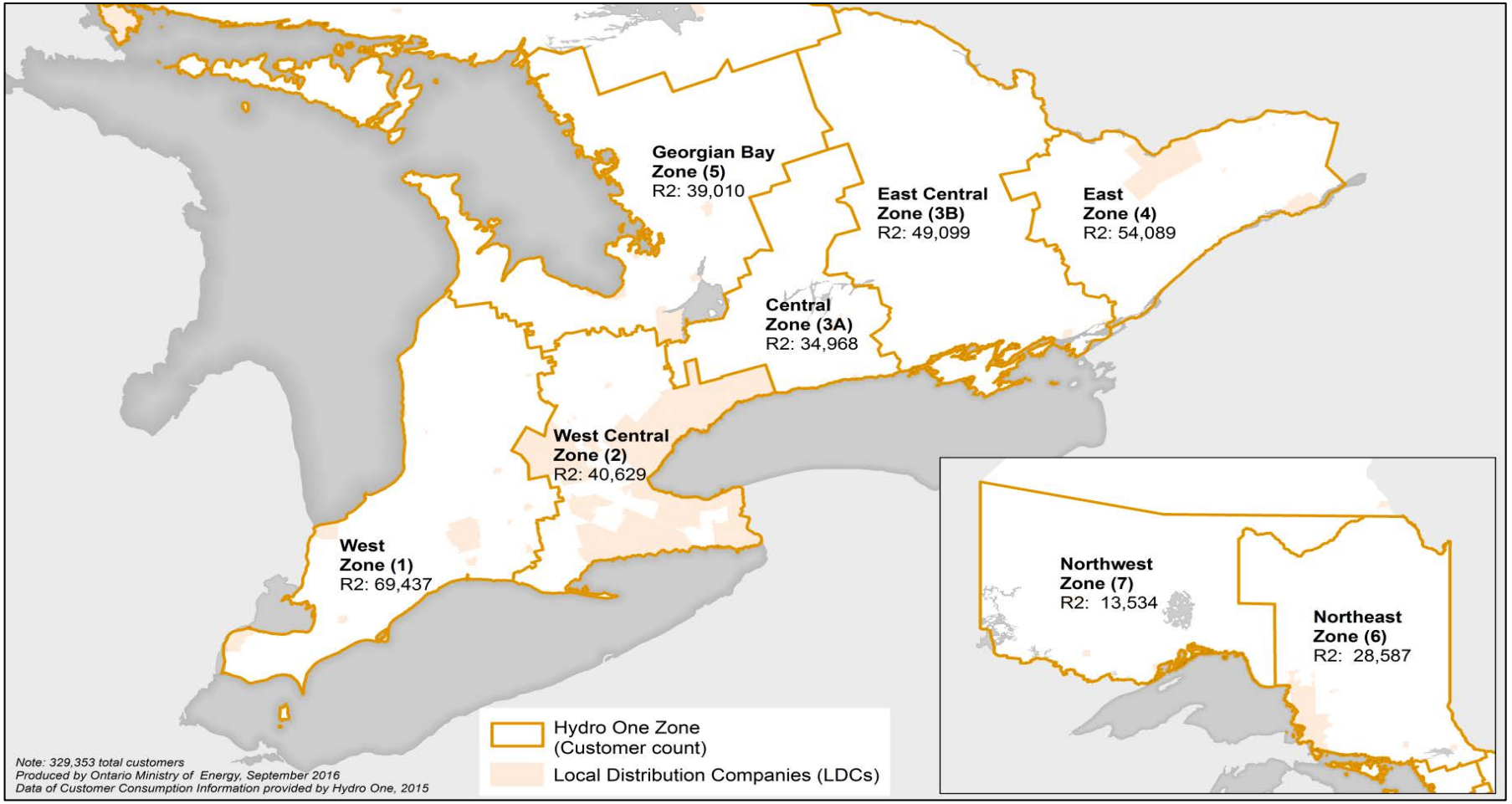
# Rural or Remote Rate Protection (RRRP) Update

- ENERGY is proposing to amend O.Reg 442/01 to provide an additional $110 million in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

- RRRP is a rate-based funded program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.
  - Today, RRRP is a $175-million program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
  - The majority of the program funding ($125.5 million) is provided to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a rebate of $31.50. The proposed update to the program would increase the benefit to $60/month.
  - RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

- An additional $110 million in program funding would see an increased benefit of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.
  - This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
  - The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the benefit remains constant.

# Rural or Remote Rate Protection (RRRP) Update – R2 Customers by Region



## 2) Expand Industrial Conservation Initiative and Redirect Cap and Trade Proceeds

# Industrial Conservation Initiative (ICI) Expansion

- ENERGY is proposing to amend O. Reg. 429/04 to expand ICI eligibility. The base setting period for the expanded program would begin in 2017, with the benefit seen by consumers starting in 2018.

- Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers).
  - Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

- ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:
  - Reduce electricity peak demand and electricity system costs by incenting more consumers to lower their electricity demand during peak periods;
  - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
  - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

# ICI Expansion – Projected Impact

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

- The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility
  - Short-term refers to the expected impact once ICI billing begins for new Class A consumers (one year after expanded eligibility takes place).
  - Long-term is the expected impact once new Class A consumers have had time to significantly change their behaviour and investment decisions in response to the ICI.

- The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating.

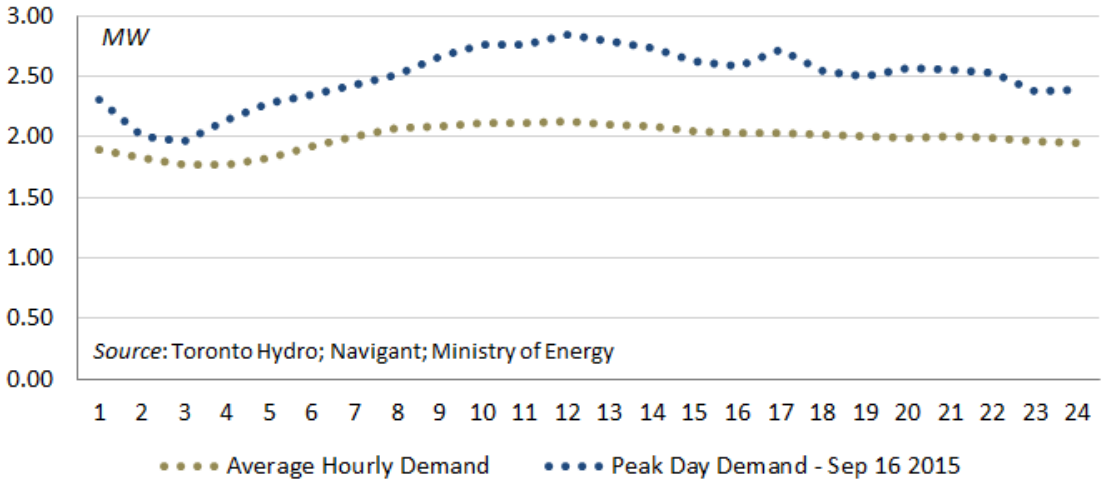
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.

# ICI Expansion – Illustrative Example of Newly Eligible Consumer

- Plastics manufacturers, such as Poly Five Plastics in Toronto, are among the consumers that would become eligible if the threshold was lowered.
- Such manufacturers fall under NAICS* code 32 and have relatively flat load profiles, reflecting around the clock production. This means they would be beneficiaries of ICI even with no change in consumption behaviour.
- Companies like Poly Five Plastics could expect to see greater savings if they are willing and able to respond to the higher prices during high demand hours.

**Typical Demand Profile, 2-3 MW Consumer**

*Manufacturer, NAICS Code 32 - Nov 2014 to Oct 2015*




**Illustrative Bill Savings, 2-3 MW Consumer**

| | *Status Quo* | *No Price Response* | *Short Term Response* | *Long Term Response* |
|---|---|---|---|---|
| | **Class B** | **Class A** | **Class A** | **Class A** |
| GA | 75.26 | 58.06 | 43.55 | 32.03 |
| Total bill | **126.28** | **109.09** | **94.58** | **83.06** |
| *Savings* | | *-14%* | *-25%* | *-34%* |

Source: Navigant; Ministry of Energy

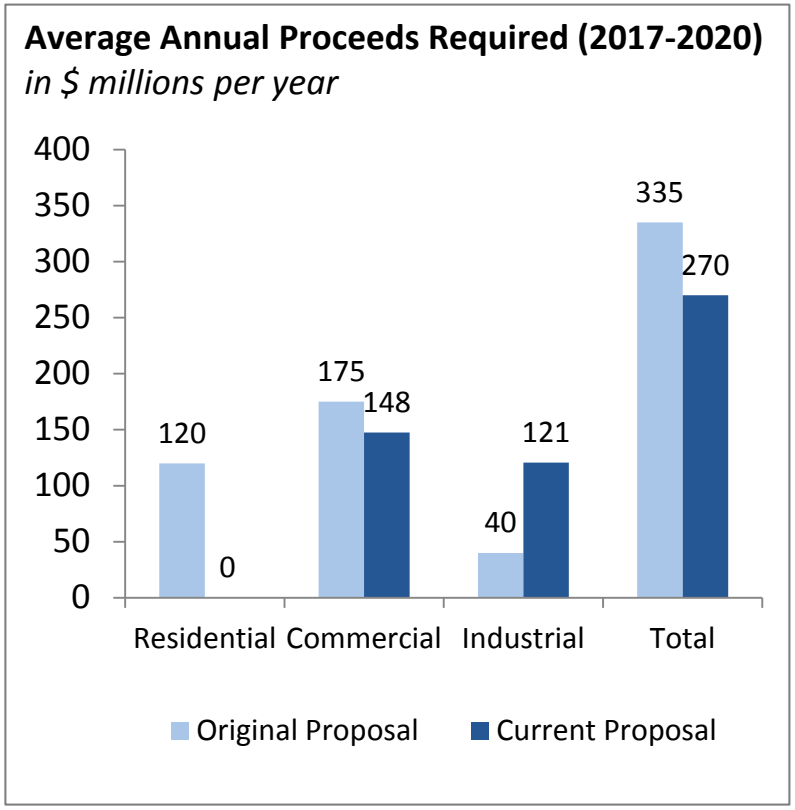
*** Note:** North American Industry Classification System (NAICS) is the standard used by statistical agencies in classifying business establishments.

# Redirect Cap and Trade Proceeds Recycling

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.
  - To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).

- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

- The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $0.24 billion over the first compliance period).




**Note:** The original proposal was to offset the impact of cap and trade via GA to the average industrial, and would provide a benefit to commercial and residential consumers. Current proposal would recycle proceeds volumetrically to industrial and commercial consumers.

# Redirect Cap and Trade Proceeds Recycling

- Redirecting cap and trade auction proceeds to lower the cost of electricity would offset consumers' contributions to non-emitting generation.

- Redirecting helps pay for committed investments/initiatives which reduce GHGs (e.g., non-emitting generation and conservation programs).
  - Due to the long-term nature (typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period. These costs will continue well beyond the timelines described in the CCAP.

- Redirecting cap and trade auction proceeds volumetrically to Class B (commercial) and Class A (industrial) consumers maintains the incentive to shift consumption from on-peak to off-peak hours.

- Using cap and trade auction proceeds to lower the cost of electricity would make it more competitive with traditionally cheaper fossil fuels.

- By using the proceeds to lower the cost of electricity, there is potential to incent fuel-switching away from fossil fuels toward much cleaner grid-connected electricity and support CCAP goals of electrification.

# Considerations

# Implementation

- On September 15, 2016, ENERGY is proposing to introduce the *Ontario Rebate for Electricity Consumers Act, 2016*.
  - If passed, the legislation would require a general regulation.
  - Amendments would also be required to various regulations to expand ICI and RRRP.

- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. ENERGY (possibly through Ontario Energy Board) will consult with LDCs to accurately assess these impacts once the program has been announced.
  - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - Timing concerns may be alleviated by allowing LDCs to provide retroactive rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.

- Detailed messaging on bills (for "low-volume" consumer bills ) could be implemented by amending O. Reg. 275/04 (made under the Ontario Energy Board Act, 1998).
  - The rebate would not be directly linked to HST.
  - With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.

- While the impact of cap and trade would be added to electricity bills as of January 2017, the offsetting effect of proceeds recycling may not occur immediately depending on implementation and potential alignment with the first auction expected in March 2017.
  - Should there be low demand for carbon allowances, auction proceeds would be less than the amount projected in the CCAP. This could mean a short-fall for proceeds recycling as proposed. However, natural gas utilities are expected to purchase allowances quarterly equal to their emissions.

- ENERGY will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

# Fiscal

- The Climate Change Action Plan (CCAP) committed about $1.3 billion over four years for electricity mitigation for industrial, commercial and residential consumers from GGRA proceeds.
  - The current rate mitigation proposal requires approximately 20% less in proceeds, saving approximately $0.24 billion relative to the CCAP commitment over the first compliance period (2017-2020).

- The 8% rebate is expected to cost about $1 billion per year (i.e., $4 billion from 2017-2020), representing an additional pressure on the fiscal plan.
  - Consideration could be given to allocating the $0.24 billion in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset.
  - If cap and trade auctions are under-subscribed, the $0.24 billion may not be available for reallocation to the fiscal plan.

- In the absence of any offset strategies, the full cost of the rate mitigation approach would add to the pressures and risks that need to be managed in order for the government to balance the budget in 2017-18 and stay balanced in 2018-19 and beyond.

# Legal

- In order to avoid characterization as an unconstitutional tax, a non-tax levy must have a sufficient nexus between those who pay and the regulatory scheme in the sense that those who pay have caused the need for or benefit from the regulatory scheme. Although the case law is not developed on the extent to which some regulated actors can be required to subsidize others, risk is reduced to the extent that any cross-subsidization serves true regulatory goals rather than revenue re-distribution goals.

- ~~HST~~ 8% Rebate of the pre-tax electricity costs (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):
  - Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

- ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):
  - Shifting costs to some consumers to lower rates for others without more carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

- RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):
  - Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

- Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):
  - To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

# Communications

- Public high-profile communications would coincide with introduction of legislation (September 2016).
  - Stakeholder outreach/technical briefings with LDCs, Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.
  - Echo public announcements in southwest and north; proactive provincial/local media.

- **Positioning:**
  - A fiscally prudent plan to benefit all ratepayers in a lasting, meaningful way.
  - Rural customers will receive the largest single rate relief ever.
  - Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.

- **Issues Considerations:**
  - Significant benefit for rural and remote residential customers; net gain for all residential customers.
  - More complex to communicate, but can be presented as a full plan that includes reforms and improvements to the system.
  - Consistent with cap-and-trade commitment that no business sector will be left worse off, though small businesses outside ICI will benefit the least.

Pending Update

Ontario

# Key Messages

- We are taking unprecedented action to help people in their everyday lives.
- Residential ratepayers and other RPP eligible ratepayers will receive an eight per cent rebate on their electricity bill, equivalent to the provincial portion of the HST.
- Modernizing the RRRP will benefit 330,000 families in rural Ontario with significant reductions to their electricity bills – $28 a month, in addition to the eight per cent rebate.
- Over a thousand more Ontario businesses will be eligible to benefit from the ICI program, helping them stay competitive and grow.
- These actions will assist over five million families, farms and small businesses across Ontario.
- These actions today join our many existing initiatives too help keep electricity in Ontario clean, reliable and affordable.

# Proposed Cabinet Minute

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

   i. Provide a rebate of 8% ~~on~~ of the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

   ii. Increase the total amount of rate protection available to R2 low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2004.

   iii. Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

   iv. Expand eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

# Proposed Cabinet Minute (cont'd)

2. ENERGY seek necessary TB/MBC approvals. **[TBD]**

3. ENERGY seek approvals for the proposed *Ontario Rebate for Electricity Consumers Act, 2016* which would, subject to the Legislature's approval of the Act, include the following elements:
   i. The rebate would be available starting January 1, 2017;
   ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
   iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers' electricity bills;
   iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way in which electricity vendors providing the rebate are to be reimbursed;
   v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;
   vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments; and
   vii. The legislation would include consequential amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*; and
   viii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date

# Proposed Cabinet Minute (cont'd)

4. ENERGY to report back to LRC and Cabinet for approval of any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments.

5. ENERGY notes the following amendments:

   i. Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the *Electricity Act, 1998* to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

   ii. Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density electricity customers and provide for a periodic adjustment mechanism.

6. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

7. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan

# Proposed Cabinet Minute (cont'd)

Cabinet approved version of the proposed *Ontario Rebate for Electricity Consumers Act, 2016* for introduction, subject to the following:

1. The Office of Legislative Counsel is authorized to prepare a French version and to make minor adjustments to the English version, for the purpose of ensuring consistency between the two versions and making other improvements or correcting mistakes discovered in the translation process.

# Appendix

# Illustrative Bill Impacts

| | Current Bill (after cost of new programs, before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (after cost of new programs, before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $140 /month | N/A | 8% ~~pre-tax~~ rebate: - $11 | $129 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $231 /month | RRRP: –$32 | 8% ~~pre-tax~~ rebate + Updated RRRP: - $45 | $186 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $102 /month | OESP: -$38 | 8% ~~pre-ta~~x rebate: - $8 | $94 /month |
| Small Business (Toronto – 403,200 kWh/month) | $150 /MWh | N/A | 8% ~~pre-tax~~ rebate: - $12/MWh | $138 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $204 /MWh | N/A | 8% ~~pre-ta~~x rebate: - $16/MWh | $188 /MWh |

***Note:** Some residential consumers ~~can~~ may also receive relief for sales tax on home energy of up to $224 for 2016 through the ~~tax credits based on income, age and geography (Northern Ontario Energy Credit and~~ Ontario Energy and Property Tax Credit~~)~~. People who live in the North may receive additional relief for home energy costs of up to $224 for 2016 through the Northern Ontario Energy Credit. These credits are delivered through the Ontario Trillium Benefit ~~Tax Credit and can be as high as $1,332 per year for a family~~.
** income of less than $28,000, family of 4.

Totals may not add due to rounding.

# Illustrative Bill Impacts (cont'd)

| | Current Rate | Current Rate mitigation initiatives* | Cost of new initiatives (RRRP and ICI) | New Rate Mitigation initiatives | Net Impact, | New Rate, |
|---|---|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | -$0.90 /MWh (-1%) | $107 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI + NIERP: -$69/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $68 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling + ICI: -$53.90/MWh | -$52 /MWh (-34%) | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $151 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh | $153 /MWh |

**Notes:**

1) There is the potential for a consumer eligible for the Regulated Price Plan to opt-out of the Regulated Price Plan to opt-in to Class A and receive all three benefits (i.e., Regulated Price Plan, ICI and proceeds recycling).

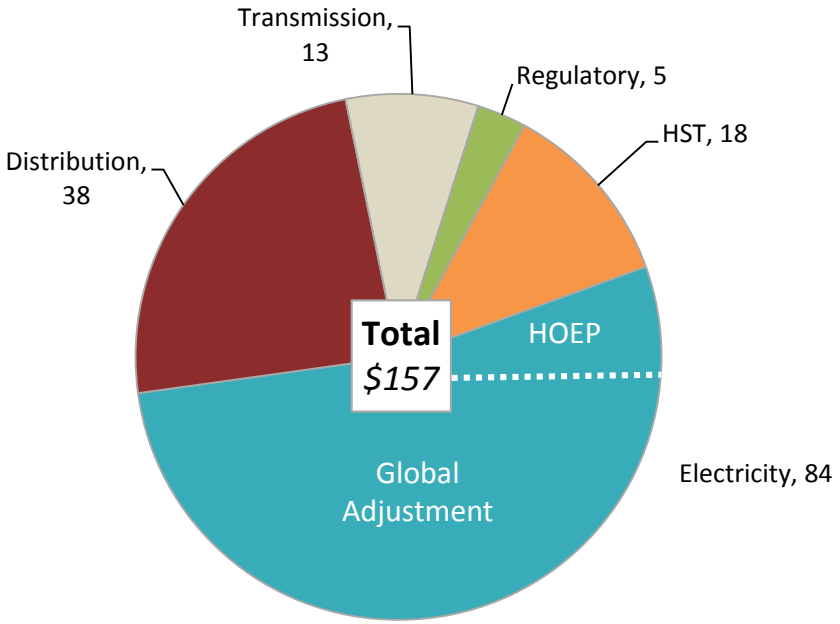
2) The impact of cap and trade would not be added to electricity bills until 2017 and varies per year over the course of the first compliance period. For illustrative purposes, the estimated average benefit of proceeds recycling is shown above.

# Residential Electricity Prices

- There are approximately 5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of May 1, 2016 (750 kWh/month)*




*Source*: OEB, Toronto Hydro

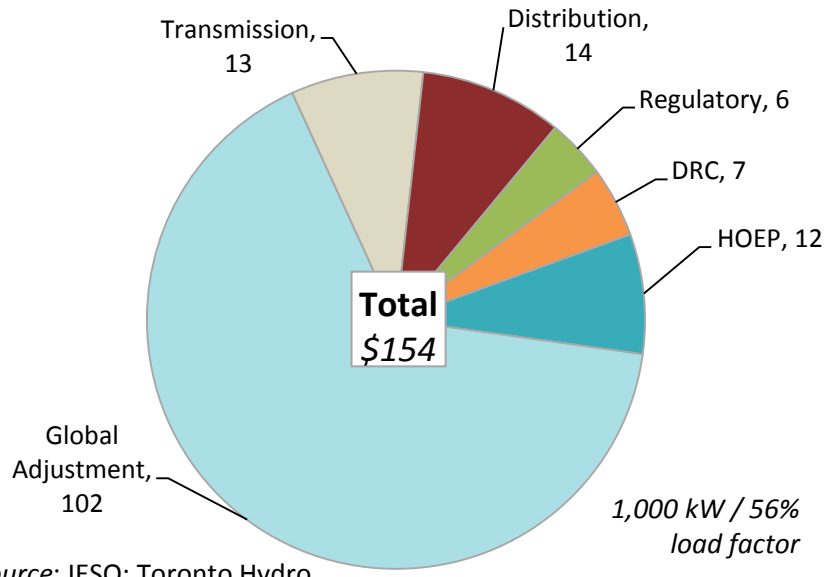
# Commercial Electricity Prices

- There are approximately 400,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.

- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




*Source*: IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.

- Targeted pricing programs are currently not available for Class B consumers.

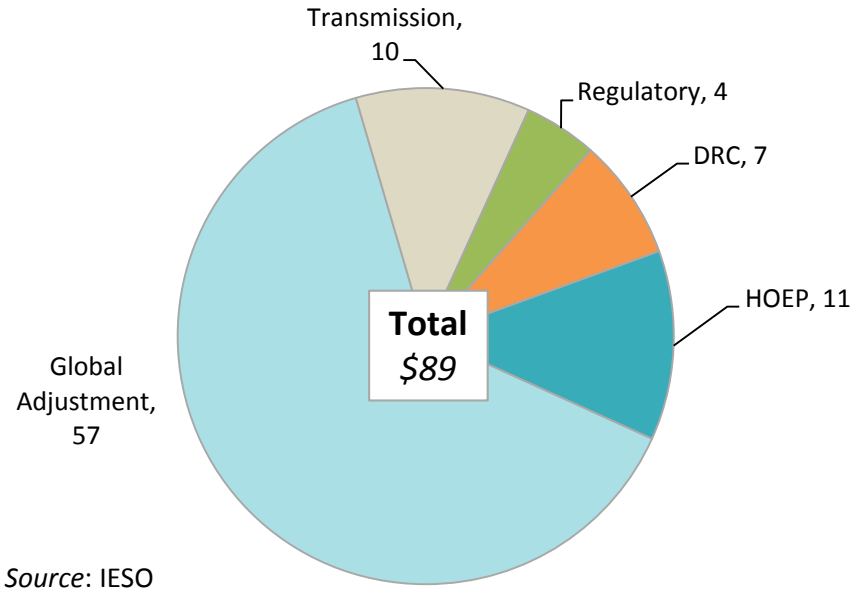
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*




*Source*: IESO

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $64/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Sales Tax Treatment in Other Jurisdictions

| Jurisdiction | Tax | Tax Paid by Business Consumers | Tax Paid by Residential Consumers | Comment |
|---|---|---|---|---|
| **British Columbia** | PST | Yes – 7% | No | • PST does not apply to residential energy, including electricity, acquired solely for residential use in a residential dwelling<br>• BC's carbon tax does not apply to electricity bills. |
| **Alberta** | None | N/A | N/A | • Alberta does not have a provincial sales tax. |
| **Saskatchewan** | PST | Yes – 5%<br>Except for electricity purchased to heat a building. | No | • PST does not apply to electricity purchased for use in a residential dwelling.<br>• PST does not apply to electricity purchased for use in heating a building that is heated solely by the electricity. |
| **Manitoba** | PST | Yes – 8%<br>Reduced rate of 1.6% applies to electricity used by a qualifying business to operate machinery | Yes – 8%<br>Electricity purchased for mixed use, 80% of which is home heating, has a reduced rate of 1.4%. Electricity solely to heat the purchaser's home is exempt. | • Winnipeg also applies a tax of 2.5% on residential and 5% on commercial. |
| **Ontario** | HST | Yes (less ITC (input tax credits)) | Yes – 8% | |
| **Quebec** | QST | Yes (less ITCs) | Yes – 9.975% | |
| **Nova Scotia** | HST | Yes (less ITCs) | Yes – 10% less provincially administered rebate. | • Rebate is equal to the provincial portion of the HST, and is administered similar to OCEB, but applies to many energy sources. |
| **New Brunswick** | HST | Yes (less ITCs) | Yes – 10% | |
| **Prince Edward Island** | HST | Yes (less ITCs) | Yes – 9% (10% beginning Oct 1, 2016) | |
| **Newfoundland and Labrador** | HST | Yes (less ITCs) | Yes – 10% | • Had a provincially administered Home Heating Rebate program until July 2015. |
| **Federal** | GST | Yes (less ITCs) | Yes – 5% | |

**From:** Ronald Kwan
**To:** John Kim; Shajee Kathirgamanathan
**Cc:** Tomasz Bugajski
**Subject:** FW: Major Projects this week
**Date:** Thursday, September 08, 2016 11:41:45 PM
**Attachments:** Cab min Sept2-16 CO MOF Edits CLEAN.DOCX
Cabinet Submission - Electricity Price Mitigation - CLEAN.PPTX
Cabinet Submission - Electricity Price Mitigation 20160908 DMO Tracked.pptx

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Hi,

Please review.

Ron

-----Original Message-----
From: Young, Gwendolynne (MOF) [mailto:Gwendolynne.Young@ontario.ca]
Sent: September-08-16 10:07 PM
To: Sriram Subrahmanyan (MOF) <Sriram.Subrahmanyan@ontario.ca>; Jenarra DeSouza (MEDTE/MRI) <Jenarra.DeSouza@ontario.ca>; Saad Baig (MOI-MTO) <Saad.Baig@ontario.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
Cc: David McLean (MOF) <David.McLean@ontario.ca>
Subject: Fw: Major Projects this week

Hi All - attached are updated materials from ENERGY.

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: McLean, David (MOF) <David.McLean@ontario.ca>
Sent: Thursday, September 8, 2016 8:32 PM
To: Young, Gwendolynne (MOF)
Subject: FW: Major Projects this week

FYI

From: Katona, Keley (ENERGY)
Sent: September 8, 2016 8:32 PM
To: Kwamena, Boafoa (CAB); McLean, David (MOF)
Cc: Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB); Moore, Karen (CAB)
Subject: RE: Major Projects this week

Hi,
Attached is the latest iteration of the Cabinet submission, including an updated minute. This is with our MO for review but wanted to keep you updated so you can continue to revise your TB / CAB notes. Note that some of the numbers have changed to remain consistent with methodology throughout the submission.
Keley

From: Katona, Keley (ENERGY)
Sent: September-08-16 12:22 PM
To: Kwamena, Boafoa (CAB); McLean, David (MOF)
Cc: Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
Subject: RE: Major Projects this week

For your records, attached is what was circulated at Major Projects today.

From: Katona, Keley (ENERGY)
Sent: September-07-16 3:38 PM
To: Kwamena, Boafoa (CAB); McLean, David (MOF)
Cc: Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
Subject: RE: Major Projects this week

We're making edits based on comments from our MO. Could be this evening or tomorrow morning.

From: Kwamena, Boafoa (CAB)
Sent: September-07-16 3:33 PM
To: Katona, Keley (ENERGY); McLean, David (MOF)
Cc: Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
Subject: RE: Major Projects this week

Hi

Will be likely receive material  later today or tomorrow?

Thanks

From: Katona, Keley (ENERGY)
Sent: September-07-16 10:12 AM
To: Kwamena, Boafoa (CAB); McLean, David (MOF)
Cc: Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
Subject: Re: Major Projects this week

Sorry, disregard, we'll make it work on our end. Thanks.

From: Katona, Keley (ENERGY)
Sent: Wednesday, September 7, 2016 10:06 AM
To: Kwamena, Boafoa (CAB); McLean, David (MOF)
Cc: Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
Subject: RE: Major Projects this week

Hi Boafoa,

Wondering if it's possible for the electricity item to be last on the agenda tomorrow. We have a Minister's briefing which conflicts with Major Projects, involving the same staff and it would be very helpful if we could be on at 11am.

Thanks,
Keley

From: Kwamena, Boafoa (CAB)
Sent: September-06-16 5:29 PM
To: Katona, Keley (ENERGY); McLean, David (MOF)
Cc: Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
Subject: Major Projects this week

Hi Keley/David

We will be adding the Electricity Pricing Mitigation item to Major Projects this Thursday. This will be an opportunity to ensure everyone is on the same page in advance of the TB trip next week.  Major Projects is scheduled from 10:30 to 11:30 on Thursday. This item will be the first–10:30 to 11:00. Please let me know if this time doesn't work or if there are any concerns.

Thanks
Boafoa

Boafoa Kwamena
Special Advisor
Office of the Secretary of the Cabinet
Cabinet Office
416-325-4400
Boafoa.kwamena2@ontario.ca<mailto:Boafoa.kwamena2@ontario.ca>

***Policy***

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

i) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

ii) Increase the total amount of rate protection available to R2 ~~with~~ low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2004.

iii) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

iv) Expand~~ing~~ eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

2. ENERGY seek necessary TB/MBC approvals.

3. ENERGY seek approvals for:

i) the proposed *Ontario Rebate for Electricity Consumers Act, 2016*~~ **[NTD-LSB – please confirm what title to use.]** and any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments and consequential legislative amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*~~, which would, subject to the Legislature's approval of the Act, includ~~e~~~~ing~~ the following elements:

i. The rebate would be available starting January 1, 2017;
ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers' electricity bills;
iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way

in which electricity vendors providing the rebate are to be reimbursed;

v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;

vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments.

~~vi.~~vii. The legislation would include consequential amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*,

viii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date.

4. ENERGY to report back to LRC and Cabinet for approval of any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments.

5.~~4~~. ENERGY notes the following amendments:

i) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the *Electricity Act, 1998* to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

ii) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density ~~rural~~ electricity customers and provide for a periodic adjustment mechanism.

~~5~~6. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

7~~6~~. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan.

~~***TB/MBC***~~

~~TBC with TBS~~

***~~LRC~~***

Cabinet approved version of the proposed ~~[~~name~~]~~ *Ontario Rebate for Electricity Consumers Act, 2016* ~~of this draft legislation~~ for introduction, subject to the following:

1. The Office of Legislative Counsel is authorized to prepare a French version and to make minor adjustments to the English version, for the purpose of ensuring consistency between the two versions and making other improvements or correcting mistakes discovered in the translation process.

# Electricity Price Mitigation

## Ministry of Energy

## WORKING DRAFT

## Date: September 12, 2016

Minister

Deputy Minister

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

- Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables.
  - This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%.

- Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online.

- The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers.

# Electricity Consumer Classes

- There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

**** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

# Current Rate Base Mitigation Programs

- Ontario has implemented several programs to help electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers;
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs; and
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- These programs have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial) as shown in the table below:

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

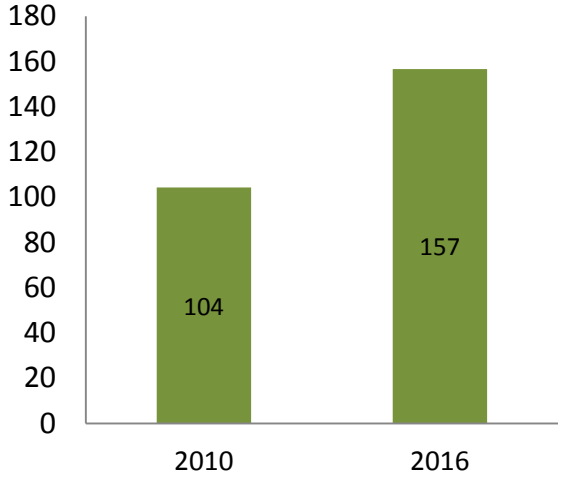
**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

# Prices by Electricity Consumer Class

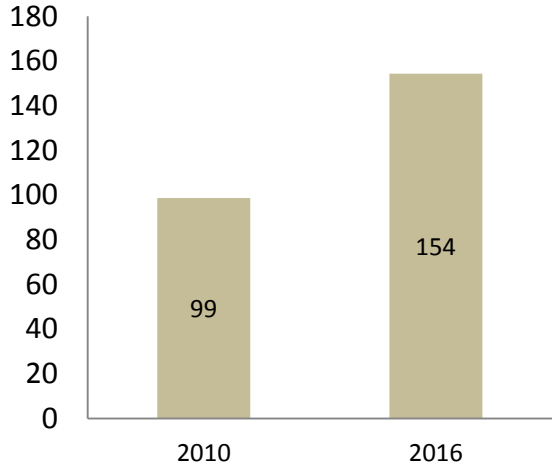
- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.

- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers.

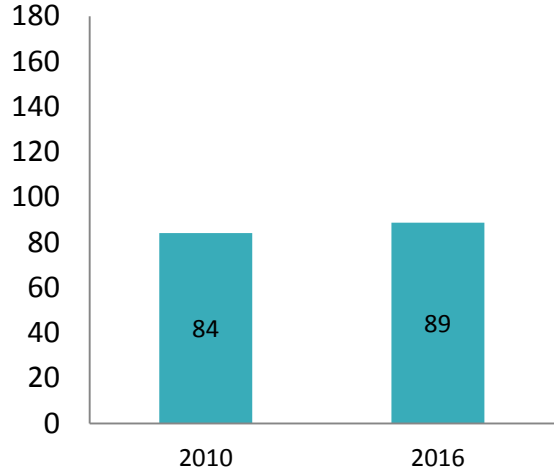
**Typical Residential Bill (750/kWh per month)**




**Typical Class B (Commercial) Price ($/MWh)**




**Typical Class A (Industrial) Price ($/MWh)**



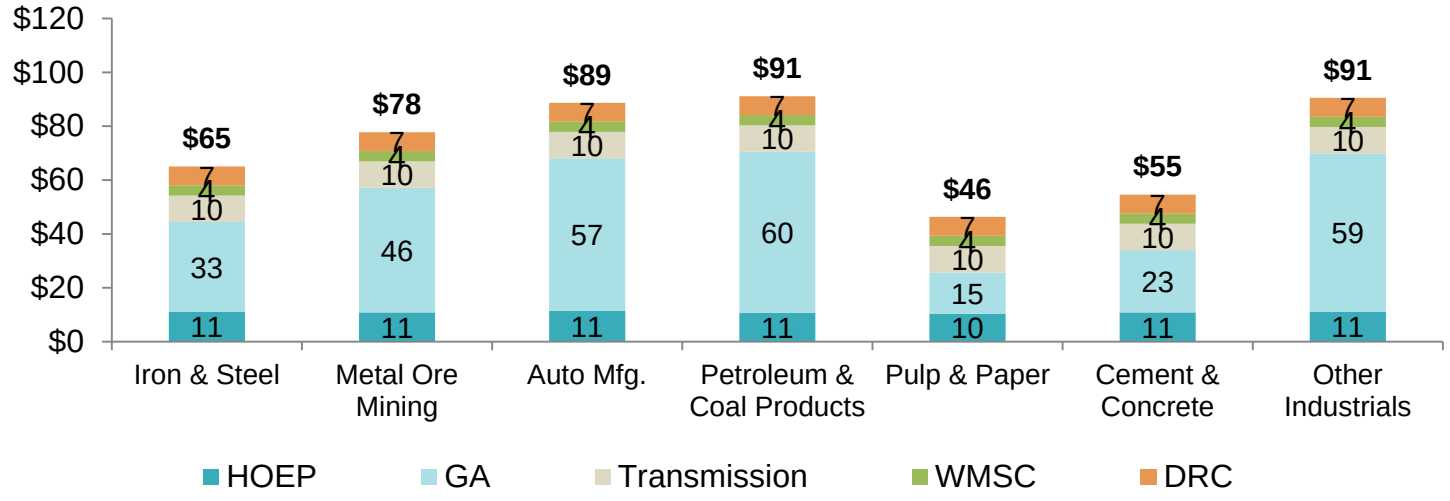

**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

# Industrial Electricity Prices Vary by Sector

- While Class A (industrial consumers) benefit from participation in the ICI program, there is a significant amount of variability in the ability to shift away from peak periods across customer classes, impacting the savings achieved.

- The below chart shows the prices paid in 2015 across a number of industrial sectors. Consumers in the north that receive rebates under the Northern Industrial Electricity Rate Program (NIERP) achieve rates that are $20/MWh lower than the below.

**Average all-in Class A, Transmission-connected Electricity Prices by Industrial Sector (estimated $/MWh), Year-to-Date June 2016**




**Note:** HOEP = Hourly Ontario Energy Price, GA = Global Adjustment, WMSC = Wholesale Market Service Charges, DRC = Debt Retirement Charge

# Recent Actions to Bend the Cost Curve

- Since 2013, a number of actions have been taken to reduce overall electricity system costs:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

# Rate Mitigation

- The 2016 Budget committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) committed $1.3 billion from the Greenhouse Gas Reduction Account (GGRA) over the first compliance period (2017-2020).

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:

  - **Tax-based Lever:**
    - Provide an on-bill rebate funded from the tax-base to all consumers or specific classes of consumers (i.e., the Ontario Clean Energy Benefit (OCEB) provided a rebate for eligible electricity consumers).

  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.

  - **Cap and Trade Proceeds Lever:**
    - Redirect cap and trade proceeds to offset the cost of existing initiatives that help reduce greenhouse gas (GHG) emissions (i.e., the CCAP committed to offset the impact of cap and trade and to keep electricity rates affordable).

# Rate Mitigation Proposal

- The Ministry of Energy is proposing to implement the following electricity price mitigation initiatives. The approach identified below would provide relief across all electricity consumer classes:

  1) Provide an 8% rebate equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms) and update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers; and

  2) Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial) and redirect cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

- The following slides provide additional information on the above initiatives.

***Note:** Eligibility for the 8% rebate would be similar to OCEB and include some customers not on the Regulated Price Plan (RPP), such as Independent Power Authority consumers and consumers that have opted-out of RPP.

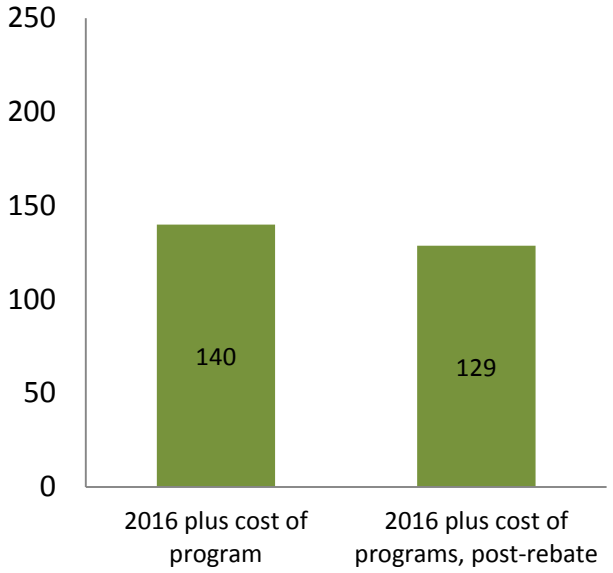
# Rate Mitigation Proposal – Illustrative Benefits*

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Benefit | | Class B (Commercial) Benefit | Class A (Industrial) Benefit | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural*** (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br><br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br><br>(-8%) | -$45/ month<br><br>(-20%) | -$3/MWh<br><br>(-2%) | -$3/ MWh<br><br>(-3%) | Up to -$52/MWh<br><br>(-34%) |

- **Notes:** The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh. The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. Proceeds recycling is an estimated average over the first compliance period (2017-2020).

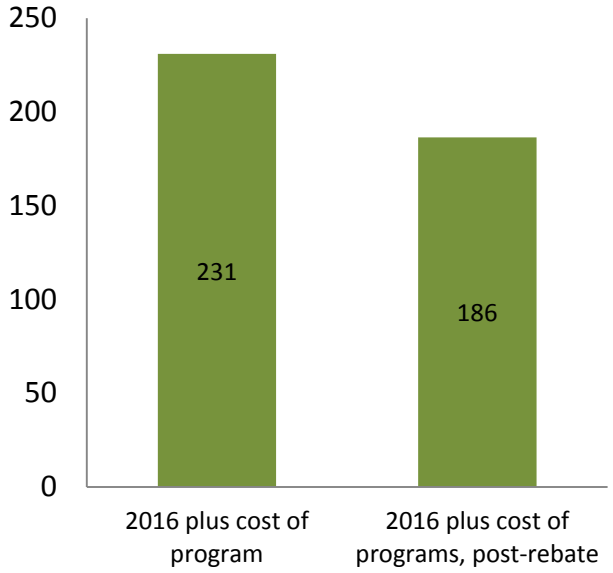
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class

**Typical Residential Bill**
**750 kWh per month, 8% only**




The pre-tax impact is a 8% reduction.

**Rural (R2) Residential Bill**
**1,000 kWh per month, 8% and RRRP Update**

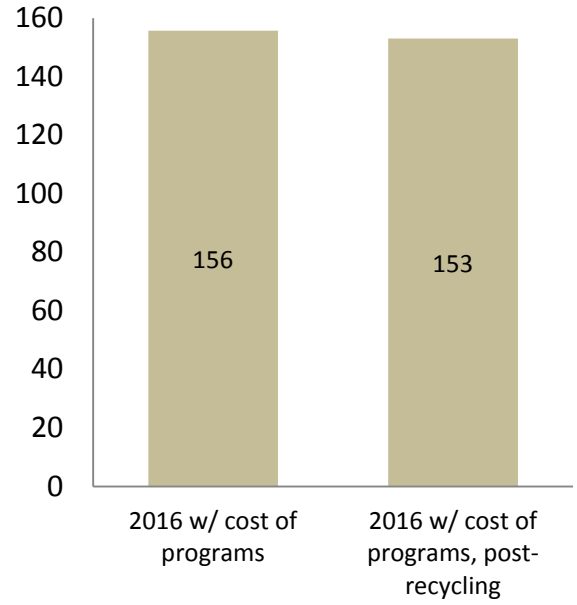



The pre-tax impact of the rate mitigation initiatives is a 20% reduction.

**Note:** Residential bills reflect electricity rates as per the Regulated Rate Plan (RRP) which came into effect on May 1, 2016.

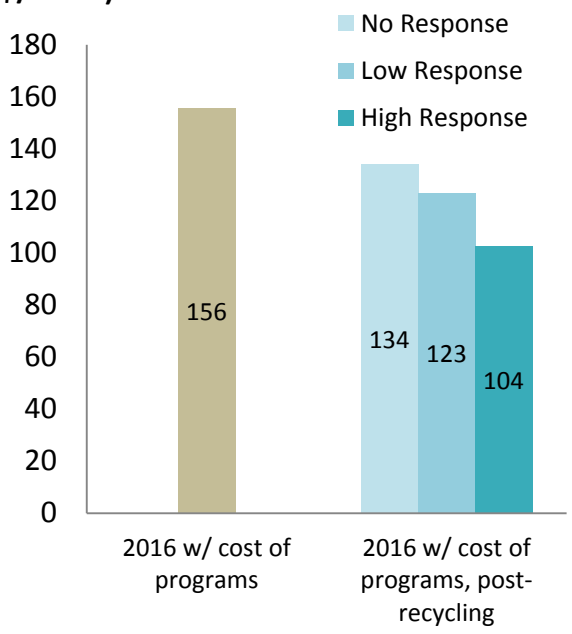
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class (cont'd)

**Typical Class B (Commercial) Price ($/MWh)**



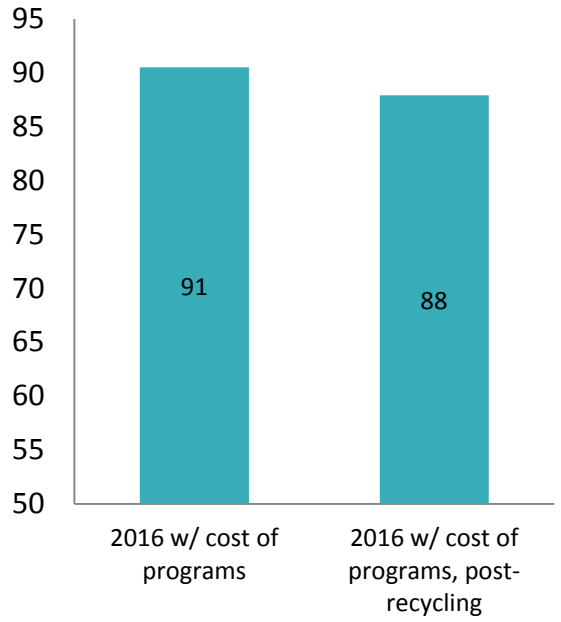

**Class B:** The benefit is a 2% reduction.

**Typical New Class A Price ($/MWh)**




**New Class A:** The benefit is a reduction of 14% to 34%.

**Typical Class A (Industrial) Price ($/MWh)**




**Existing Class A:** The benefit of the rate mitigation initiatives is a 3% reduction.

**Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

# 1) Regulated Price Plan Eligible Consumers and Rural or Remote Rate Protection Update

# 8% Rebate to Regulated Price Plan Eligible Consumers

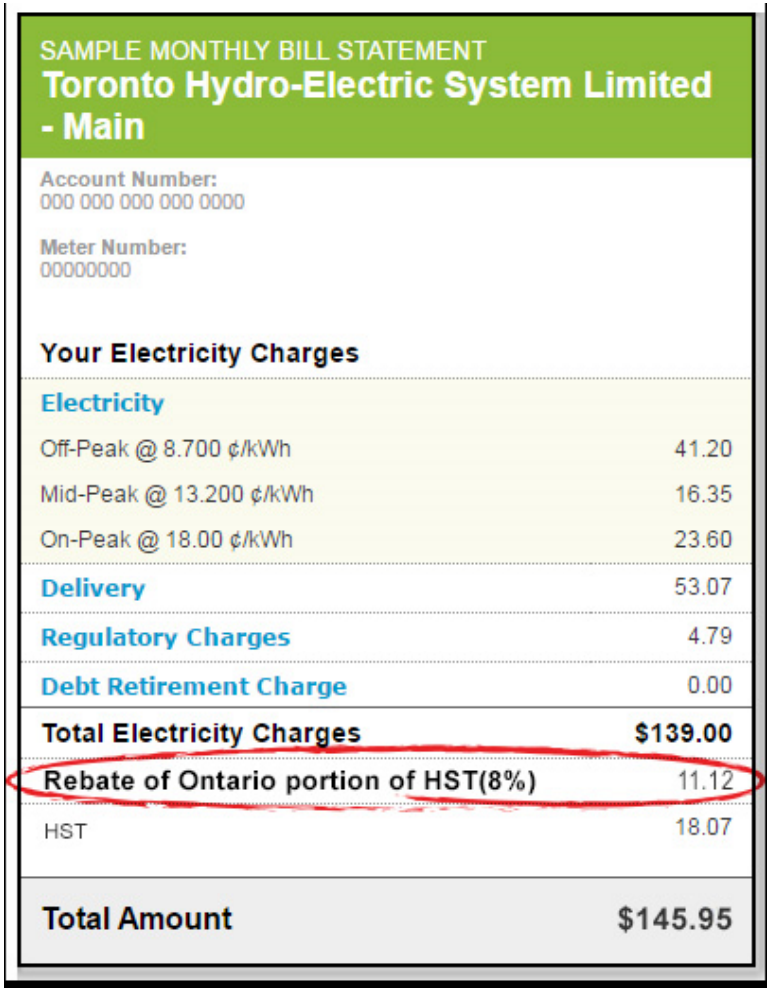
- Legislation/regulation will be introduced to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit.
  - This would be equivalent to the provincial portion of the HST*.

| **Eligible for the 8% rebate**<br>(< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate**<br>(> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>  − Coffee / snack retailer<br>  − Convenience store<br>  − Apparel store<br>  − Hair salon<br>  − Small insurance office | • Class A consumers<br>  − Manufacturer<br>  − Large grocery store<br>  − Mines<br>  − Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>  − Commercial offices (low rise)<br>  − Hotel<br>  − General warehousing |

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).

***Note:** An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

# Illustrative Electricity Bill Mock-Up



SAMPLE MONTHLY BILL STATEMENT

**Toronto Hydro-Electric System Limited - Main**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| **Rebate of Ontario portion of HST(8%)** | 11.12 |
| HST | 18.07 |
| **Total Amount** | **$145.95** |

**Note:** Final bill presentment pending submission to LRC.

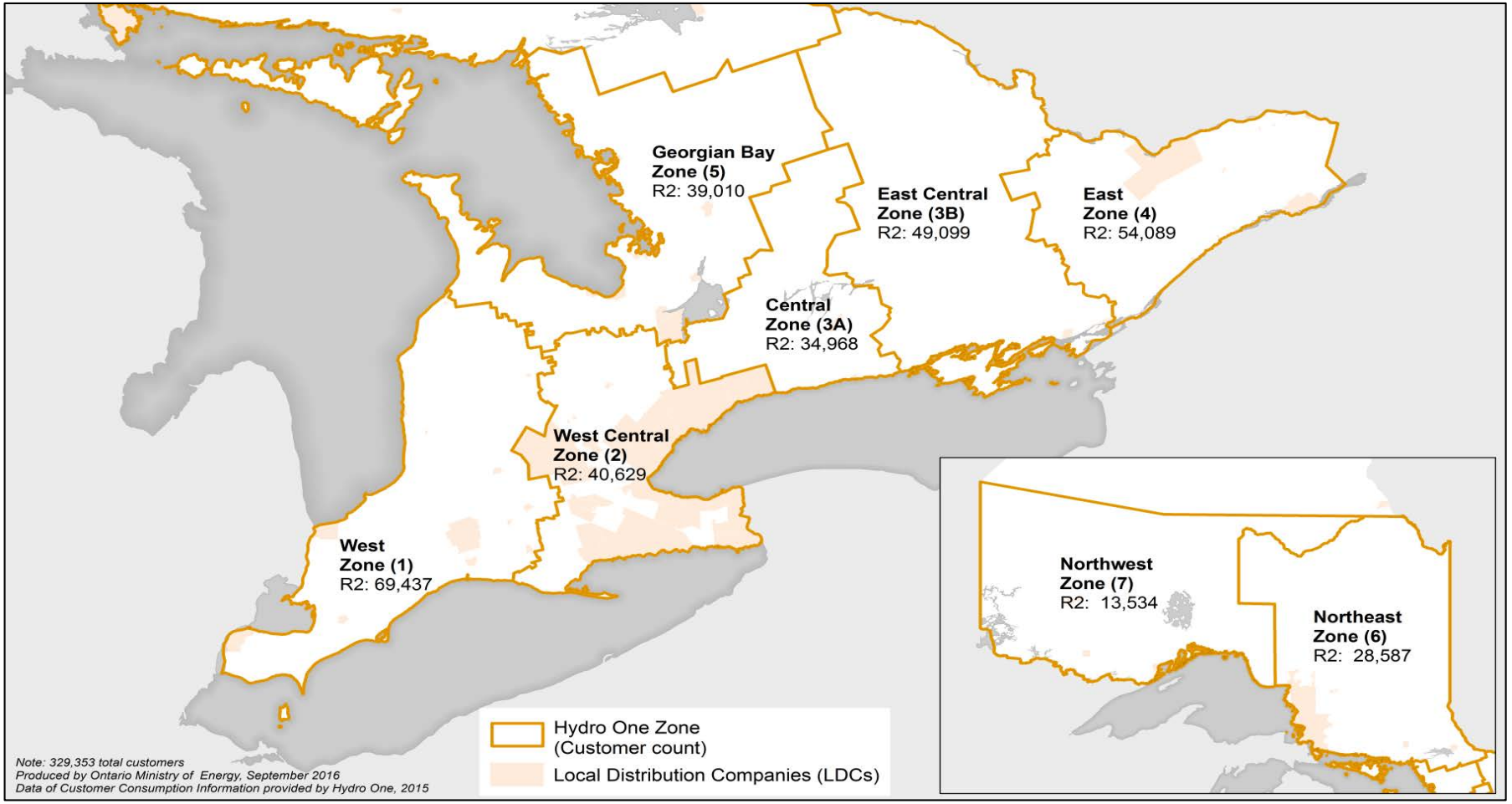
# Rural or Remote Rate Protection (RRRP) Update

- ENERGY is proposing to amend O.Reg 442/01 to provide an additional $110 million in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

- RRRP is a rate-based funded program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.
  - Today, RRRP is a $175-million program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
  - The majority of the program funding ($125.5 million) is provided to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a rebate of $31.50. The proposed update to the program would increase the benefit to $60/month.
  - RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

- An additional $110 million in program funding would see an increased benefit of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.
  - This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
  - The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the benefit remains constant.

# Rural or Remote Rate Protection (RRRP) Update – R2 Customers by Region



## 2) Expand Industrial Conservation Initiative and Redirect Cap and Trade Proceeds

# Industrial Conservation Initiative (ICI) Expansion

- ENERGY is proposing to amend O. Reg. 429/04 to expand ICI eligibility. The base setting period for the expanded program would begin in 2017, with the benefit seen by consumers starting in 2018.

- Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers).
  - Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

- ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:
  - Reduce electricity peak demand and electricity system costs by incenting more consumers to lower their electricity demand during peak periods;
  - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
  - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

# ICI Expansion – Projected Impact

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

- The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility
  - Short-term refers to the expected impact once ICI billing begins for new Class A consumers (one year after expanded eligibility takes place).
  - Long-term is the expected impact once new Class A consumers have had time to significantly change their behaviour and investment decisions in response to the ICI.

- The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating.

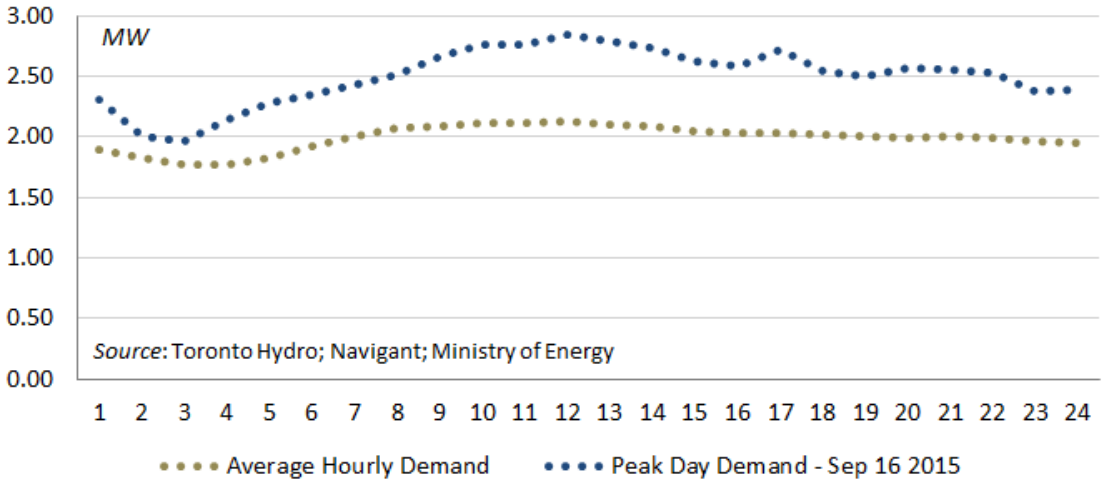
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.

# ICI Expansion – Illustrative Example of Newly Eligible Consumer

- Plastics manufacturers, such as Poly Five Plastics in Toronto, are among the consumers that would become eligible if the threshold was lowered.
- Such manufacturers fall under NAICS* code 32 and have relatively flat load profiles, reflecting around the clock production. This means they would be beneficiaries of ICI even with no change in consumption behaviour.
- Companies like Poly Five Plastics could expect to see greater savings if they are willing and able to respond to the higher prices during high demand hours.

**Typical Demand Profile, 2-3 MW Consumer**

*Manufacturer, NAICS Code 32 - Nov 2014 to Oct 2015*




**Illustrative Bill Savings, 2-3 MW Consumer**

| | *Status Quo* | *No Price Response* | *Short Term Response* | *Long Term Response* |
|---|---|---|---|---|
| | **Class B** | **Class A** | **Class A** | **Class A** |
| GA | 75.26 | 58.06 | 43.55 | 32.03 |
| Total bill | **126.28** | **109.09** | **94.58** | **83.06** |
| *Savings* | | *-14%* | *-25%* | *-34%* |

Source: Navigant; Ministry of Energy

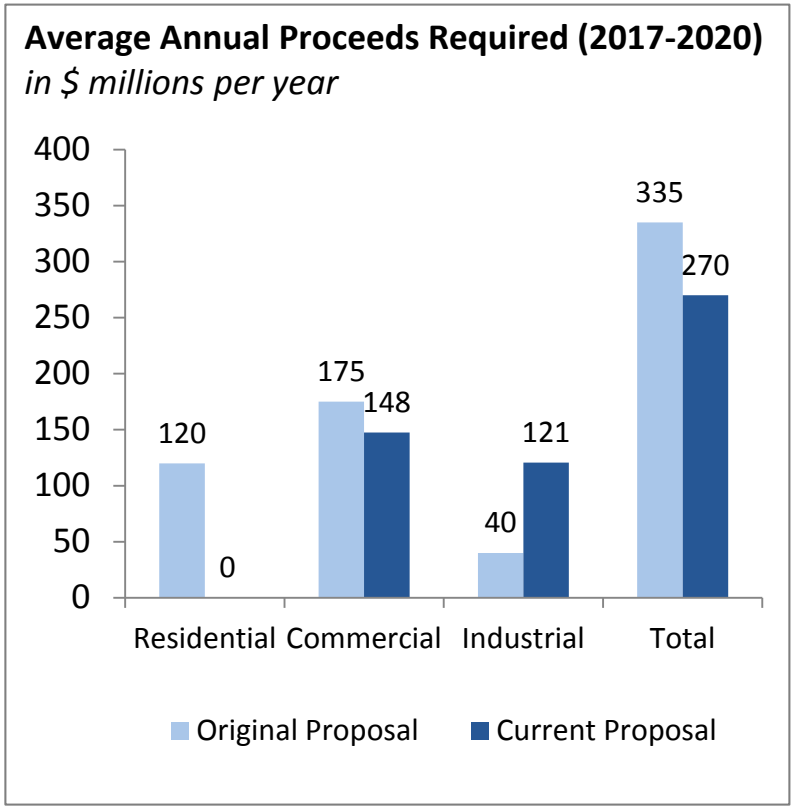
*** Note:** North American Industry Classification System (NAICS) is the standard used by statistical agencies in classifying business establishments.

# Redirect Cap and Trade Proceeds Recycling

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.
  - To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).

- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

- The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $0.24 billion over the first compliance period).




**Note:** The original proposal was to offset the impact of cap and trade via GA to the average industrial, and would provide a benefit to commercial and residential consumers. Current proposal would recycle proceeds volumetrically to industrial and commercial consumers.

# Redirect Cap and Trade Proceeds Recycling

- Redirecting cap and trade auction proceeds to lower the cost of electricity would offset consumers' contributions to non-emitting generation.

- Redirecting helps pay for committed investments/initiatives which reduce GHGs (e.g., non-emitting generation and conservation programs).
  - Due to the long-term nature (typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period. These costs will continue well beyond the timelines described in the CCAP.

- Redirecting cap and trade auction proceeds volumetrically to Class B (commercial) and Class A (industrial) consumers maintains the incentive to shift consumption from on-peak to off-peak hours.

- Using cap and trade auction proceeds to lower the cost of electricity would make it more competitive with traditionally cheaper fossil fuels.

- By using the proceeds to lower the cost of electricity, there is potential to incent fuel-switching away from fossil fuels toward much cleaner grid-connected electricity and support CCAP goals of electrification.

# Considerations

# Implementation

- On September 15, 2016, ENERGY is proposing to introduce the *Ontario Rebate for Electricity Consumers Act, 2016*.
  - If passed, the legislation would require a general regulation.
  - Amendments would also be required to various regulations to expand ICI and RRRP.

- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. ENERGY (possibly through Ontario Energy Board) will consult with LDCs to accurately assess these impacts once the program has been announced.
  - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - Timing concerns may be alleviated by allowing LDCs to provide retroactive rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.

- Detailed messaging on bills (for "low-volume" consumer bills ) could be implemented by amending O. Reg. 275/04 (made under the Ontario Energy Board Act, 1998).
  - The rebate would not be directly linked to HST.
  - With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.

- While the impact of cap and trade would be added to electricity bills as of January 2017, the offsetting effect of proceeds recycling may not occur immediately depending on implementation and potential alignment with the first auction expected in March 2017.
  - Should there be low demand for carbon allowances, auction proceeds would be less than the amount projected in the CCAP. This could mean a short-fall for proceeds recycling as proposed. However, natural gas utilities are expected to purchase allowances quarterly equal to their emissions.

- ENERGY will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

# Fiscal

- The Climate Change Action Plan (CCAP) committed about $1.3 billion over four years for electricity mitigation for industrial, commercial and residential consumers from GGRA proceeds.
  - The current rate mitigation proposal requires approximately 20% less in proceeds, saving approximately $0.24 billion relative to the CCAP commitment over the first compliance period (2017-2020).

- The 8% rebate is expected to cost about $1 billion per year (i.e., $4 billion from 2017-2020), representing an additional pressure on the fiscal plan.
  - Consideration could be given to allocating the $0.24 billion in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset.
  - If cap and trade auctions are under-subscribed, the $0.24 billion may not be available for reallocation to the fiscal plan.

- In the absence of any offset strategies, the full cost of the rate mitigation approach would add to the pressures and risks that need to be managed in order for the government to balance the budget in 2017-18 and stay balanced in 2018-19 and beyond.

# Legal

- In order to avoid characterization as an unconstitutional tax, a non-tax levy must have a sufficient nexus between those who pay and the regulatory scheme in the sense that those who pay have caused the need for or benefit from the regulatory scheme. Although the case law is not developed on the extent to which some regulated actors can be required to subsidize others, risk is reduced to the extent that any cross-subsidization serves true regulatory goals rather than revenue re-distribution goals.

- HST Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):
  - Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

- ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):
  - Shifting costs to some consumers to lower rates for others without more carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

- RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):
  - Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

- Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):
  - To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

# Communications

- Public high-profile communications would coincide with introduction of legislation (September 2016).
  - Stakeholder outreach/technical briefings with LDCs, Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.
  - Echo public announcements in southwest and north; proactive provincial/local media.

- **Positioning:**
  - A fiscally prudent plan to benefit all ratepayers in a lasting, meaningful way.
  - Rural customers will receive the largest single rate relief ever.
  - Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.

- **Issues Considerations:**
  - Significant benefit for rural and remote residential customers; net gain for all residential customers.
  - More complex to communicate, but can be presented as a full plan that includes reforms and improvements to the system.
  - Consistent with cap-and-trade commitment that no business sector will be left worse off, though small businesses outside ICI will benefit the least.

Pending Update

Ontario

# Key Messages

- We are taking unprecedented action to help people in their everyday lives.
- Residential ratepayers and other RPP eligible ratepayers will receive an eight per cent rebate on their electricity bill, equivalent to the provincial portion of the HST.
- Modernizing the RRRP will benefit 330,000 families in rural Ontario with significant reductions to their electricity bills – $28 a month, in addition to the eight per cent rebate.
- Over a thousand more Ontario businesses will be eligible to benefit from the ICI program, helping them stay competitive and grow.
- These actions will assist over five million families, farms and small businesses across Ontario.
- These actions today join our many existing initiatives too help keep electricity in Ontario clean, reliable and affordable.

# Proposed Cabinet Minute

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

    i. Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

    ii. Increase the total amount of rate protection available to R2 low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2004.

    iii. Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

    iv. Expand eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

# Proposed Cabinet Minute (cont'd)

2. ENERGY seek necessary TB/MBC approvals. **[TBD]**

3. ENERGY seek approvals for the proposed *Ontario Rebate for Electricity Consumers Act, 2016* which would, subject to the Legislature's approval of the Act, include the following elements:
   i. The rebate would be available starting January 1, 2017;
   ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
   iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers' electricity bills;
   iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way in which electricity vendors providing the rebate are to be reimbursed;
   v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;
   vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments; and
   vii. The legislation would include consequential amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*; and
   viii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date

# Proposed Cabinet Minute (cont'd)

4. ENERGY to report back to LRC and Cabinet for approval of any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments.

5. ENERGY notes the following amendments:

   i. Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the *Electricity Act, 1998* to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

   ii. Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density electricity customers and provide for a periodic adjustment mechanism.

6. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

7. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan

# Proposed Cabinet Minute (cont'd)

Cabinet approved version of the proposed *Ontario Rebate for Electricity Consumers Act, 2016* for introduction, subject to the following:

1. The Office of Legislative Counsel is authorized to prepare a French version and to make minor adjustments to the English version, for the purpose of ensuring consistency between the two versions and making other improvements or correcting mistakes discovered in the translation process.

# Appendix

# Illustrative Bill Impacts

| | Current Bill (after cost of new programs, before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (after cost of new programs, before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $140 /month | N/A | 8% pre-tax rebate: - $11 | $129 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $231 /month | RRRP: –$32 | 8% pre-tax rebate + Updated RRRP: - $45 | $186 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $102 /month | OESP: -$38 | 8% pre-tax rebate: - $8 | $94 /month |
| Small Business (Toronto – 403,200 kWh/month) | $150 /MWh | N/A | 8% pre-tax rebate: - $12/MWh | $138 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $204 /MWh | N/A | 8% pre-tax rebate: - $16/MWh | $188 /MWh |

***Note:** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as $1,332 per year for a family.
** income of less than $28,000, family of 4.

Totals may not add due to rounding.

# Illustrative Bill Impacts (cont'd)

| | Current Rate | Current Rate mitigation initiatives* | Cost of new initiatives (RRRP and ICI) | New Rate Mitigation initiatives | Net Impact, | New Rate, |
|---|---|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | -$0.90 /MWh (-1%) | $107 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI + NIERP: -$69/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $68 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling + ICI: -$53.90/MWh | -$52 /MWh (-34%) | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $151 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh | $153 /MWh |

**Notes:**

1) There is the potential for a consumer eligible for the Regulated Price Plan to opt-out of the Regulated Price Plan to opt-in to Class A and receive all three benefits (i.e., Regulated Price Plan, ICI and proceeds recycling).

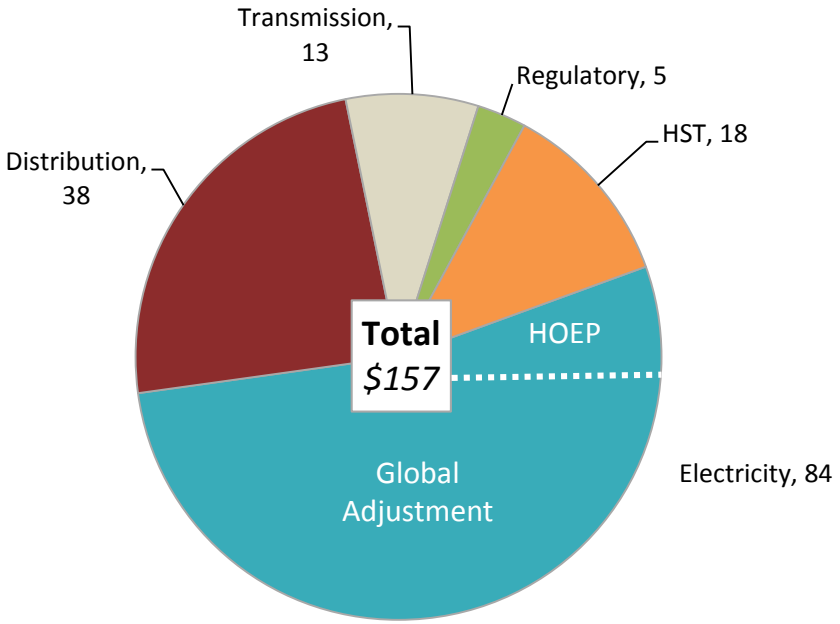
2) The impact of cap and trade would not be added to electricity bills until 2017 and varies per year over the course of the first compliance period. For illustrative purposes, the estimated average benefit of proceeds recycling is shown above.

# Residential Electricity Prices

- There are approximately 5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of May 1, 2016 (750 kWh/month)*




*Source*: OEB, Toronto Hydro

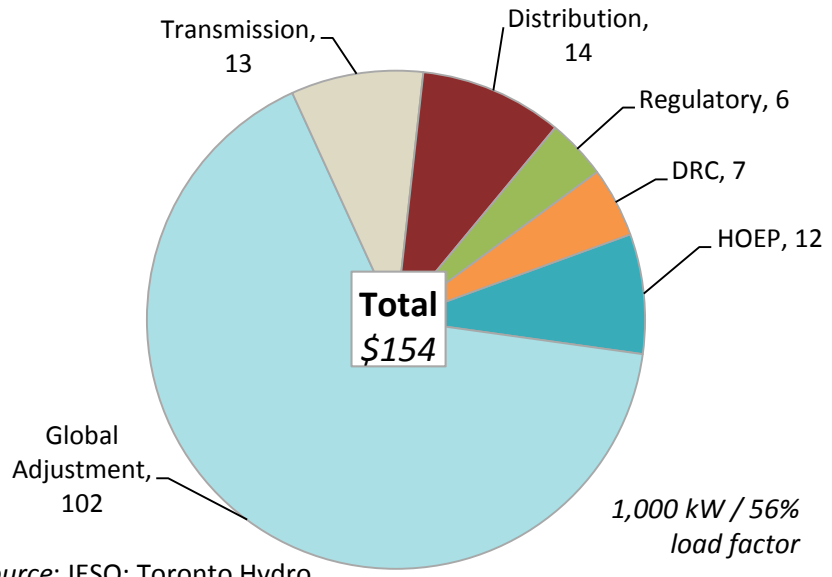
# Commercial Electricity Prices

- There are approximately 400,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.

- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




*Source*: IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.

- Targeted pricing programs are currently not available for Class B consumers.

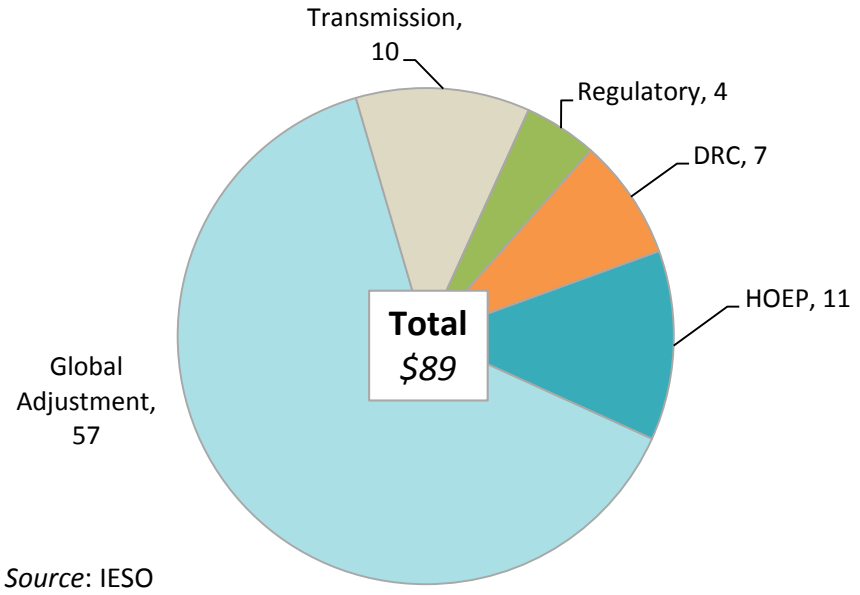
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*




*Source*: IESO

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $64/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Sales Tax Treatment in Other Jurisdictions

| Jurisdiction | Tax | Tax Paid by Business Consumers | Tax Paid by Residential Consumers | Comment |
|---|---|---|---|---|
| **British Columbia** | PST | Yes – 7% | No | • PST does not apply to residential energy, including electricity, acquired solely for residential use in a residential dwelling<br>• BC's carbon tax does not apply to electricity bills. |
| **Alberta** | None | N/A | N/A | • Alberta does not have a provincial sales tax. |
| **Saskatchewan** | PST | Yes – 5%<br>Except for electricity purchased to heat a building. | No | • PST does not apply to electricity purchased for use in a residential dwelling.<br>• PST does not apply to electricity purchased for use in heating a building that is heated solely by the electricity. |
| **Manitoba** | PST | Yes – 8%<br>Reduced rate of 1.6% applies to electricity used by a qualifying business to operate machinery | Yes – 8%<br>Electricity purchased for mixed use, 80% of which is home heating, has a reduced rate of 1.4%. Electricity solely to heat the purchaser's home is exempt. | • Winnipeg also applies a tax of 2.5% on residential and 5% on commercial. |
| **Ontario** | HST | Yes (less ITC (input tax credits)) | Yes – 8% | |
| **Quebec** | QST | Yes (less ITCs) | Yes – 9.975% | |
| **Nova Scotia** | HST | Yes (less ITCs) | Yes – 10% less provincially administered rebate. | • Rebate is equal to the provincial portion of the HST, and is administered similar to OCEB, but applies to many energy sources. |
| **New Brunswick** | HST | Yes (less ITCs) | Yes – 10% | |
| **Prince Edward Island** | HST | Yes (less ITCs) | Yes – 9% (10% beginning Oct 1, 2016) | |
| **Newfoundland and Labrador** | HST | Yes (less ITCs) | Yes – 10% | • Had a provincially administered Home Heating Rebate program until July 2015. |
| **Federal** | GST | Yes (less ITCs) | Yes – 5% | |

# Electricity Price Mitigation

## Ministry of Energy

## WORKING DRAFT

## Date: September 14, 2016

Minister

Deputy Minister

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

- Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables.
  - This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%.

- Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online.

- The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers.

# Electricity Consumer Classes

- There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

**** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

# Current Rate Base Mitigation Programs

- Ontario has implemented several programs to help electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers;
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs; and
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- These programs have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial) as shown in the table below:

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

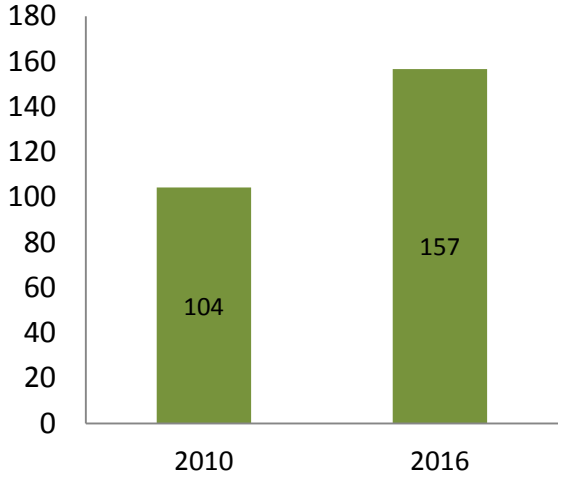
**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

# Prices by Electricity Consumer Class

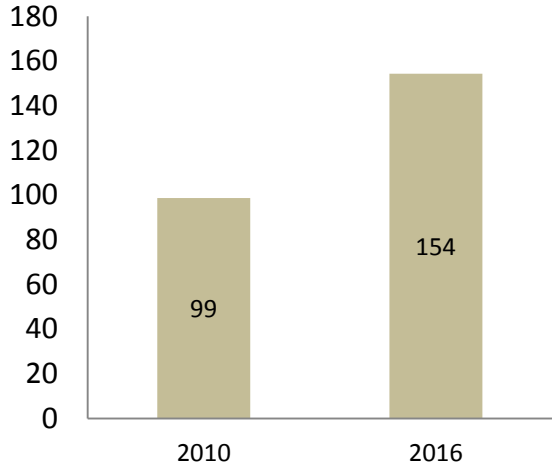
- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.

- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers.

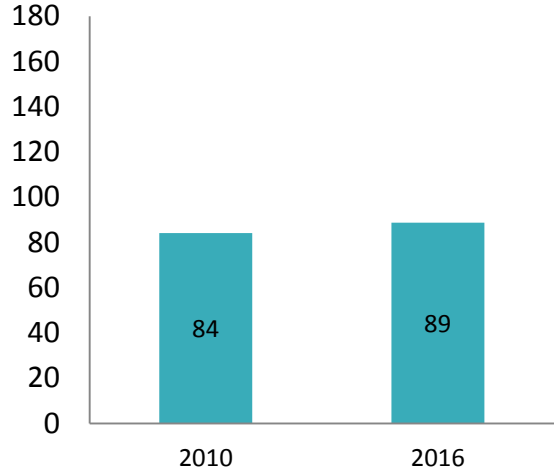
**Typical Residential Bill (750/kWh per month)**




**Typical Class B (Commercial) Price ($/MWh)**




**Typical Class A (Industrial) Price ($/MWh)**



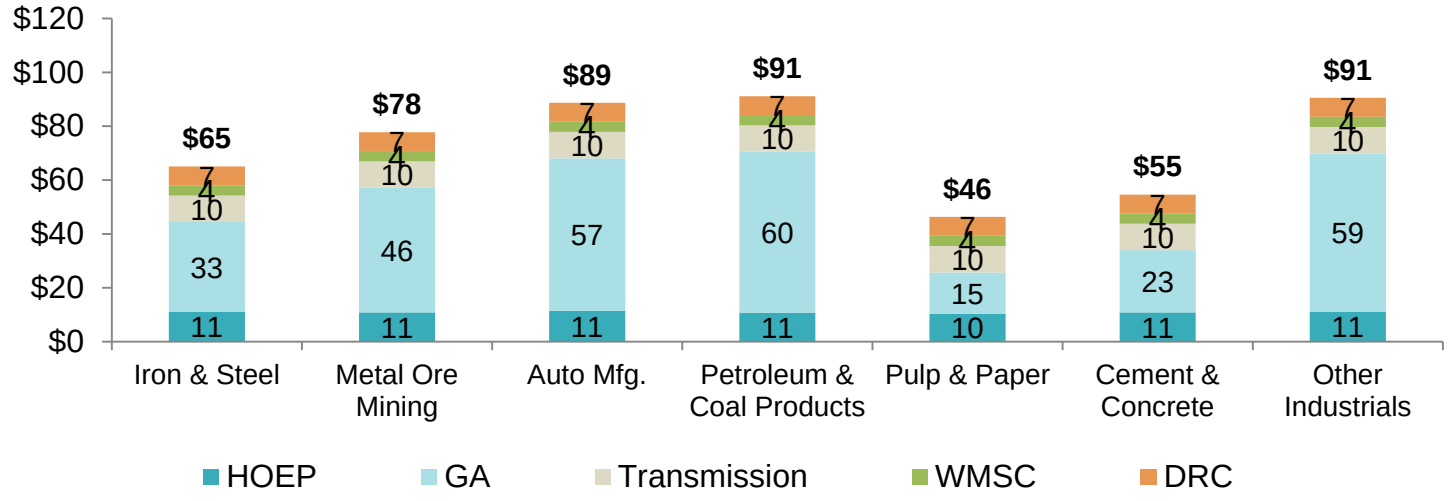

**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

# Industrial Electricity Prices Vary by Sector

- While Class A (industrial consumers) benefit from participation in the ICI program, there is a significant amount of variability in the ability to shift away from peak periods across customer classes, impacting the savings achieved.

- The below chart shows the prices paid in 2015 across a number of industrial sectors. Consumers in the north that receive rebates under the Northern Industrial Electricity Rate Program (NIERP) achieve rates that are $20/MWh lower than the below.

**Average all-in Class A, Transmission-connected Electricity Prices by Industrial Sector (estimated $/MWh), Year-to-Date June 2016**




**Note:** HOEP = Hourly Ontario Energy Price, GA = Global Adjustment, WMSC = Wholesale Market Service Charges, DRC = Debt Retirement Charge

# Recent Actions to Bend the Cost Curve

- Since 2013, a number of actions have been taken to reduce overall electricity system costs:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

# Rate Mitigation

- The 2016 Budget committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) committed $1.3 billion from the Greenhouse Gas Reduction Account (GGRA) over the first compliance period (2017-2020).

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:

  - **Tax-based Lever:**
    - Provide an on-bill rebate funded from the tax-base to all consumers or specific classes of consumers (i.e., the Ontario Clean Energy Benefit (OCEB) provided a rebate for eligible electricity consumers).

  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.

  - **Cap and Trade Proceeds Lever:**
    - Redirect cap and trade proceeds to offset the cost of existing initiatives that help reduce greenhouse gas (GHG) emissions (i.e., the CCAP committed to offset the impact of cap and trade and to keep electricity rates affordable).

# Rate Mitigation Proposal

- The Ministry of Energy is proposing to implement the following electricity price mitigation initiatives. The approach identified below would provide relief across all electricity consumer classes:

  1) Provide an 8% rebate equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms) and update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers; and

  2) Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial) and redirect cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

- The following slides provide additional information on the above initiatives.

***Note:** Eligibility for the 8% rebate would be similar to OCEB and include some customers not on the Regulated Price Plan (RPP), such as Independent Power Authority consumers and consumers that have opted-out of RPP. ~~See Appendix for discussion on HST considerations.~~

# Rate Mitigation Proposal – Illustrative Benefits*

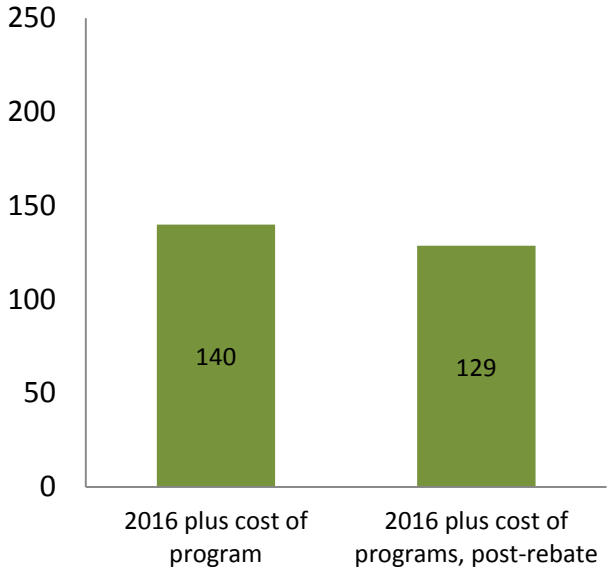
| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Benefit | | Class B (Commercial) Benefit | Class A (Industrial) Benefit | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural*** (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br><br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br><br>(-8%) | -$45/ month<br><br>(-20%) | -$3/MWh<br><br>(-2%) | -$3/ MWh<br><br>(-3%) | Up to -$52/MWh<br><br>(-34%) |

- **Notes:** The above benefits do not include the cost of ICI expansion, and the RRRP update (total impact of $1.74/MWh).

The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. Proceeds recycling is an estimated average over the first compliance period (2017-2020).

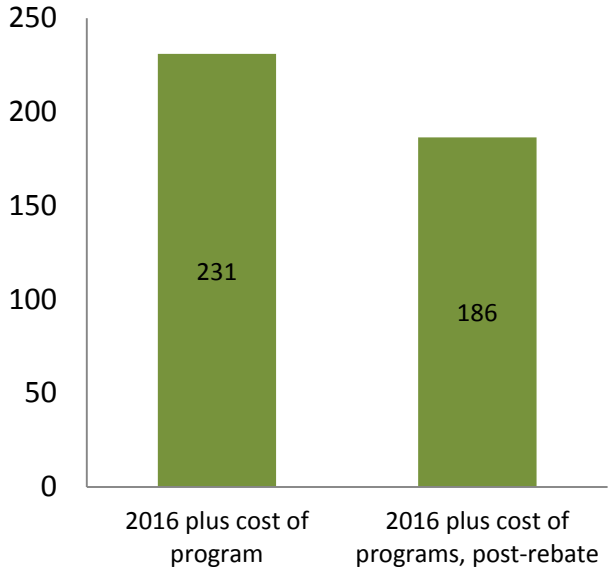
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class

**Typical Residential Bill**
**750 kWh per month, 8% only**




The pre-tax impact is a 8% reduction.

**Rural (R2) Residential Bill**
**1,000 kWh per month, 8% and RRRP Update**

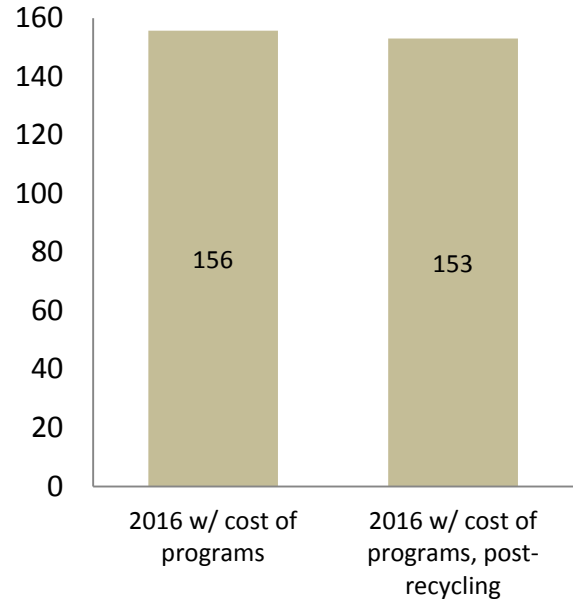



The pre-tax impact of the rate mitigation initiatives is a 20% reduction.

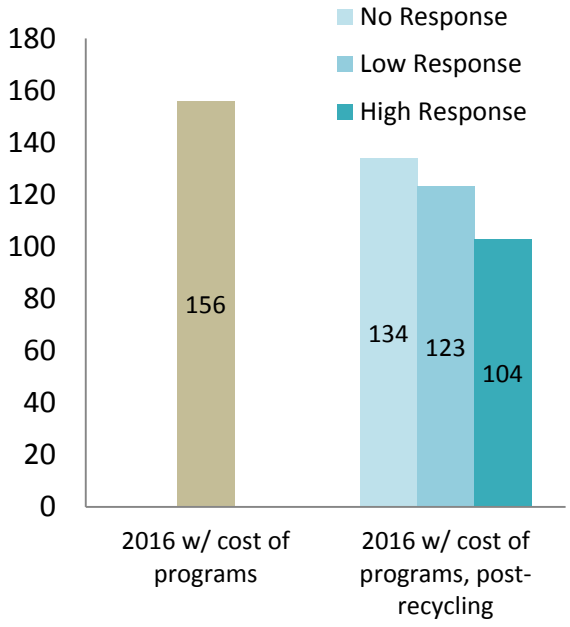
**Note:** Residential bills reflect electricity rates as per the Regulated Rate Plan (RRP) which came into effect on May 1, 2016.

# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class (cont'd)

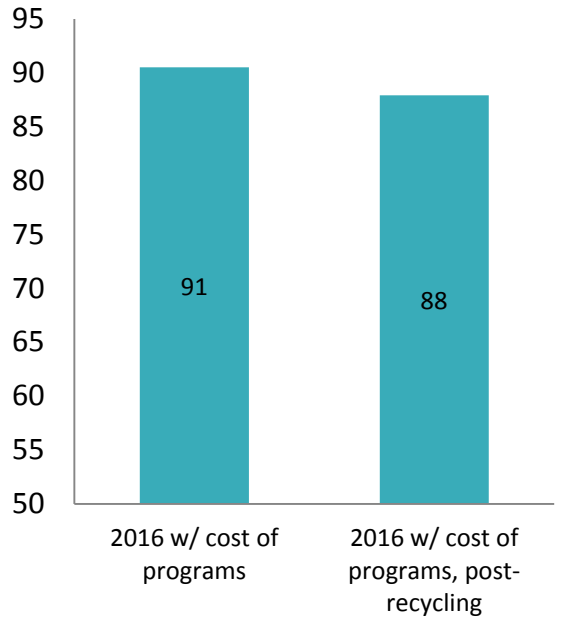
**Typical Class B (Commercial) Price ($/MWh)**




**Typical New Class A Price ($/MWh)**




**Typical Class A (Industrial) Price ($/MWh)**




**Class B:** The benefit is a 2% reduction.

**New Class A:** The ~~net impact~~ benefit is a reduction of 14% to 34%.

**Existing Class A:** The ~~net impact~~ benefit ~~of~~ the rate mitigation initiatives is a 3% reduction.

**Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

# 1) Regulated Price Plan Eligible Consumers and Rural or Remote Rate Protection Update

# 8% Rebate to Regulated Price Plan Eligible Consumers

- Legislation/regulation will be introduced to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit.
  - This would be equivalent to the provincial portion of the HST*.

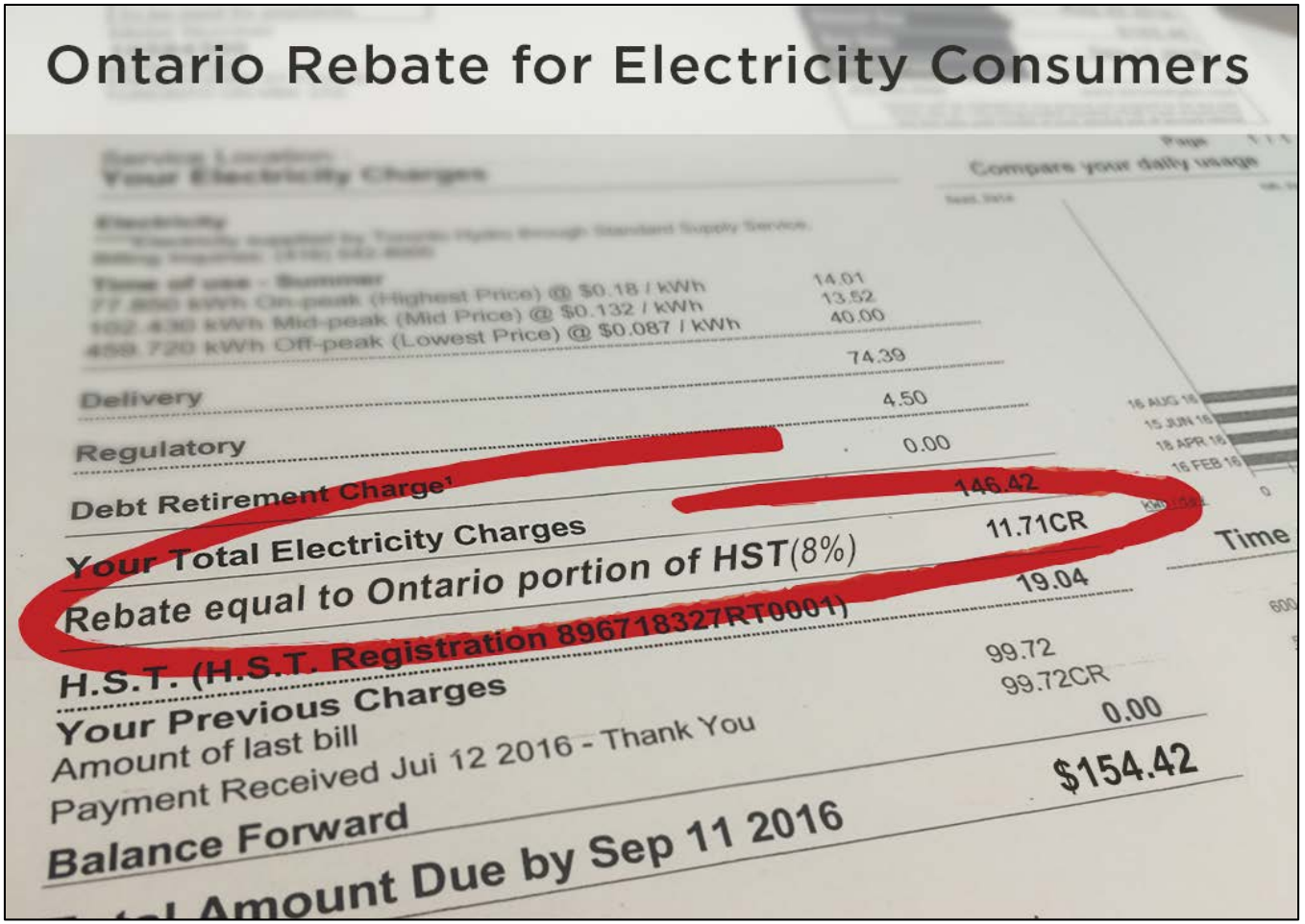
| **Eligible for the 8% rebate**<br>(< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate**<br>(> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>  − Coffee / snack retailer<br>  − Convenience store<br>  − Apparel store<br>  − Hair salon<br>  − Small insurance office | • Class A consumers<br>  − Manufacturer<br>  − Large grocery store<br>  − Mines<br>  − Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>  − Commercial offices (low rise)<br>  − Hotel<br>  − General warehousing |

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).

***Note:** An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

To be updated by Comms

# Illustrative Electricity Bill Mock-Up




**Note:** Final bill presentment pending submission to LRC.

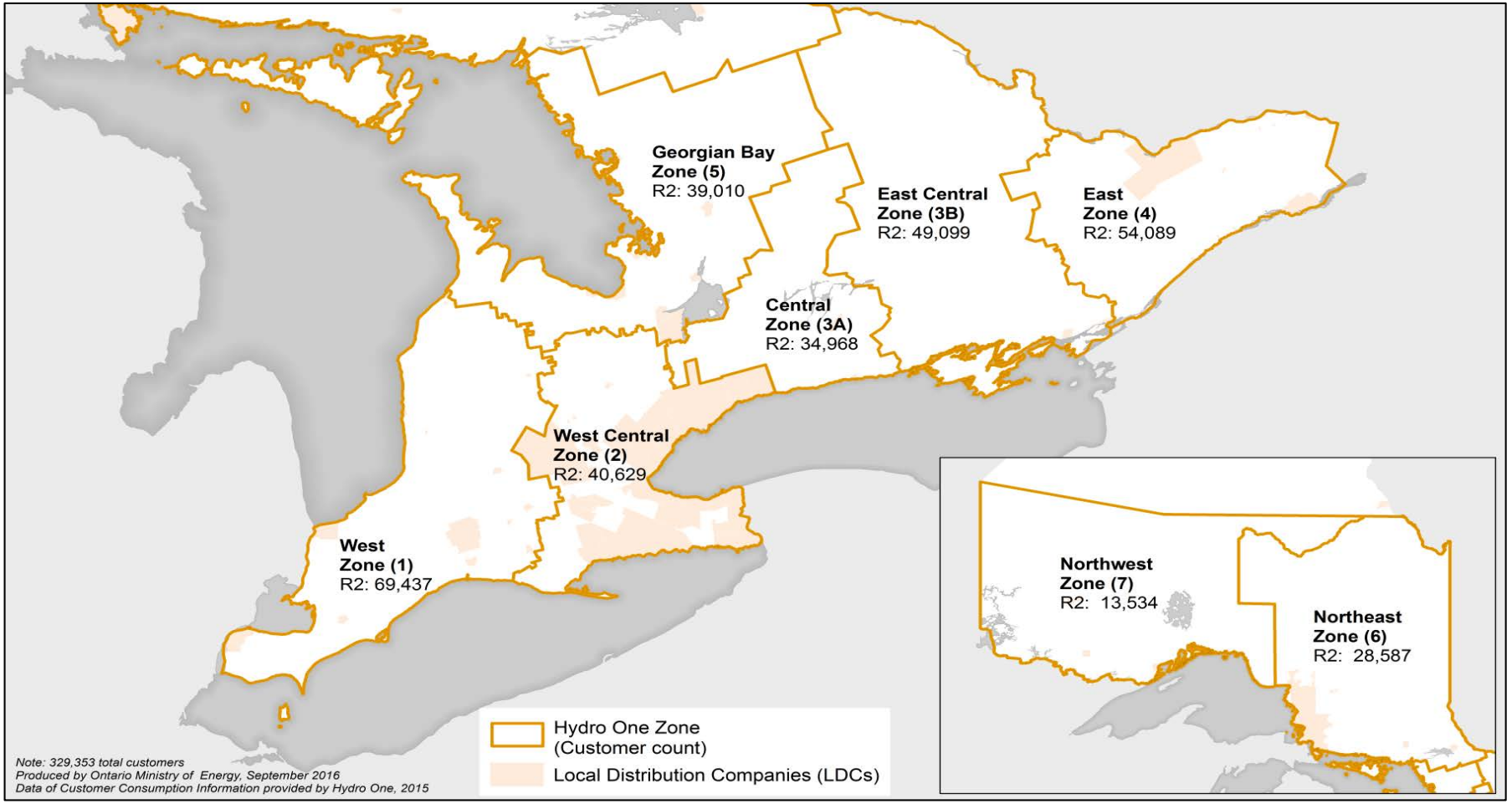
# Rural or Remote Rate Protection (RRRP) Update

- ENERGY is proposing to amend O.Reg 442/01 to provide an additional $110 million in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

- RRRP is a rate-based funded ~~subsidy~~ program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.
  - Today, RRRP is a $175-million program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
  - The majority of the program funding ($125.5 million) is provided ~~subsidy~~ to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a rebate of $31.50. The proposed update to the program would increase the benefit to $60/month.
  - RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

- An additional $110 million in program funding would see an increased benefit ~~subsidy~~ of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.
  - This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
  - The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the benefit ~~subsidy~~ remains constant.

# Rural or Remote Rate Protection (RRRP) Update – R2 Customers by Region



## 2) Expand Industrial Conservation Initiative and Redirect Cap and Trade Proceeds

# Industrial Conservation Initiative (ICI) Expansion

- ENERGY is proposing to amend O. Reg. 429/04 to expand ICI eligibility. The base setting period for the expanded program would begin in 2017, with the benefit seen by consumers starting in 2018.

- Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers).
  - Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

- ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:
  - Reduce electricity peak demand and electricity system costs by incenting more consumers to lower their electricity demand during peak periods;
  - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
  - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

# ICI Expansion – Projected Impact

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

- The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility
  - Short-term refers to the expected impact once ICI billing begins for new Class A consumers (one year after expanded eligibility takes place).
  - Long-term is the expected impact once new Class A consumers have had time to significantly change their behaviour and investment decisions in response to the ICI.

- The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating.

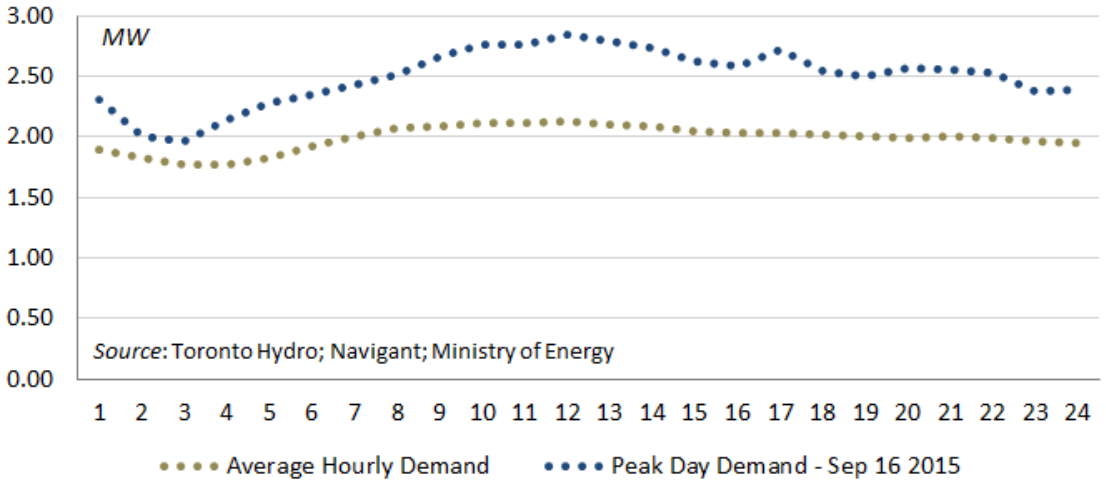
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.

# ICI Expansion – Illustrative Example of Newly Eligible Consumer

- Plastics manufacturers, such as Poly Five Plastics in Toronto, are among the consumers that would become eligible if the threshold was lowered.
- Such manufacturers fall under NAICS* code 32 and have relatively flat load profiles, reflecting around the clock production. This means they would be beneficiaries of ICI even with no change in consumption behaviour.
- Companies like Poly Five Plastics could expect to see greater savings if they are willing and able to respond to the higher prices during high demand hours.

**Typical Demand Profile, 2-3 MW Consumer**

*Manufacturer, NAICS Code 32 - Nov 2014 to Oct 2015*




**Illustrative Bill Savings, 2-3 MW Consumer**

| | *Status Quo* | *No Price Response* | *Short Term Response* | *Long Term Response* |
|---|---|---|---|---|
| | **Class B** | **Class A** | **Class A** | **Class A** |
| GA | 75.26 | 58.06 | 43.55 | 32.03 |
| Total bill | **126.28** | **109.09** | **94.58** | **83.06** |
| *Savings* | | *-14%* | *-25%* | *-34%* |

Source: Navigant; Ministry of Energy

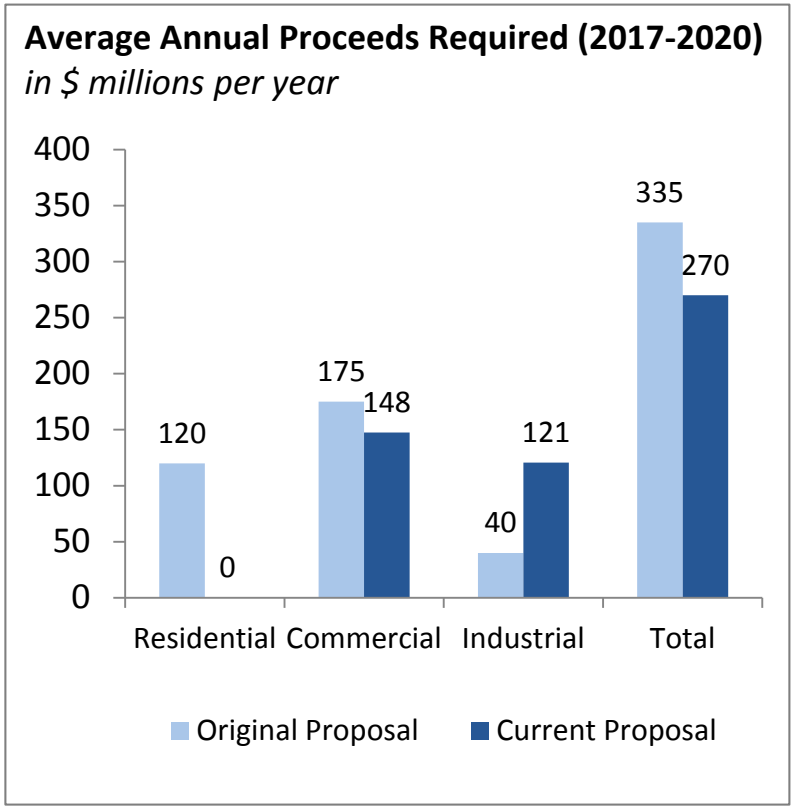
*** Note:** North American Industry Classification System (NAICS) is the standard used by statistical agencies in classifying business establishments.

# Redirect Cap and Trade Proceeds Recycling

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.
  - To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).

- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

- The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $0.24 billion over the first compliance period).




**Note:** The original proposal was to offset the impact of cap and trade via GA to the average industrial, and would provide a benefit to commercial and residential consumers. Current proposal would recycle proceeds volumetrically to industrial and commercial consumers.

# Redirect Cap and Trade Proceeds Recycling

- Redirecting cap and trade auction proceeds to lower the cost of electricity would offset consumers' contributions to non-emitting generation.

- Redirecting helps pay for committed investments/initiatives which reduce GHGs (e.g., non-emitting generation and conservation programs).
  - Due to the long-term nature (typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period. These costs will continue well beyond the timelines described in the CCAP.

- Redirecting cap and trade auction proceeds volumetrically to Class B (commercial) and Class A (industrial) consumers maintains the incentive to shift consumption from on-peak to off-peak hours.

- Using cap and trade auction proceeds to lower the cost of electricity would make it more competitive with traditionally cheaper fossil fuels.

- By using the proceeds to lower the cost of electricity, there is potential to incent fuel-switching away from fossil fuels toward much cleaner grid-connected electricity and support CCAP goals of electrification.

# Considerations

# Implementation

- ~~New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010.~~ On September 15, 2016, ENERGY is proposing to introduce the *Ontario Rebate for Electricity Consumers Act, 2016*.
  - If passed, the legislation would require a general regulation.
  - Amendments would also be required to various regulations to expand ICI and RRRP.

- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. ENERGY (possibly through Ontario Energy Board) will consult with LDCs to accurately assess these impacts once the program has been announced.
  - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - Timing concerns may be alleviated by allowing LDCs to provide retroactive rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.

- Detailed messaging on bills (for "low-volume" consumer bills ) could be implemented by amending O. Reg. 275/04 (made under the Ontario Energy Board Act, 1998).
  - The rebate would not be directly linked to HST.
  - With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.

- While the impact of cap and trade would be added to electricity bills as of January 2017, the offsetting effect of proceeds recycling may not occur immediately depending on implementation and potential alignment with the first auction expected in March 2017.
  - Should there be low demand for carbon allowances, auction proceeds would be less than the amount projected in the CCAP. This could mean a short-fall for proceeds recycling as proposed. However, natural gas utilities are expected to purchase allowances quarterly equal to their emissions.

- ENERGY will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

# Fiscal

- The Climate Change Action Plan (CCAP) committed about $1.3 billion over four years for electricity mitigation for industrial, commercial and residential consumers from GGRA proceeds.
  - The current rate mitigation proposal requires approximately 20% less in proceeds, saving approximately $0.24 billion relative to the CCAP commitment over the first compliance period (2017-2020).

- The 8% rebate is expected to cost about $1 billion per year (i.e., $4 billion from 2017-2020), representing an additional pressure on the fiscal plan.
  - Consideration could be given to allocating the $0.24 billion in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset.
  - If cap and trade auctions are under-subscribed, the $0.24 billion ~~additional funds~~ may not be available for reallocation to the fiscal plan.

- In the absence of any offset strategies, the full cost of the rate mitigation approach would add to the pressures and risks that need to be managed in order for the government to balance the budget in 2017-18 and stay balanced in 2018-19 and beyond.

# Legal

- In order to avoid characterization as an unconstitutional tax, a non-tax levy must have a sufficient nexus between those who pay and the regulatory scheme in the sense that those who pay have caused the need for or benefit from the regulatory scheme. Although the case law is not developed on the extent to which some regulated actors can be required to subsidize others, risk is reduced to the extent that any cross-subsidization serves true regulatory goals rather than revenue re-distribution goals.

- HST Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):
  - Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

- ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):
  - Shifting costs to some consumers to lower rates for others without more carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

- RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):
  - Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

- Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):
  - To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

# Communications

- Public high-profile communications would coincide with introduction of legislation (September 2016).
  - Stakeholder outreach/technical briefings with LDCs, Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.
  - Echo public announcements in southwest and north; proactive provincial/local media.

- **Positioning:**
  - A fiscally prudent plan to benefit all ratepayers in a lasting, meaningful way.
  - Rural customers will receive the largest single rate relief ever.
  - Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.

- **Issues Considerations:**
  - Significant benefit for rural and remote residential customers; net gain for all residential customers.
  - More complex to communicate, but can be presented as a full plan that includes reforms and improvements to the system.
  - Consistent with cap-and-trade commitment that no business sector will be left worse off, though small businesses outside ICI will benefit the least.

Pending Update

Ontario

# Key Messages

- We are taking unprecedented action to help people in their everyday lives.
- Residential ratepayers and other RPP eligible ratepayers will receive an eight per cent rebate on their electricity bill, equivalent to the provincial portion of the HST.
- Modernizing the RRRP will benefit 330,000 families in rural Ontario with significant reductions to their electricity bills – $28 a month, in addition to the eight per cent rebate.
- Over a thousand more Ontario businesses will be eligible to benefit from the ICI program, helping them stay competitive and grow.
- These actions will assist over five million families, farms and small businesses across Ontario.
- These actions today join our many existing initiatives too help keep electricity in Ontario clean, reliable and affordable.

# Proposed Cabinet Minute

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

    i. Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

    ii. Increase the total amount of rate protection available to R2 low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2004.

    iii. Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

    iv. Expand eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

# Proposed Cabinet Minute (cont'd)

2. ENERGY seek necessary TB/MBC approvals. **[TBD]**

3. ENERGY seek approvals for the proposed *Ontario Rebate for Electricity Consumers Act, 2016* which would, subject to the Legislature's approval of the Act, include the following elements:
   i. The rebate would be available starting January 1, 2017;
   ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
   iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers' electricity bills;
   iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way in which electricity vendors providing the rebate are to be reimbursed;
   v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;
   vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments; and
   vii. The legislation would include consequential amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*; and
   viii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date

# Proposed Cabinet Minute (cont'd)

4. ENERGY to report back to LRC and Cabinet for approval of any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments.

5. ENERGY notes the following amendments:

   i. Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the *Electricity Act, 1998* to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

   ii. Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density electricity customers and provide for a periodic adjustment mechanism.

6. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

7. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan

# Proposed Cabinet Minute (cont'd)

Cabinet approved version of the proposed *Ontario Rebate for Electricity Consumers Act, 2016* for introduction, subject to the following:

1. The Office of Legislative Counsel is authorized to prepare a French version and to make minor adjustments to the English version, for the purpose of ensuring consistency between the two versions and making other improvements or correcting mistakes discovered in the translation process.

Since we're going to LRC, not sure we need this.

# Appendix

# Illustrative Bill Impacts

| | Current Bill (after cost of new programs, before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (after cost of new programs, before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | ~~$139~~ $140 /month | N/A | 8% pre-tax rebate: - $11 | ~~$128~~ $129 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | ~~$229~~ $231 /month | RRRP: –$32 | 8% pre-tax rebate + Updated RRRP: - $45 | ~~$185~~ $186 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | ~~$101~~ $102 /month | OESP: -$38 | 8% pre-tax rebate: - $8 | ~~$93~~ $94 /month |
| Small Business (Toronto – 403,200 kWh/month) | ~~$148~~ $150 /MWh | N/A | 8% pre-tax rebate: - $12/MWh | ~~$136~~ $138 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | ~~$202~~ $204 /MWh | N/A | 8% pre-tax rebate: - $16/MWh | ~~$186~~ $188 /MWh |

***Note:** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as $1,332 per year for a family.
** income of less than $28,000, family of 4.

Totals may not add due to rounding.

# Illustrative Bill Impacts (cont'd)

| | Current Rate | Current Rate mitigation initiatives* | Cost of new initiatives (RRRP and ICI) | New Rate Mitigation initiatives | Net Impact, | New Rate, |
|---|---|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | -$0.90 /MWh (-1%) | $107 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI + NIERP: -$69/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $68 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling + ICI: -$53.90/MWh | -$52 /MWh (-34%) | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $151 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh | $153 /MWh |

**Notes:**

1) There is the potential for a consumer eligible for the Regulated Price Plan to opt-out of the Regulated Price Plan to opt-in to Class A and receive all three benefits (i.e., Regulated Price Plan, ICI and proceeds recycling).

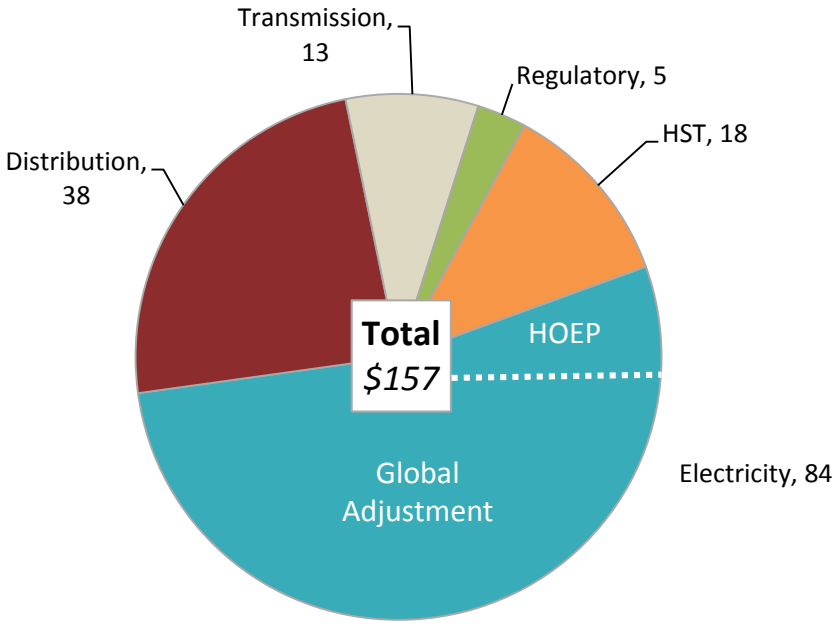
2) The impact of cap and trade would not be added to electricity bills until 2017 and varies per year over the course of the first compliance period. For illustrative purposes, the estimated average benefit of proceeds recycling is shown above.

# Residential Electricity Prices

- There are approximately 5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of May 1, 2016 (750 kWh/month)*




*Source*: OEB, Toronto Hydro

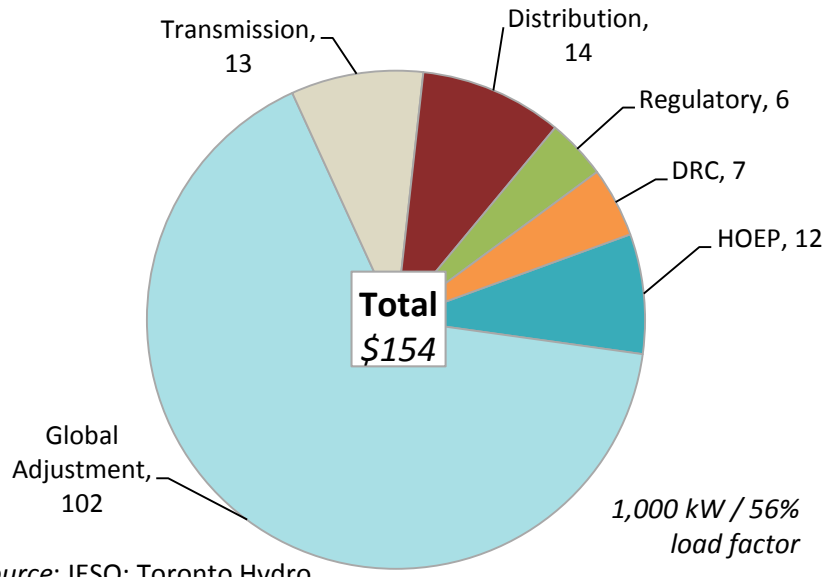
# Commercial Electricity Prices

- There are approximately 400,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.

- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




*Source*: IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.

- Targeted pricing programs are currently not available for Class B consumers.

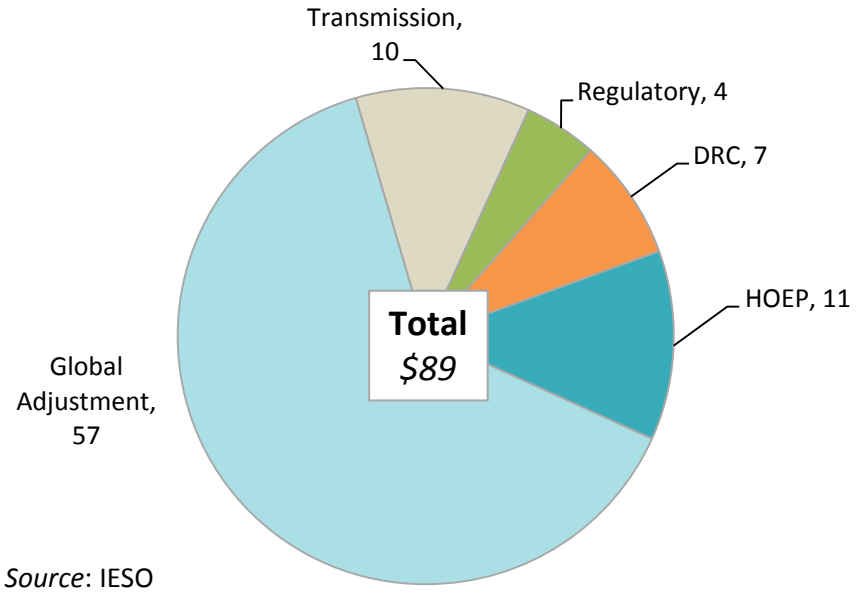
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*




*Source*: IESO

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $64/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Sales Tax Treatment in Other Jurisdictions

| Jurisdiction | Tax | Tax Paid by Business Consumers | Tax Paid by Residential Consumers | Comment |
|---|---|---|---|---|
| **British Columbia** | PST | Yes – 7% | No | • PST does not apply to residential energy, including electricity, acquired solely for residential use in a residential dwelling<br>• BC's carbon tax does not apply to electricity bills. |
| **Alberta** | None | N/A | N/A | • Alberta does not have a provincial sales tax. |
| **Saskatchewan** | PST | Yes – 5%<br>Except for electricity purchased to heat a building. | No | • PST does not apply to electricity purchased for use in a residential dwelling.<br>• PST does not apply to electricity purchased for use in heating a building that is heated solely by the electricity. |
| **Manitoba** | PST | Yes – 8%<br>Reduced rate of 1.6% applies to electricity used by a qualifying business to operate machinery | Yes – 8%<br>Electricity purchased for mixed use, 80% of which is home heating, has a reduced rate of 1.4%. Electricity solely to heat the purchaser's home is exempt. | • Winnipeg also applies a tax of 2.5% on residential and 5% on commercial. |
| **Ontario** | HST | Yes (less ITC (input tax credits)) | Yes – 8% | |
| **Quebec** | QST | Yes (less ITCs) | Yes – 9.975% | |
| **Nova Scotia** | HST | Yes (less ITCs) | Yes – 10% less provincially administered rebate. | • Rebate is equal to the provincial portion of the HST, and is administered similar to OCEB, but applies to many energy sources. |
| **New Brunswick** | HST | Yes (less ITCs) | Yes – 10% | |
| **Prince Edward Island** | HST | Yes (less ITCs) | Yes – 9% (10% beginning Oct 1, 2016) | |
| **Newfoundland and Labrador** | HST | Yes (less ITCs) | Yes – 10% | • Had a provincially administered Home Heating Rebate program until July 2015. |
| **Federal** | GST | Yes (less ITCs) | Yes – 5% | |

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan |
| **Subject:** | FW: Major Projects this week |
| **Date:** | Thursday, September 08, 2016 3:39:58 PM |
| **Attachments:** | GOV2016.091.e08 (Clean Energy Rebate).docx<br>Cab min Sept2-16 CO MOF Edits CLEAN.DOCX<br>Cabinet Submission - Electricity Price Mitigation 20160907 CLEAN V2.pptx |

Had you seen this?

**From:** Tomasz Bugajski
**Sent:** Thursday, September 08, 2016 12:55 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** FW: Major Projects this week

FYI

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

**From:** Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
**Sent:** Thursday, September 08, 2016 12:41 PM
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Ghufran Tarin (MOF) <Ghufran.Tarin@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>
**Subject:** FW: Major Projects this week

FYI.

**From:** Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
**Sent:** Thursday, September 8, 2016 12:22 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

For your records, attached is what was circulated at Major Projects today.

**From:** Katona, Keley (ENERGY)
**Sent:** September-07-16 3:38 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

We're making edits based on comments from our MO. Could be this evening or tomorrow morning.

**From:** Kwamena, Boafoa (CAB)
**Sent:** September-07-16 3:33 PM
**To:** Katona, Keley (ENERGY); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

Hi

Will be likely receive material  later today or tomorrow?

Thanks

---

**From:** Katona, Keley (ENERGY)
**Sent:** September-07-16 10:12 AM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** Re: Major Projects this week

Sorry, disregard, we'll make it work on our end. Thanks.

---

**From:** Katona, Keley (ENERGY)
**Sent:** Wednesday, September 7, 2016 10:06 AM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

Hi Boafoa,

Wondering if it's possible for the electricity item to be last on the agenda tomorrow. We have a Minister's briefing which conflicts with Major Projects, involving the same staff and it would be very helpful if we could be on at 11am.

Thanks,
Keley

---

**From:** Kwamena, Boafoa (CAB)
**Sent:** September-06-16 5:29 PM
**To:** Katona, Keley (ENERGY); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** Major Projects this week

Hi Keley/David

We will be adding the Electricity Pricing Mitigation item to Major Projects this Thursday. This will be an opportunity to ensure everyone is on the same page in advance of the TB trip next week.  Major Projects is scheduled from 10:30 to 11:30 on Thursday. This item will be the first–10:30 to 11:00. Please let me know if this time doesn't work or if there are any concerns.

Thanks
Boafoa

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**CONFIDENTIAL**
GOV2016.091.e
8-LT/RA

# Ontario Rebate for Electricity Consumers Act, 2016

## EXPLANATORY NOTE

The *Ontario Rebate for Electricity Consumers Act, 2016* authorizes financial assistance for certain Ontario electricity consumers in respect of electricity costs. Consumers receive the financial assistance by means of an 8 per cent reduction in the amount payable before tax under their electricity accounts for each billing period. The amount of financial assistance for a billing period is required to be shown on invoices issued to consumers for the billing period.

The Act authorizes the making of regulations to reimburse electricity vendors for amounts credited to consumers' accounts under the Act. The Act authorizes the making of various other regulations, including to set out other ways for consumers to receive financial assistance, to alter the default rules in the Act for how to calculate the financial assistance and to limit or alter who is entitled to financial assistance. The Act amends the *Ontario Clean Energy Benefit Act, 2010* to authorize the making of regulations under that Act in respect of cut-off dates for financial assistance under that Act.

The Act contains administrative and enforcement provisions, including requirements relating to record keeping by electricity vendors and authorization for inspections and inquiries with respect to amounts of financial assistance provided and reimbursements to electricity vendors. The *Ontario Energy Board Act, 1998* is amended so that provisions of the *Ontario Rebate for Electricity Consumers Act, 2016* and regulations made under it will be enforceable by the Ontario Energy Board.

# An Act in respect of the cost of electricity

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Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

## Definitions

**1.** (1) In this Act,

"billing period" means a period of time that is wholly or partly in the eligible period and for which an invoice in respect of an eligible account is issued; ("période de facturation")

"Board" means the Ontario Energy Board; ("Commission")

"consumer" means a person,

(a) to whom an invoice is issued in respect of an eligible account for a billing period, or

(b) who is prescribed by the regulations or who satisfies such conditions as may be prescribed by the regulations; ("consommateur")

"distribution system" has the same meaning as in section 3 of the *Ontario Energy Board Act, 1998*; ("réseau de distribution")

"electricity vendor" means the IESO, a licensed distributor, a licensed retailer or a person prescribed by the regulations; ("vendeur d'électricité")

"eligible account" means, in respect of a consumer, an account with an electricity vendor, or with a person prescribed by the regulations, for the provision of electricity in Ontario if,

(a) the consumer has a demand for electricity of 50 kilowatts or less, or such other amount of demand for electricity as may be prescribed,

(b) the consumer annually uses not more than 250,000 kilowatt hours of electricity, or such other amount of use of electricity as may be prescribed,

(c) the consumer,

(i) carries on a business that is a farming business for the purposes of the *Farm Registration and Farm Organizations Funding Act, 1993*, and

(ii) holds a valid registration number assigned under that Act or the consumer's obligation to file a farming business registration form was waived pursuant to an order made under subsection 22 (6) of that Act,

(d) the account relates to,

(i) a dwelling,

(ii) a property, within the meaning of the *Condominium Act, 1998*,

(iii) a residential complex, within the meaning of subsection 2 (1) of the *Residential Tenancies Act, 2006*, without regard to section 5 of that Act, or

(iv) a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the *Co-operative Corporations Act*, or

(e) the consumer or the account satisfies such conditions as may be prescribed by the regulations; ("compte admissible")

"eligible period" means the period commencing January 1, 2017; ("période admissible")

"IESO" has the same meaning as in subsection 2 (1) of the *Electricity Act, 1998*; ("SIERE")

"licensed distributor" means a person licensed under Part V of the *Ontario Energy Board Act, 1998* to own or operate a distribution system; ("distributeur titulaire d'un permis")

"licensed retailer" means a person who is licensed under Part V of the *Ontario Energy Board Act, 1998* to retail electricity; ("détaillant titulaire d'un permis")

"market rules" means the market rules made under section 32 of the *Electricity Act, 1998*; (règles du marché")

"regulations" means the regulations made under this Act; ("règlement")

"retail" has the same meaning as in section 56 of the *Ontario Energy Board Act, 1998*; ("vendre au détail")

"unit sub-metering" means activities that are unit sub-metering for the purposes of the *Ontario Energy Board Act, 1998*; ("activités liées aux compteurs divisionnaires d'unité")

"unit sub-meter provider" means a person who is licensed to engage in unit sub-metering by the Board under Part V of the *Ontario Energy Board Act, 1998*. ("fournisseur de compteurs divisionnaires d'unité")

**Eligible account**

(2) For the purposes of this Act, if a consumer would, but for this subsection, have an eligible account with a licensed retailer and with a licensed distributor, but only one of them issues an invoice to the consumer for a billing period for all amounts payable by the consumer to them for the billing period,

(a) the consumer is deemed to have an eligible account for the billing period only with whichever of them issues the invoice for the billing period; and

(b) the licensed distributor or licensed retailer who issues the invoice for the billing period is deemed to be imposing all charges and other amounts payable under the invoice for the purposes of determining the amount of financial assistance to which the consumer is entitled.

**Base invoice amount**

**2.** (1) For the purposes of this Act, the base invoice amount for a billing period in respect of an eligible account is determined in accordance with the regulations and, unless otherwise prescribed by the regulations, includes, if the invoice is issued by a licensed distributor or a licensed retailer, amounts in respect of,

(a) the commodity price of the electricity;

(b) the rates and charges set out in the applicable rate order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998* that are not required under subsection (2) or the regulations to be excluded;

(c) any adjustment on the invoice required pursuant to section 25.33 of the *Electricity Act, 1998*;

(d) any debt retirement charge payable by the consumer under subsection 85 (4) of the *Electricity Act, 1998*; and

(e) anything else prescribed by the regulations.

**Exclusions**

(2) Except as otherwise prescribed by the regulations, the base invoice amount for a billing period must exclude,

(a) the balance of any amounts carried forward from previous invoices;

(b) all penalties and interest;

(c) any charges that do not relate to the consumption of electricity;

(d) the fixed monthly service charge payable by a generation facility, within the meaning of section 56 of the *Ontario Energy Board Act, 1998*, that is classified as “microFIT” in a rate order issued by the Board under subsection 78 (3) of that Act;

(e) charges labelled as “specific service charges” or “retail service charges” in the applicable rate order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998*;

(f) the amount of any harmonized sales tax payable under Part IX of the *Excise Tax Act* (Canada); and

(g) any other amounts prescribed by the regulations.

**Financial assistance**

**3.** (1) A consumer who has an eligible account during a billing period is entitled to receive financial assistance in respect of the cost of electricity during the billing period in an amount equal to 8 per cent of the base invoice amount for the billing period in respect of the eligible account.

**Exception**

(2) Despite subsection (1), a consumer is not entitled to receive financial assistance under this Act,

(a) in respect of electricity consumed in generation station service;

(b) in such circumstances as may be prescribed by the regulations; or

(c) if the regulations prescribe that the consumer is not entitled to receive financial assistance.

**Payment of financial assistance**

(3) The financial assistance to which a consumer is entitled under this Act shall be paid,

(a) by crediting the consumer's eligible account; or

(b) in such other manner as may be prescribed by the regulations.

**Money appropriated by the Legislature**

(4) The money required for the purposes of this Act shall be paid out of the money appropriated for those purposes by the Legislature.

**No assignment of financial assistance**

(5) An assignment by a consumer to another person or entity, including a licensed retailer, of the consumer's entitlement to any payment, rebate or credit does not apply to any financial assistance to which the consumer is entitled under this Act, whether the assignment was made before or after this subsection comes into force.

**Same**

(6) Subsection (7) applies if,

(a) a consumer provides to another person electricity in respect of which the consumer is entitled to financial assistance under subsection (1); and

(b) an invoice for the electricity is issued to the person by the consumer, by an agent of the consumer or by a unit sub-meter provider providing unit sub-metering for the consumer.

**Requirement to pass on benefit**

(7) Despite subsections (1) and (5), the consumer and every unit sub-meter provider providing unit sub-metering for the consumer shall ensure that each person who is liable to pay an invoice referred to in clause (6) (b) receives a credit, determined in the manner prescribed by the regulations, in respect of the financial assistance to which the consumer is entitled with respect to electricity the consumer provides to the person.

**Invoices**

**4.** (1) Unless otherwise prescribed by the regulations, every electricity vendor who issues an invoice for a billing period to a consumer in respect of an eligible account shall clearly show on the invoice,

(a) a credit equal to the amount of the financial assistance provided to the consumer for the billing period; and

(b) the net amount of the invoice after the credit.

**Invoice issued by consumer, etc.**

(2) An invoice that is issued by a consumer, an agent of a consumer, a unit sub-meter provider or another person prescribed by the regulations must be in the form required by the regulations and contain or be accompanied by the information required by the regulations.

**Transitional**

(3) If, for technical or operational reasons, an electricity vendor or a person referred to in subsection (2) is unable to adapt its invoices to comply with this Act and the regulations by the time it issues its first invoice for electricity consumed in 2017 in respect of an eligible account,

(a) the electricity vendor or person shall adapt its invoices as soon as possible and, in any event, no later than July 1, 2017; and

(b) consumers continue to be entitled to receive the financial assistance to which they are entitled under this Act and may receive it as a lump sum credit on the invoice for the first billing period after the invoices have been adapted or by such other means as may be prescribed by the regulations.

**Financial arrangements**
**Purposes**
**5.** (1) The purposes of this section are,

(a) to ensure that financial assistance under this Act and the regulations is provided to those persons entitled to receive it; and

(b) to authorize the making of financial arrangements to reimburse electricity vendors, and other persons prescribed by the regulations, for financial assistance provided under this Act and the regulations.

**Regulations**
(2) The Lieutenant Governor in Council may, for the purpose of this section, make regulations,

(a) authorizing the Minister of Energy to make payments to persons who are electricity vendors or persons prescribed by the regulations in respect of the amount of financial assistance to which consumers are entitled under this Act and prescribing methods for determining the amounts payable;

(b) requiring the IESO to make payments to licensed distributors, or to persons prescribed by the regulations, in respect of financial assistance provided under this Act or the regulations and prescribing methods for determining the amounts payable;

(c) requiring a licensed distributor to make payments to other licensed distributors or licensed retailers in respect of financial assistance under this Act and prescribing methods for determining the amounts payable;

(d) requiring a person who is an electricity vendor or a person prescribed by the regulations to make payments in respect of financial assistance to consumers or other persons entitled to receive the financial assistance and prescribing the circumstances in which such payments are to be made and methods for determining the amounts payable;

(e) authorizing the Minister of Energy to make payments of financial assistance directly to consumers and prescribing the circumstances when such payments are to be made;

(f) requiring a person who is an electricity vendor or a person prescribed by the regulations to make payments to the Minister of Finance in respect of amounts received by them or in circumstances prescribed by the regulations and prescribing methods for determining the amounts payable;

(g) authorizing payments referred to in clause (a), (b), (c), (d) or (f) to be made by way of set-offs and credits and prescribing conditions entitling or requiring amounts to be set off or credited;

(h) governing the payments required under clause (a), (b), (c), (d) or (f), including methods for paying the amounts payable and when the payments must be made, and governing methods for determining amounts to be set off or credited, including the times within which amounts must or may be set off or credited;

(i) for the purposes of this Act and the regulations, requiring persons who are electricity vendors or persons prescribed by the regulations to provide information to the Minister of Energy, the Minister of Finance, the IESO, the Board or licensed distributors and prescribing the information to be provided and when it must be provided;

(j) governing the establishment and maintenance of variance accounts required for the purposes of this Act.

**Conflict with market rules and codes**

(3) In the event of a conflict, a regulation made under subsection (2) prevails over the market rules to the extent of the conflict and prevails over a code issued by the Board under section 70.1 of the *Ontario Energy Board Act, 1998* to the extent of the conflict.

**Provision of information**

(4) A person may do anything required by a regulation made under clause (2) (i) despite any agreement to the contrary and, if the person does so,

(a) the person is not liable for doing the thing in contravention of any agreement to the contrary; and

(b) doing the thing is deemed not to constitute a breach, termination, repudiation or frustration of any contract.

**Limitation periods for financial assistance, reimbursement**

**Financial assistance**

**6.** (1) Despite any past entitlement of a consumer to financial assistance under this Act, no financial assistance is payable to a consumer after a limitation period prescribed by the regulations in respect of the consumer, other than in such circumstances as may be prescribed by the regulations.

**Reimbursement**

(2) Despite any requirement under this Act to reimburse an electricity vendor or other person for financial assistance provided by them to consumers, no amounts for reimbursement are payable to the electricity vendor or other person after a limitation period prescribed by the regulations in respect of the electricity vendor or other person, where such reimbursement is based on a consumer's past entitlement not yet paid or reimbursed under this Act, other than in such circumstances as may be prescribed by the regulations.

**Definition**

**7.** In sections 8, 9 and 10,

"Minister" means the Minister of Finance or such other member of the Executive Council to whom the administration of those sections is assigned under the *Executive Council Act*.

**Records**

**8.** (1) Every electricity vendor and every person prescribed by the regulations shall keep at a location in Ontario such records as are necessary to determine and verify compliance with this Act and the regulations and any records required by the regulations to be kept.

**Electronic records**

(2) If a person keeps records in an electronic form, the person shall ensure that, from the time the records are first made and for as long as they are required to be retained,

(a) they remain complete and unaltered, apart from any changes or additions made in the normal course of communication, storage or display; and

(b) they are capable of being printed and of being produced in electronically readable format for inspection, examination or audit.

**Retention of records**

(3) Records required to be kept under subsection (1) shall not be destroyed unless authorization has been given in writing by the Minister.

**Offence**

(4) Every person who fails to keep records in accordance with this section is guilty of an offence and, on conviction, is liable to a fine of not less than $50 and not more than $5,000.

**Inspections and inquiries**

**9.** (1) The Minister may appoint one or more inspectors who are authorized to exercise any of the powers and perform any of the duties of a person authorized by the Minister under subsection 31 (1) of the *Retail Sales Tax Act* for any purpose related to the administration and enforcement of this Act.

**Same**

(2) Subsections 31 (1), (2), (2.1) and (2.2) of the *Retail Sales Tax Act* apply, with necessary modifications, with respect to the administration and enforcement of this Act.

**Admission of evidence**

(3) The Minister, or a person authorized by the Minister, may, for any purpose related to the administration of this Act or the regulations, reproduce from original data stored electronically any information previously submitted as required under this Act or the regulations in any form by any person, and the electronically reproduced document shall be admissible in evidence and shall have the same probative force as the original document would have had if it had been proved in the ordinary way.

**Inquiry**

(4) The Minister may, for any purpose related to the administration of this Act or the regulations, authorize any person, whether or not the person is an employee in the Ministry of the Minister, to make such inquiry as the Minister considers necessary with reference to anything relating to the administration of this Act or the regulations.

**Copies**

(5) If a book, record or other document is examined or produced under this section, the person by whom it is examined or to whom it is produced or any officer of the Ministry may make, or cause to be made, one or more copies of it, and a document purporting to be certified by the person to be a copy made pursuant to this section is admissible in evidence and has the same probative force as the original document would have if proved in the ordinary way.

**Compliance**

(6) No person shall hinder or molest or interfere with any person doing anything that the person is authorized by this section to do or prevent or attempt to prevent any person doing any such thing.

**Same**

(7) Despite any other law to the contrary, every person shall, unless the person is unable to do so, do everything he, she or it is required by this section to do.

**Administration of oaths**

(8) Declarations or affidavits in connection with statements of information submitted pursuant to this section may be taken before any person having authority to administer an oath or before any person specially authorized for that purpose by the Lieutenant Governor in Council, but any person so specially authorized shall not charge any fee for doing so.

**Application of Public Inquiries Act, 2009**

(9) Section 33 of the *Public Inquiries Act, 2009* applies to an inquiry under subsection (4).

**Recovery of overpayments**

**Definitions**

**10.** (1) In this section,

"inspector" means an inspector referred to in section 9; ("inspecteur")

"overpayment" means an amount received by a person in excess of any reimbursement to which the person is entitled under this Act and the regulations. ("trop-perçu")

**Notice of overpayment**

(2) If it appears to an inspector that a person has received an overpayment, the Minister may send a written notice to the person advising the person of the following:

1. That the person has received an overpayment.

2. The amount of the overpayment and how it was calculated.

3. The required steps to be taken by the person with respect to the overpayment.

4. The date, not more than six months after the date of the notice, by which these steps must be completed.

5. That the Minister has the authority to assess the person for the amount of the overpayment, plus interest, if the person fails to complete the required steps by the specified date.

**Calculation of amount of overpayment**

(3) For the purposes of this section, an inspector shall calculate an overpayment or the outstanding balance of an overpayment in the manner and form and using such procedures as the Minister considers adequate and expedient.

**Assessment**

(4) If a person fails to complete the steps required in a notice under subsection (2) within the time specified in the notice, and any additional time requested by the person and permitted by the Minister, the Minister may assess or reassess the amount of the overpayment, or the outstanding balance of the overpayment, based on the inspector's calculation described in subsection (3).

**Penalty**

(5) If the Minister makes an assessment or reassessment under subsection (4) and is satisfied that the person's non-compliance with the required steps in the notice was attributable to neglect, carelessness, wilful default or fraud, the Minister may assess a penalty against the person equal to the outstanding balance of the overpayment when the penalty is assessed.

**Time limit**

(6) The Minister shall not assess or reassess under subsection (4) more than 48 months after the end of the month in which the person received the overpayment.

**Exception, where misrepresentation, etc.**

(7) Subsection (6) does not apply if the Minister establishes that the person has made a misrepresentation that is attributable to neglect, carelessness or wilful default or has committed any fraud in supplying information under this Act or the regulations or in omitting to disclose information.

**Deemed debt retirement charge**

(8) An amount assessed or reassessed by the Minister under this section is deemed for the purposes of the administration and enforcement of this Act to be a debt retirement charge, as defined in subsection 85 (1) of the *Electricity Act, 1998*, that has been collected, on the last day of the month in which the person received the overpayment, by the person as a collector appointed under subsection 85.3 (1) of the *Electricity Act, 1998* and, for those purposes,

(a) sections 85.11, 85.12, 85.14, 85.17 and 85.30 of that Act apply with necessary modifications;

(b) in the application of sections 85.11 and 85.14 of that Act and without limiting the generality of clause (a), references to the Financial Corporation are read as references to the Minister of Finance and references to the Minister of Finance are read as references to the Minister as defined in section 7 of this Act;

(c) the regulations made under that Act for the purposes of calculating the rate or rates of interest payable under section 85.11 of that Act and the manner of calculating the amount of interest apply with necessary modifications; and

(d) sections 23 and 36, subsections 37 (1), (1.1) and (2) and sections 37.1, 38 and 39 of the *Retail Sales Tax Act* apply with necessary modifications.

**Disposition of repaid amounts**

(9) If all or part of an overpayment is repaid to the Minister of Finance, the Minister of Energy shall make such financial arrangements and payments as may be necessary to ensure that any electricity vendor or other person entitled to all or part of the overpayment receives the appropriate amount.

**Confidentiality**

**11.** (1) Except as authorized by this section, no person employed by the Government of Ontario shall,

(a) knowingly communicate or knowingly allow to be communicated to any person any information obtained by or on behalf of the Minister of Energy or the Minister of Finance for the purposes of this Act; or

(b) knowingly allow any person to inspect or to have access to any record or thing obtained by or on behalf of either Minister for the purposes of this Act.

**Testimony**

(2) No person employed by the Government of Ontario shall be required, in connection with any legal proceedings,

(a) to give evidence relating to any information obtained by or on behalf of the Minister of Energy or Minister of Finance for the purposes of this Act; or

(b) to produce any record or thing obtained by or on behalf of either Minister for the purposes of this Act.

**Exception**

(3) Subsections (1) and (2) do not apply in respect of,

(a) criminal proceedings under any Act of the Parliament of Canada;

(b) proceedings in respect of the trial of any person for an offence under an Act of the Legislature; or

(c) proceedings relating to the administration or enforcement of this Act or Part V.1 or VI of the *Electricity Act, 1998*.

**Communication**

(4) A person employed by the Government of Ontario may, in the course of duties in connection with the administration or enforcement of this Act,

(a) communicate or allow to be communicated to another person employed by the Government of Ontario in the administration or enforcement of any law or to an employee of the Board information obtained by or on behalf of either Minister for the purposes of this Act; and

(b) allow another person employed by the Government of Ontario in the administration or enforcement of any law or an employee of the Board to inspect or have access to any record or thing obtained by or on behalf of either Minister for the purposes of this Act.

**Reciprocal communication**

(5) A person who receives information or obtains access to any record or thing under subsection (4) has a duty to communicate or furnish to that Minister on a reciprocal basis any information, record or thing obtained by the person that affects the administration or enforcement of this Act.

**Use of information**

(6) Any information, record or thing communicated or furnished under this section may be used only for the administration or enforcement of this Act or an Act that is administered or enforced by the person receiving the information, record or thing.

**Same**

(7) The Minister of Finance may permit information or a copy of any record or thing obtained by or on behalf of the Minister of Finance for the purposes of this Act to be given to,

(a) the person from whom the information, record or thing was obtained;

(b) any person by whom an amount is payable or has been paid under this Act; or

(c) the legal representative of a person mentioned in clause (a) or (b) or the agent of the person authorized in writing in that behalf.

**Information**

(8) The Minister of Finance may permit information or a copy of any record or thing obtained by or on behalf of the Minister of Finance for the purposes of this Act to be given to any person employed by any government if,

(a) the information, record or thing obtained by that government for the purpose of any Act that imposes a tax or duty are communicated or furnished on a reciprocal basis to the Minister; and

(b) the information, record or thing will not be used for any purpose other than the administration or enforcement of a law that provides for the imposition of a tax or duty.

**Offence**

(9) Every person who contravenes any provision of this section is guilty of an offence and on conviction is liable to a fine of not more than $2,000.

**Offences**

**False statements, etc., and fraud**

**12.** (1) Every person who engages in any of the following acts or omissions is guilty of an offence:

1. Making, participating in, assenting to or acquiescing in the making of a false or deceptive statement in any document or answer required or submitted under this Act or the regulations.

2. Destroying, altering, mutilating, hiding or otherwise disposing of information or records of an electricity vendor or other person, for the purpose of evading compliance with this Act or the regulations.

3. Making, assenting to or acquiescing in the making of a false or deceptive entry of a material particular in a record of an electricity vendor or other person required to maintain records for the purposes of this Act.

4. Omitting to make or assenting to or acquiescing in the omission of an entry of a material particular in a record of an electricity vendor or other person required to maintain records for the purposes of this Act.

5. Wilfully evading or attempting to evade, in any manner, compliance with an obligation under this Act or the regulations.

**Penalty upon conviction**

(2) A person convicted of an offence under subsection (1) is liable to either or both of the following penalties in addition to any other penalty assessed under this Act:

1. A fine in an amount that is not less than $1,000 and not more than $10,000.

2. Imprisonment for a term of not more than two years.

**General offence**

(3) Every person who contravenes, by any act or omission, a requirement imposed under this Act is guilty of an offence and, on conviction, is liable, where no other penalty is provided for the offence, to a fine of not less than $50 and not more than $5,000.

**Limitation period**

**13.** A proceeding to prosecute an offence under this Act must be commenced within six years after the date on which the matter of the offence arose.

**Payment of fines**

**14.** Fines imposed on conviction of an offence under this Act are payable to the Minister of Finance on behalf of the Crown in right of Ontario.

**Regulations**

**15.** (1) The Lieutenant Governor in Council may make regulations,

(a) subject to the Minister of Energy's powers under subsection (2), prescribing anything required to be or referred to in this Act as being prescribed by the regulations;

(b) defining any word or expression used in this Act that is not already expressly defined in this Act;

(c) requiring any person to take such action or refrain from taking such action as may be necessary for the purposes of or in connection with any regulation made under this Act;

(d) governing information that must or may be provided to consumers concerning this Act and eligibility for financial assistance under it;

(e) governing the determination of the base invoice amount for a billing period with respect to a class of electricity vendors or a class of consumers;

(f) prescribing a method of paying or crediting to a consumer an amount of financial assistance to which the consumer is entitled under this Act and the circumstances in which the method applies;

(g) requiring a unit sub-meter provider to provide financial assistance in respect of the cost of electricity and prescribing,

(i) the circumstances in which the financial assistance is to be provided,

(ii) the person or class of persons entitled to receive the financial assistance,

(iii) the method of determining the amount of the financial assistance to be provided,

(iv) the manner for paying or otherwise providing the financial assistance;

(h) setting out one or more limitation periods for the purposes of subsection 6 (1) or (2), and governing the circumstances in which that subsection does not apply;

(i) respecting records to be kept by electricity vendors or by persons prescribed by the regulations;

(j) providing for matters which, in the opinion of the Lieutenant Governor in Council, are necessary or desirable to facilitate the implementation of this Act and the regulations.

**Regulations, Minister of Energy**

(2) The Minister of Energy may make regulations,

(a) prescribing information that must or may be included on invoices issued to consumers or that must or may accompany invoices issued to consumers or payments of financial assistance under this Act;

(b) governing the presentation of financial assistance under this Act on invoices issued to consumers;

(c) prescribing anything required to be or referred to in section 4 as being prescribed by the regulations.

**Retroactive regulations**

(3) A regulation made under this Act is, if it so provides, effective with reference to a period before it is filed.

**Subdelegation**

(4) The Lieutenant Governor in Council may, by regulation, delegate to the Minister of Energy the power to make some or all of the regulations under subsection (1).

***Ontario Clean Energy Benefit Act, 2010***

**16. (1) The *Ontario Clean Energy Benefit Act, 2010* is amended by adding the following section:**

**Cut-off dates for financial assistance, reimbursement**
**Financial assistance**

**6.1** (1) Despite any entitlement of consumers to financial assistance under this Act, no financial assistance is payable to a consumer after the date prescribed by the regulations in respect of the consumer, other than in such circumstances as may be prescribed by the regulations.

**Reimbursement**

(2) Despite any requirement under this Act to reimburse an electricity vendor or other person for financial assistance provided by them to consumers, no amounts for reimbursement are payable to the electricity vendor or other person after the date prescribed by the regulations in respect of the electricity vendor or other person, other than in such circumstances as may be prescribed by the regulations.

**(2) Subsection 15 (1) of the Act is amended by adding the following clause:**

(i.1) setting out one or more dates for the purposes of subsection 6.1 (1) or (2), and governing the circumstances in which that subsection does not apply;

***Ontario Energy Board Act, 1998***

**17. (1) The definition of "enforceable provision" in section 3 of the *Ontario Energy Board Act, 1998* is amended by adding the following clause:**

(c.2) a provision of the *Ontario Rebate for Electricity Consumers Act, 2016* or the regulations made under it,

**(2) Section 70 of the Act is amended by adding the following subsection:**

**Deemed condition of licences, unit sub-meter provider, *Ontario Rebate for Electricity Consumers Act, 2016***

(2.3) Every licence issued to a unit sub-meter provider is deemed to contain the condition that the unit sub-meter provider is required to comply with the *Ontario Rebate for Electricity Consumers Act, 2016* and the regulations made under it.

**Commencement**

**18. Subject to subsection (2), this Act comes into force on the later of January 1, 2017 and the day it receives Royal Assent.**

**Short title**

**19. The short title of this Act is the *Ontario Rebate for Electricity Consumers Act, 2016*.**

***Policy***

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

i) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

ii) Increase the total amount of rate protection available to R2 with low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2004.

iii) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

iv) Expanding eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

2. ENERGY seek necessary TB/MBC approvals.

3. ENERGY seek approvals for:

i) the proposed *Ontario Rebate for Electricity Consumers Act, 2016* – **NTD-LSB – please confirm what title to use.]** and any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments and consequential legislative amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*, subject to the Legislature's approval of the Act, including the following elements:

   i. The rebate would be available starting January 1, 2017;
   ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
   iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers electricity bills;
   iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way

in which electricity vendors providing the rebate are to be reimbursed;

v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;
vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments.
vii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date.

4. ENERGY notes the following amendments:

i) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the *Electricity Act, 1998* to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

ii) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density rural electricity customers and provide for a periodic adjustment mechanism.

5. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

6. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan.

***TB/MBC***

TBC with TBS

***LRC***

Cabinet approved version [name] of this draft legislation for introduction, subject to the following:

1. The Office of Legislative Counsel is authorized to prepare a French version and to make minor adjustments to the English version, for the purpose of ensuring consistency between the two versions and making other improvements or correcting mistakes discovered in the translation process

# Electricity Price Mitigation

## Ministry of Energy

## WORKING DRAFT

## Date: September 14, 2016

Minister

Deputy Minister

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

- Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables.
  - This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%.

- Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online.

- The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers.

# Electricity Consumer Classes

- There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

**** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

# Current Rate Base Mitigation Programs

- Ontario has implemented several programs to help electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers;
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods; and
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- These programs have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial) as shown in the table below:

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

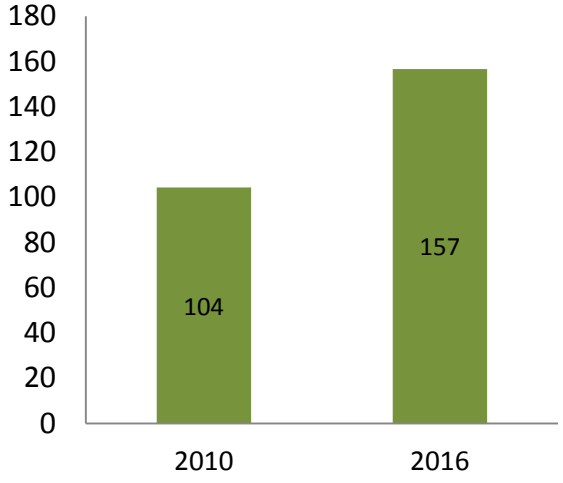
**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

# Prices by Electricity Consumer Class

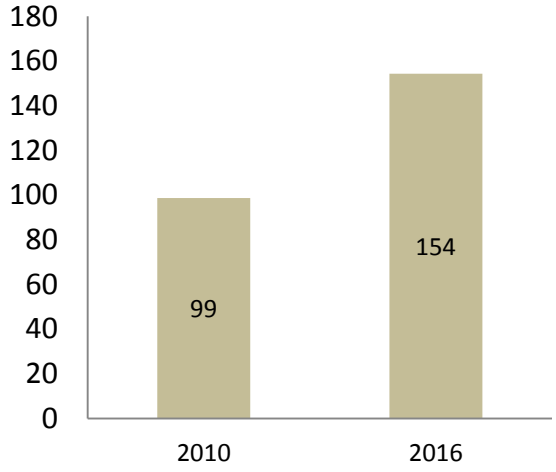
- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.

- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers.

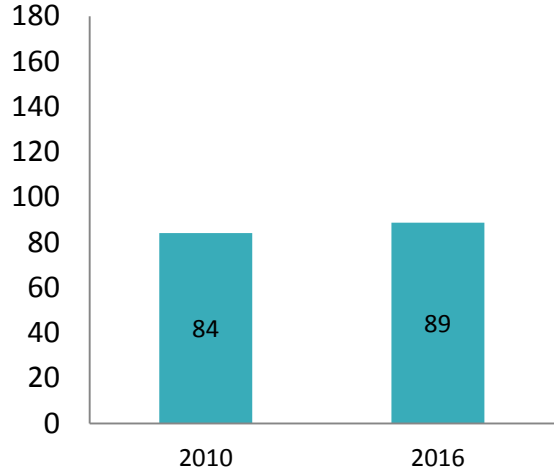
**Typical Residential Bill (750/kWh per month)**




**Typical Class B (Commercial) Price ($/MWh)**




**Typical Class A (Industrial) Price ($/MWh)**



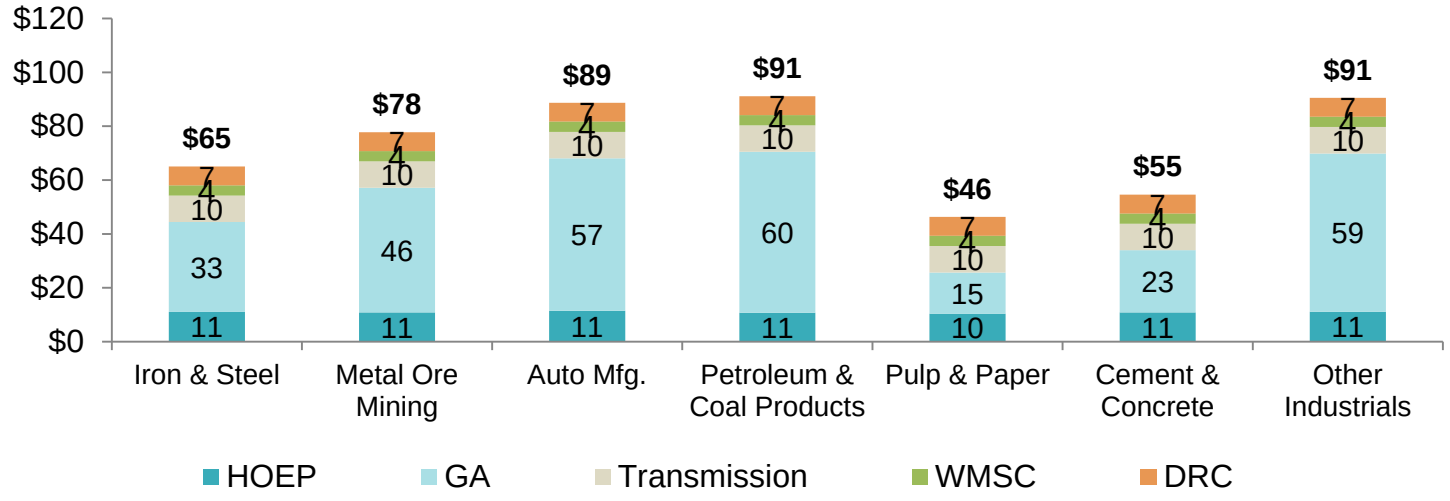

**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

# Industrial Electricity Prices Vary by Sector

- While Class A (industrial consumers) benefit from participation in the ICI program, there is a significant amount of variability in the ability to shift away from peak periods across customer classes, impacting the savings achieved.

- The below chart shows the prices paid in 2015 across a number of industrial sectors. Consumers in the north that receive rebates under the Northern Industrial Electricity Rate Program (NIERP) achieve rates that are $20/MWh lower than the below.

**Average all-in Class A, Transmission-connected Electricity Prices by Industrial Sector (estimated $/MWh), Year-to-Date June 2016**




**Note:** HOEP = Hourly Ontario Energy Price, GA = Global Adjustment, WMSC = Wholesale Market Service Charges, DRC = Debt Retirement Charge

# Recent Actions to Bend the Cost Curve

- Since 2010, a number of actions have been taken to reduce overall electricity system costs:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

# Rate Mitigation

- The 2016 Budget committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) committed $1.3 billion from the Greenhouse Gas Reduction Account (GGRA) over the first compliance period (2017-2020).

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:

  - **Tax-based Lever:**
    - Provide an on-bill rebate funded from the tax-base to all consumers or specific classes of consumers (i.e., the Ontario Clean Energy Benefit (OCEB) provided a rebate for eligible electricity consumers).

  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.

  - **Cap and Trade Proceeds Lever:**
    - Redirect cap and trade proceeds to offset the cost of existing initiatives that help reduce greenhouse gas (GHG) emissions (i.e., the CCAP committed to offset the impact of cap and trade and to keep electricity rates affordable).

# Rate Mitigation Proposal

- The Ministry of Energy is proposing to implement the following electricity price mitigation initiatives. The approach identified below would provide relief across all electricity consumer classes:

  1) Provide an 8% rebate equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms) and update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers

  2) Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial) and redirect cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

- The following slides provide additional information on the above initiatives.

***Notes:** Eligibility for the 8% rebate would be similar to OCEB and include some customers not on the Regulated Price Plan (RPP), such as Independent Power Authority consumers and consumers that have opted-out of RPP. See Appendix for discussion on HST considerations.

# Rate Mitigation Proposal – Illustrative Impacts

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Impact | | Class B (Commercial) Impact* | Class A (Industrial) Impact* | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)*** | *Rural*** (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br><br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br><br>(-8%) | -$45/ month<br><br>(-20%) | -$1/MWh<br><br>(-1%) | -$1/ MWh<br><br>(-1%) | Up to -$52/MWh<br><br>(-34%) |

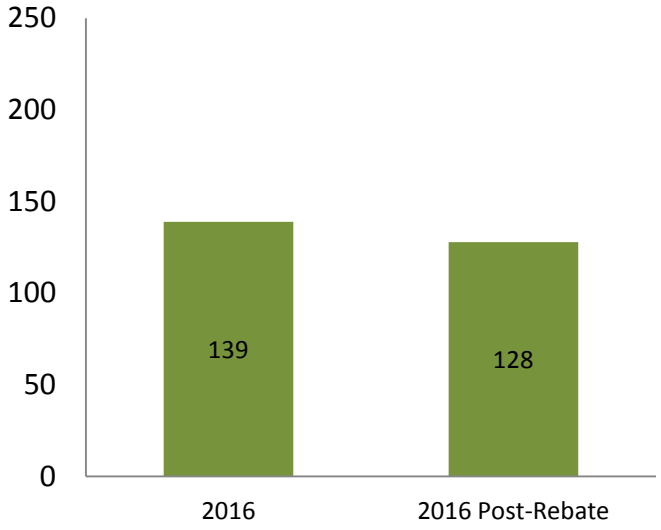
***Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes.

**** Note:** Average Regulated Price Plan Impact represents a pre-tax value of the 8% rebate and does not include the impact of ICI expansion and RRRP update (total impact of $1.31/month based on 750 kWh/month).

*****Note**: Rural customers refers to customers of Hydro One eligible to receive RRRP (R2 rate class customers). Impact shown is pre-tax and does not include the impact of ICI expansion and RRRP update (total impact of $1.74/month based on 1000 kWh/month).

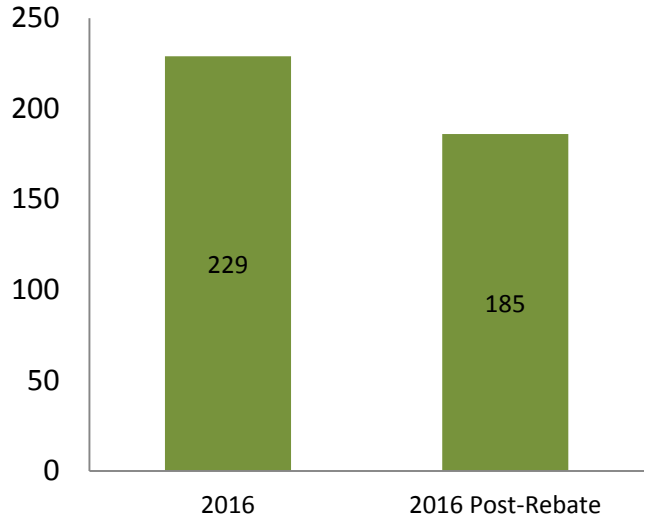
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class

**Typical Residential Bill**
**750/kWh per month, 8% only**




The pre-tax impact of a 8% reduction.

**Rural (R2) Residential Bill**
**1,000/kWh per month, 8% and RRRP update**

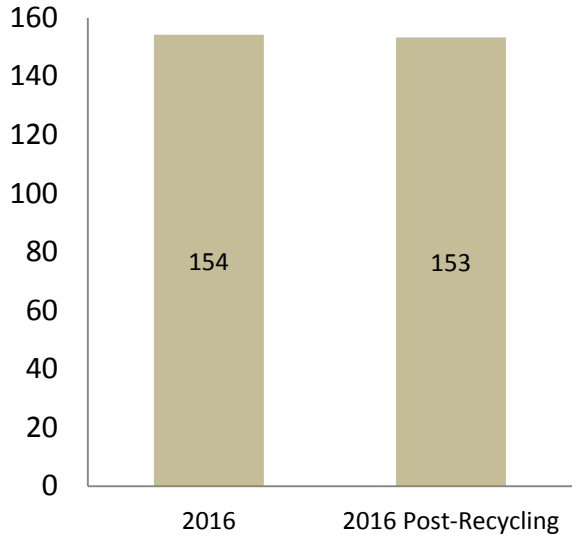



The pre-tax impact of the rate mitigation initiatives is a 19% reduction.

**Note:** Residential bills reflect electricity rates as per the Regulated Rate Plan (RRP) which came into effect on May 1, 2016. Commercial and industrial electricity prices reflect YTD June 2016.

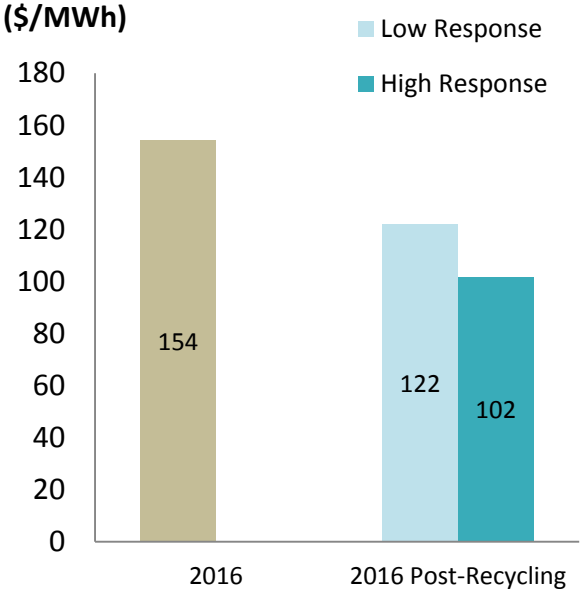
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class (cont'd)

**Typical Class B (Commercial) Price ($/MWh)**



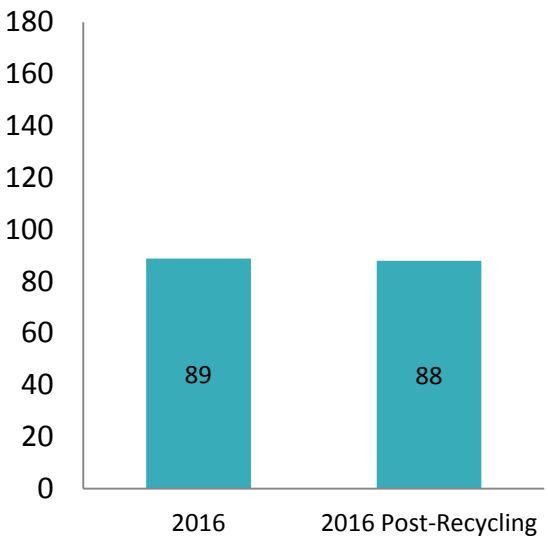

**Class B:** The net impact of the rate mitigation initiatives is a 1% reduction.

**Typical New Class A Price ($/MWh)**




**New Class A:** The net impact of the rate mitigation initiatives is a reduction of up to 21% and 34% for low and high response respectively.

**Typical Class A (Industrial) Price ($/MWh)**




**Existing Class A:** The net impact of the rate mitigation initiatives is a 1% reduction.

**Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

# 1) Regulated Price Plan Eligible Consumers and Rural or Remote Rate Protection Update

# 8% Rebate to Regulated Price Plan Eligible Consumers

- Legislation/regulation will be introduced to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit.
  - This would be equivalent to the provincial portion of the HST*.

| **Eligible for the 8% rebate**<br>(< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate**<br>(> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>  − Coffee / snack retailer<br>  − Convenience store<br>  − Apparel store<br>  − Hair salon<br>  − Small insurance office | • Class A consumers<br>  − Manufacturer<br>  − Large grocery store<br>  − Mines<br>  − Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>  − Commercial offices (low rise)<br>  − Hotel<br>  − General warehousing |

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).

***Note:** An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

# Placeholder – Electricity Bill Mock-Up

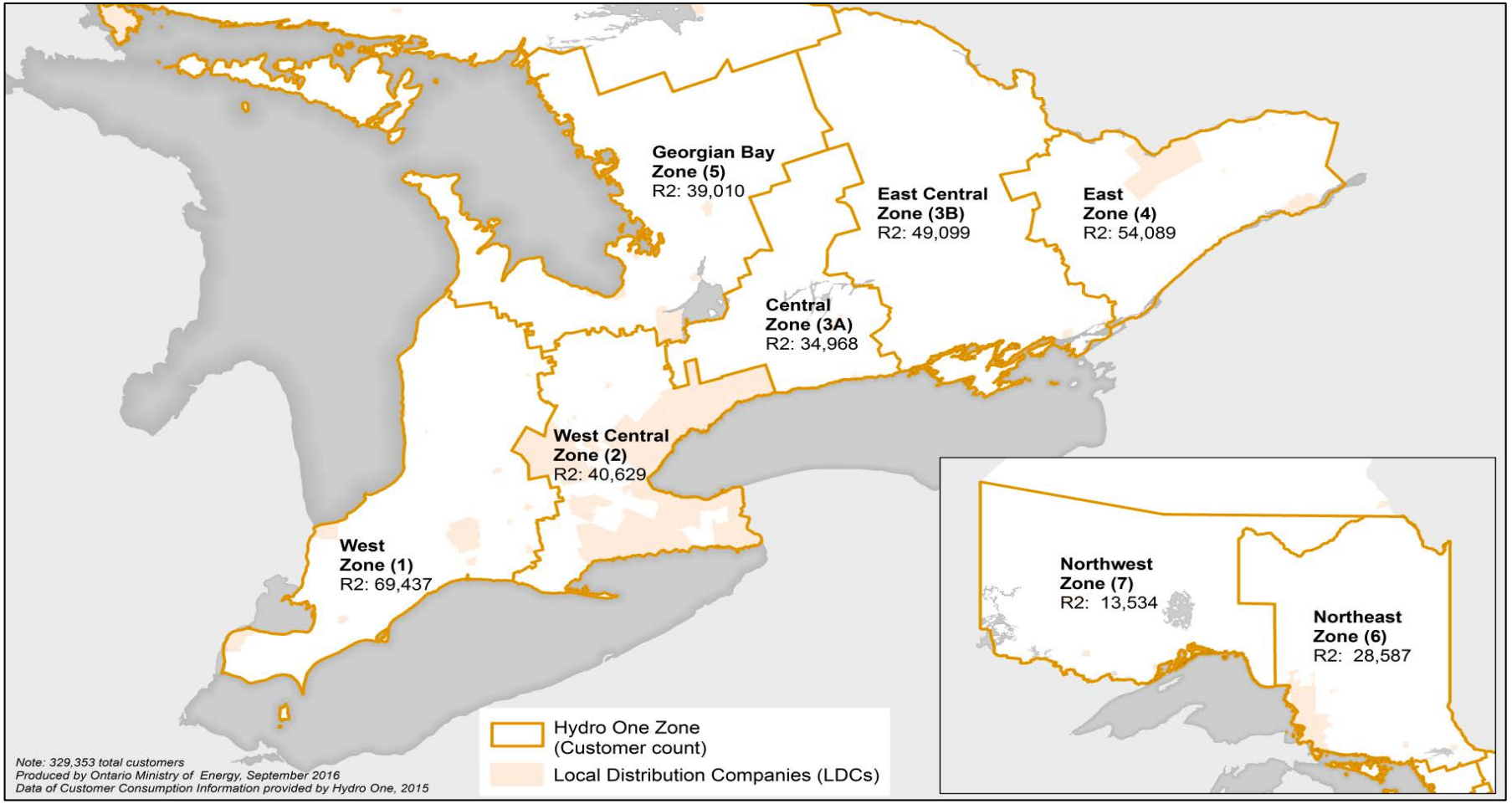
# Rural or Remote Rate Protection (RRRP) Update

- ENERGY is proposing to amend O.Reg 442/01 to provide an additional $110 million in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

- RRRP is a rate-based funded subsidy program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.
  - Today, RRRP is a $175-million program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
  - The majority of the program funding ($125.5 million) provides a subsidy to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a monthly subsidy for R2 customers of $31.50.
  - RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

- An additional $110 million in program funding would see an increased subsidy of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.
  - This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
  - The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the subsidy remains constant.

# Rural or Remote Rate Protection (RRRP) Update – R2 Customers by Region



## 2) Expand Industrial Conservation Initiative and Redirect Cap and Trade Proceeds

# Industrial Conservation Initiative (ICI) Expansion

- ENERGY is proposing to amend O. Reg. 429/04 to expand ICI eligibility effective [X placeholder date].

- Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers).
  - Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

- ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:
  - Reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods;
  - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
  - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

# ICI Expansion – Projected Impact

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

- The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility
  - Short-term refers to the expected impact once ICI billing begins for new Class A consumers (one year after expanded eligibility takes place).
  - Long-term is the expected impact once new Class A consumers have had time to significantly change their behaviour and investment decisions in response to the ICI.

- The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating.

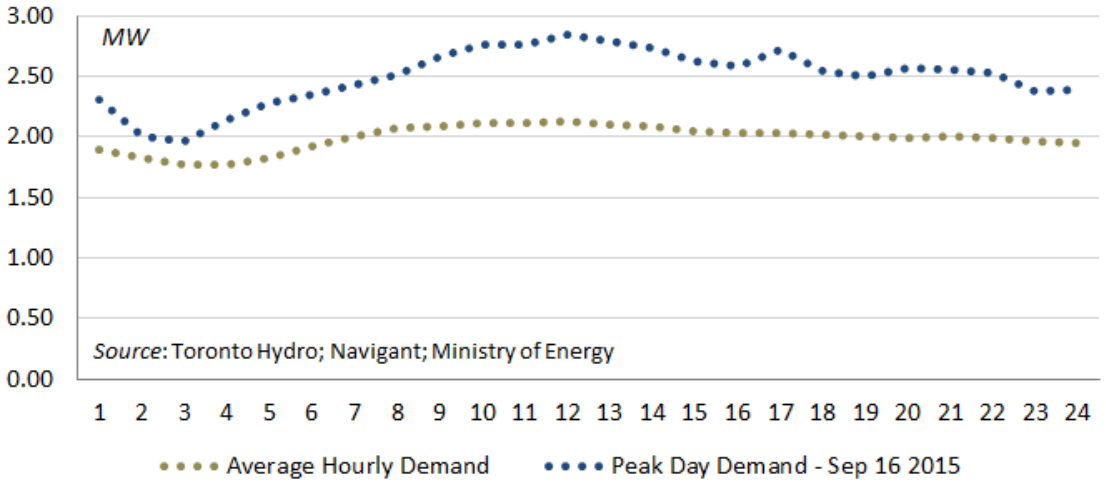
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.

# ICI Expansion – Illustrative Example of Newly Eligible Consumer

- Plastics manufacturers, such as Poly Five Plastics in Toronto, are among the consumers that would become eligible if the threshold was lowered.
- Such manufacturers fall under NAICS* code 32 and have relatively flat load profiles, reflecting around the clock production. This means they would be beneficiaries of ICI even with no change in consumption behaviour.
- Companies like Poly Five Plastics could expect to see greater savings if they are willing and able to respond to the higher prices during high demand hours.

**Typical Demand Profile, 2-3 MW Consumer**

*Manufacturer, NAICS Code 32 - Nov 2014 to Oct 2015*




**Illustrative Bill Savings, 2-3 MW Consumer**

| | *Status Quo* | *No Price Response* | *Short Term Response* | *Long Term Response* |
|---|---|---|---|---|
| | **Class B** | **Class A** | **Class A** | **Class A** |
| GA | 75.26 | 58.06 | 43.55 | 32.03 |
| Total bill | **126.28** | **109.09** | **94.58** | **83.06** |
| *Savings* | | *-14%* | *-25%* | *-34%* |

Source: Navigant; Ministry of Energy

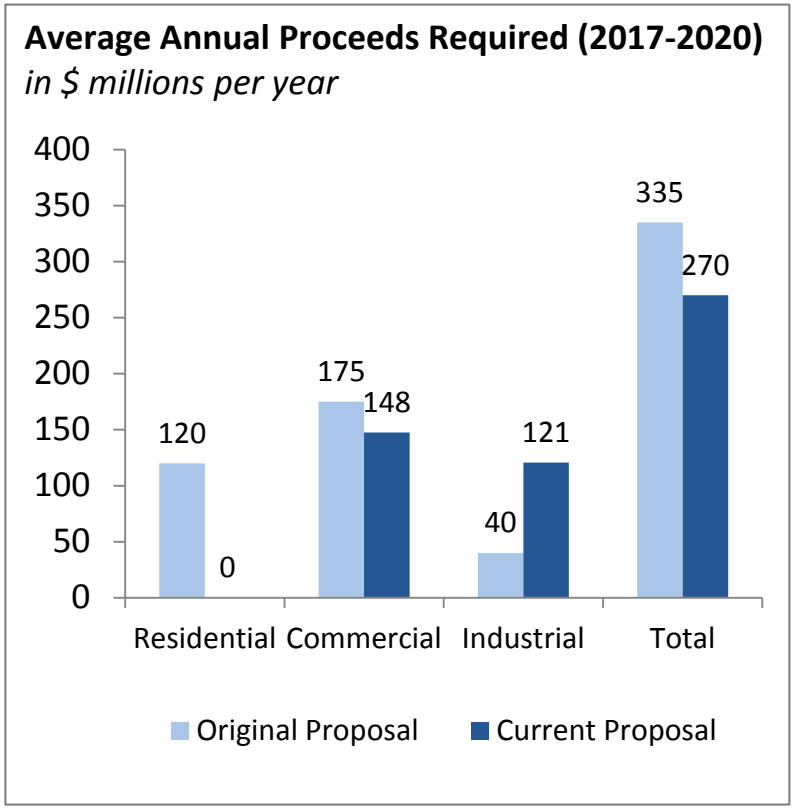
*** Note:** North American Industry Classification System (NAICS) is the standard used by statistical agencies in classifying business establishments.

# Redirect Cap and Trade Proceeds Recycling

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.
  - To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).

- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

- The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $0.24 billion over the first compliance period).




**Note:** The original proposal was to offset the impact of cap and trade via GA to the average industrial, and would provide a benefit to commercial and residential consumers. Current proposal would recycle proceeds volumetrically to industrial and commercial consumers.

# Redirect Cap and Trade Proceeds Recycling

- Redirecting cap and trade auction proceeds to lower the cost of electricity would offset consumers' contributions to non-emitting generation.

- Redirecting helps pay for committed investments/initiatives which reduce GHGs (e.g., non-emitting generation and conservation programs).
  - Due to the long-term nature (typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period. These costs will continue well beyond the timelines described in the CCAP.

- Redirecting cap and trade auction proceeds volumetrically to Class B (commercial) and Class A (industrial) consumers maintains the incentive to shift consumption from on-peak to off-peak hours.

- Using cap and trade auction proceeds to lower the cost of electricity would make it more competitive with traditionally cheaper fossil fuels.

- By using the proceeds to lower the cost of electricity, there is potential to incent fuel-switching away from fossil fuels toward much cleaner grid-connected electricity and support CCAP goals of electrification.

# Considerations

# Implementation

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010.
  - If passed, the legislation would require a general regulation.
  - Amendments would also be required to various regulations to expand ICI and RRRP.
- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. ENERGY (possibly through Ontario Energy Board) will consult with LDCs to accurately assess these impacts once the program has been announced.
  - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - Timing concerns may be alleviated by allowing LDCs to provide retroactive rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- Detailed messaging on bills (for "low-volume" consumer bills ) could be implemented by amending O. Reg. 275/04 (made under the Ontario Energy Board Act, 1998).
  - The rebate would not be directly linked to HST.
  - With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.
- While the impact of cap and trade would be added to electricity bills as of January 2017, the offsetting effect of proceeds recycling may not occur immediately depending on implementation and potential alignment with the first auction expected in March 2017.
- ENERGY will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

# Fiscal

- The Climate Change Action Plan (CCAP) committed about $1.3 billion over four years for electricity mitigation for industrial, commercial and residential consumers from GGRA proceeds.
  - The current rate mitigation proposal requires approximately 20% less in proceeds, saving approximately $240 million relative to the CCAP commitment over the first compliance period (2017-2020).

- The 8% rebate is expected to cost about $1 billion per year (i.e., $4 billion from 2017-2020), representing an additional pressure on the fiscal plan.
  - Consideration could be given to allocating the $240 million in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset.

- In the absence of any offset strategies, the full cost of the rate mitigation approach would add to the pressures and risks that need to be managed in order for the government to balance the budget in 2017-18 and stay balanced in 2018-19 and beyond.

# Legal

- In order to avoid characterization as an unconstitutional tax, a non-tax levy must have a sufficient nexus between those who pay and the regulatory scheme in the sense that those who pay have caused the need for or benefit from the regulatory scheme. Although the case law is not developed on the extent to which some regulated actors can be required to subsidize others, risk is reduced to the extent that any cross-subsidization serves true regulatory goals rather than revenue re-distribution goals.

- HST Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):
  - Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

- ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):
  - Shifting costs to some consumers to lower rates for others without more carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

- RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):
  - Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

- Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):
  - To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

# Communications

- Public high-profile communications would coincide with introduction of legislation (September 2016).
  - Stakeholder outreach/technical briefings with LDCs, Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.
  - Echo public announcements in southwest and north; proactive provincial/local media.

- **Positioning:**
  - A fiscally prudent plan to benefit all ratepayers in a lasting, meaningful way.
  - Rural customers will receive the largest single rate relief ever.
  - Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.

- **Issues Considerations:**
  - Significant benefit for rural and remote residential customers; net gain for all residential customers.
  - More complex to communicate, but can be presented as a full plan that includes reforms and improvements to the system.
  - Consistent with cap-and-trade commitment that no business sector will be left worse off, though small businesses outside ICI will benefit the least.

# Key Messages

- We are taking unprecedented action to help people in their everyday lives.
- Residential ratepayers and other RPP eligible ratepayers will receive an eight per cent rebate on their electricity bill, equivalent to the provincial portion of the HST.
- Modernizing the RRRP will benefit 330,000 families in rural Ontario with significant reductions to their electricity bills – $28 a month, in addition to the eight per cent rebate.
- Over a thousand more Ontario businesses will be eligible to benefit from the ICI program, helping them stay competitive and grow.
- These actions will assist over five million families, farms and small businesses across Ontario.
- These actions today join our many existing initiatives too help keep electricity in Ontario clean, reliable and affordable.

# Proposed Cabinet Minute

PLACEHOLDER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# Appendix

# Illustrative Bill Impacts

| | Current Bill (after tax) (before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (after tax) (before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $139 /month | N/A | 8% pre-tax rebate: - $11 | $128 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $229 /month | RRRP: –$32 | 8% pre-tax rebate: - $16<br>Updated RRRP: - $28 | $185 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $101 /month | OESP: -$38 | 8% pre-tax rebate: - $8 | $93 /month |
| Small Business (Toronto – 403,200 kWh/month) | $148 /MWh | N/A | 8% pre-tax rebate: - $12/MWh | $136 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $202 /MWh | N/A | 8% pre-tax rebate: - $16/MWh | $186 /MWh |

***Note:** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as $1,332 per year for a family.
** income of less than $28,000, family of 4.

Totals may not add due to rounding.

# Illustrative Bill Impacts (cont'd)

| | Current Rate | Current Rate mitigation initiatives* | Cost of new initiatives (RRRP and ICI) | New Rate Mitigation initiatives | Net Impact | New Rate |
|---|---|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | -$0.90 /MWh (-1%) | $107 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI: -$49/MWh NIERP: -$20/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $68 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh<br>ICI: -$51.30/MWh | -$52 /MWh (-34%) | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $151 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh | $153 /MWh |

**Notes:**

1) There is the potential for a consumer eligible for the Regulated Price Plan to opt-out of the Regulated Price Plan to opt-in to Class A and receive all three benefits (i.e., Regulated Price Plan, ICI, proceeds recycling).

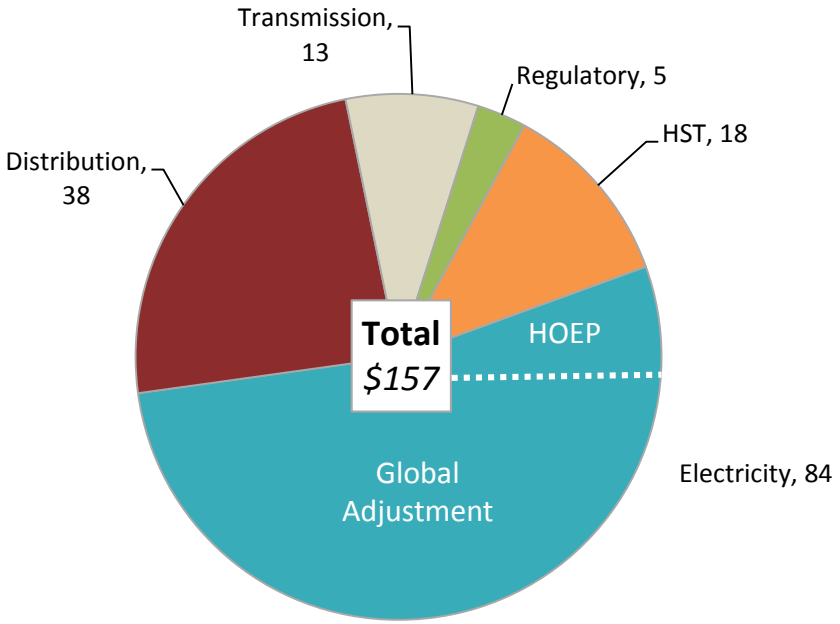
2) The impact of cap and trade would not be added to electricity bills until 2017 and varies per year over the course of the first compliance period. For illustrative purposes, the estimated average benefit of proceeds recycling is shown above.

# Residential Electricity Prices

- There are approximately 5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of May 1, 2016 (750 kWh/month)*




*Source*: OEB, Toronto Hydro

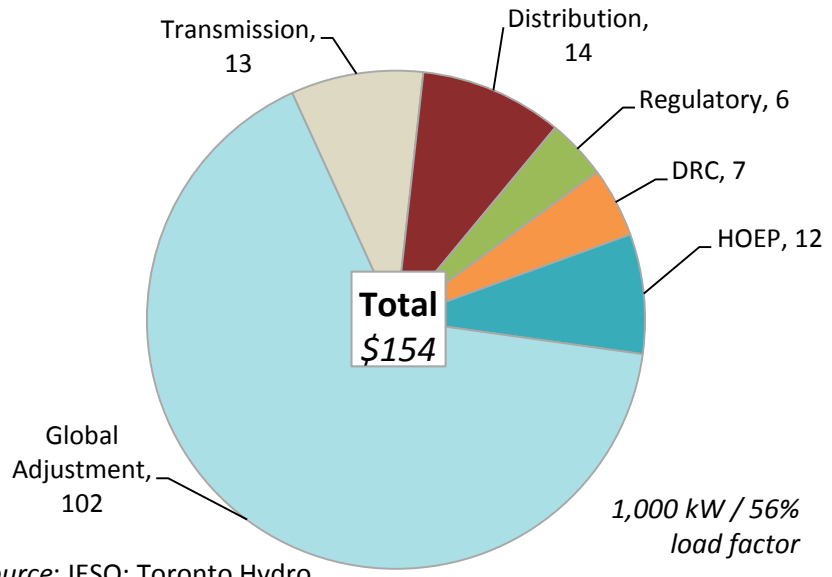
# Commercial Electricity Prices

- There are approximately 400,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.

- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




*Source*: IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.

- Targeted pricing programs are currently not available for Class B consumers.

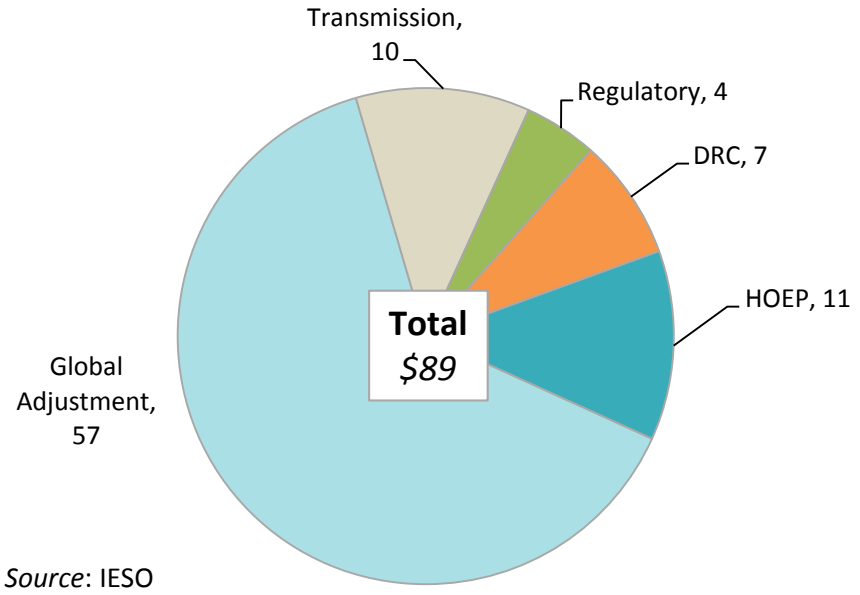
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*




*Source*: IESO

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $64/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Sales Tax Treatment in Other Jurisdictions

| Jurisdiction | Tax | Tax Paid by Business Consumers | Tax Paid by Residential Consumers | Comment |
|---|---|---|---|---|
| **British Columbia** | PST | Yes – 7% | No | • PST does not apply to residential energy, including electricity, acquired solely for residential use in a residential dwelling<br>• BC's carbon tax does not apply to electricity bills. |
| **Alberta** | None | N/A | N/A | • Alberta does not have a provincial sales tax. |
| **Saskatchewan** | PST | Yes – 5%<br>Except for electricity purchased to heat a building. | No | • PST does not apply to electricity purchased for use in a residential dwelling.<br>• PST does not apply to electricity purchased for use in heating a building that is heated solely by the electricity. |
| **Manitoba** | PST | Yes – 8%<br>Reduced rate of 1.6% applies to electricity used by a qualifying business to operate machinery | Yes – 8%<br>Electricity purchased for mixed use, 80% of which is home heating, has a reduced rate of 1.4%. Electricity solely to heat the purchaser's home is exempt. | • Winnipeg also applies a tax of 2.5% on residential and 5% on commercial. |
| **Ontario** | HST | Yes (less ITC (input tax credits)) | Yes – 8% | |
| **Quebec** | QST | Yes (less ITCs) | Yes – 9.975% | |
| **Nova Scotia** | HST | Yes (less ITCs) | Yes – 10% less provincially administered rebate. | • Rebate is equal to the provincial portion of the HST, and is administered similar to OCEB, but applies to many energy sources. |
| **New Brunswick** | HST | Yes (less ITCs) | Yes – 10% | |
| **Prince Edward Island** | HST | Yes (less ITCs) | Yes – 9% (10% beginning Oct 1, 2016) | |
| **Newfoundland and Labrador** | HST | Yes (less ITCs) | Yes – 10% | • Had a provincially administered Home Heating Rebate program until July 2015. |
| **Federal** | GST | Yes (less ITCs) | Yes – 5% | |

**From:** Tomasz Bugajski
**To:** Ronald Kwan; John Kim
**Subject:** FW: Major Projects this week
**Date:** Thursday, September 08, 2016 12:55:27 PM
**Attachments:** GOV2016.091.e08 (Clean Energy Rebate).docx
Cab min Sept2-16 CO MOF Edits CLEAN.DOCX
Cabinet Submission - Electricity Price Mitigation 20160907 CLEAN V2.pptx

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FYI

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

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**From:** Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
**Sent:** Thursday, September 08, 2016 12:41 PM
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Ghufran Tarin (MOF) <Ghufran.Tarin@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>
**Subject:** FW: Major Projects this week

FYI.

---

**From:** Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
**Sent:** Thursday, September 8, 2016 12:22 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

For your records, attached is what was circulated at Major Projects today.

---

**From:** Katona, Keley (ENERGY)
**Sent:** September-07-16 3:38 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

We're making edits based on comments from our MO. Could be this evening or tomorrow morning.

---

**From:** Kwamena, Boafoa (CAB)
**Sent:** September-07-16 3:33 PM
**To:** Katona, Keley (ENERGY); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

Hi

Will be likely receive material  later today or tomorrow?

Thanks

---

**From:** Katona, Keley (ENERGY)
**Sent:** September-07-16 10:12 AM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** Re: Major Projects this week

Sorry, disregard, we'll make it work on our end. Thanks.

---

**From:** Katona, Keley (ENERGY)
**Sent:** Wednesday, September 7, 2016 10:06 AM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

Hi Boafoa,

Wondering if it's possible for the electricity item to be last on the agenda tomorrow. We have a Minister's briefing which conflicts with Major Projects, involving the same staff and it would be very helpful if we could be on at 11am.

Thanks,
Keley

---

**From:** Kwamena, Boafoa (CAB)
**Sent:** September-06-16 5:29 PM
**To:** Katona, Keley (ENERGY); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** Major Projects this week

Hi Keley/David

We will be adding the Electricity Pricing Mitigation item to Major Projects this Thursday. This will be an opportunity to ensure everyone is on the same page in advance of the TB trip next week.  Major Projects is scheduled from 10:30 to 11:30 on Thursday. This item will be the first–10:30 to 11:00. Please let me know if this time doesn't work or if there are any concerns.

Thanks
Boafoa

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**CONFIDENTIAL**
GOV2016.091.e
8-LT/RA

# Ontario Rebate for Electricity Consumers Act, 2016

## EXPLANATORY NOTE

The *Ontario Rebate for Electricity Consumers Act, 2016* authorizes financial assistance for certain Ontario electricity consumers in respect of electricity costs. Consumers receive the financial assistance by means of an 8 per cent reduction in the amount payable before tax under their electricity accounts for each billing period. The amount of financial assistance for a billing period is required to be shown on invoices issued to consumers for the billing period.

The Act authorizes the making of regulations to reimburse electricity vendors for amounts credited to consumers' accounts under the Act. The Act authorizes the making of various other regulations, including to set out other ways for consumers to receive financial assistance, to alter the default rules in the Act for how to calculate the financial assistance and to limit or alter who is entitled to financial assistance. The Act amends the *Ontario Clean Energy Benefit Act, 2010* to authorize the making of regulations under that Act in respect of cut-off dates for financial assistance under that Act.

The Act contains administrative and enforcement provisions, including requirements relating to record keeping by electricity vendors and authorization for inspections and inquiries with respect to amounts of financial assistance provided and reimbursements to electricity vendors. The *Ontario Energy Board Act, 1998* is amended so that provisions of the *Ontario Rebate for Electricity Consumers Act, 2016* and regulations made under it will be enforceable by the Ontario Energy Board.

# An Act in respect of the cost of electricity

**CONTENTS**


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| 2. | Base invoice amount |
| 3. | Financial assistance |
| 4. | Invoices |
| 5. | Financial arrangements |
| 6. | Cut-off dates and limitation periods for financial assistance, reimbursement |
| 7. | Definition |
| 8. | Records |
| 9. | Inspections and inquiries |
| 10. | Recovery of overpayments |
| 11. | Confidentiality |
| 12. | Offences |
| 13. | Limitation period |
| 14. | Payment of fines |
| 15. | Regulations |
| 16. | Repeal |
| 17. | Ontario Clean Energy Benefit Act, 2010 |
| 6.1 | Cut-off dates for financial assistance, reimbursement |
| 18. | Ontario Energy Board Act, 1998 |
| 19. | Commencement |
| 20. | Short title |


Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

## Definitions

**1.** (1) In this Act,

"billing period" means a period of time that is wholly or partly in the eligible period and for which an invoice in respect of an eligible account is issued; ("période de facturation")

"Board" means the Ontario Energy Board; ("Commission")

"consumer" means a person,

(a) to whom an invoice is issued in respect of an eligible account for a billing period, or

(b) who is prescribed by the regulations or who satisfies such conditions as may be prescribed by the regulations; ("consommateur")

"distribution system" has the same meaning as in section 3 of the *Ontario Energy Board Act, 1998*; ("réseau de distribution")

"electricity vendor" means the IESO, a licensed distributor, a licensed retailer or a person prescribed by the regulations; ("vendeur d'électricité")

"eligible account" means, in respect of a consumer, an account with an electricity vendor, or with a person prescribed by the regulations, for the provision of electricity in Ontario if,

(a) the consumer has a demand for electricity of 50 kilowatts or less, or such other amount of demand for electricity as may be prescribed,

(b) the consumer annually uses not more than 250,000 kilowatt hours of electricity, or such other amount of use of electricity as may be prescribed,

(c) the consumer,

(i) carries on a business that is a farming business for the purposes of the *Farm Registration and Farm Organizations Funding Act, 1993*, and

(ii) holds a valid registration number assigned under that Act or the consumer's obligation to file a farming business registration form was waived pursuant to an order made under subsection 22 (6) of that Act,

(d) the account relates to,

(i) a dwelling,

(ii) a property, within the meaning of the *Condominium Act, 1998*,

(iii) a residential complex, within the meaning of subsection 2 (1) of the *Residential Tenancies Act, 2006*, without regard to section 5 of that Act, or

(iv) a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the *Co-operative Corporations Act*, or

(e) the consumer or the account satisfies such conditions as may be prescribed by the regulations; ("compte admissible")

"eligible period" means the period commencing January 1, 2017; ("période admissible")

"IESO" has the same meaning as in subsection 2 (1) of the *Electricity Act, 1998*; ("SIERE")

"licensed distributor" means a person licensed under Part V of the *Ontario Energy Board Act, 1998* to own or operate a distribution system; ("distributeur titulaire d'un permis")

"licensed retailer" means a person who is licensed under Part V of the *Ontario Energy Board Act, 1998* to retail electricity; ("détaillant titulaire d'un permis")

"market rules" means the market rules made under section 32 of the *Electricity Act, 1998*; (règles du marché")

"regulations" means the regulations made under this Act; ("règlement")

"retail" has the same meaning as in section 56 of the *Ontario Energy Board Act, 1998*; ("vendre au détail")

"unit sub-metering" means activities that are unit sub-metering for the purposes of the *Ontario Energy Board Act, 1998*; ("activités liées aux compteurs divisionnaires d'unité")

"unit sub-meter provider" means a person who is licensed to engage in unit sub-metering by the Board under Part V of the *Ontario Energy Board Act, 1998*. ("fournisseur de compteurs divisionnaires d'unité")

**Eligible account**

(2) For the purposes of this Act, if a consumer would, but for this subsection, have an eligible account with a licensed retailer and with a licensed distributor, but only one of them issues an invoice to the consumer for a billing period for all amounts payable by the consumer to them for the billing period,

(a) the consumer is deemed to have an eligible account for the billing period only with whichever of them issues the invoice for the billing period; and

(b) the licensed distributor or licensed retailer who issues the invoice for the billing period is deemed to be imposing all charges and other amounts payable under the invoice for the purposes of determining the amount of financial assistance to which the consumer is entitled.

**Base invoice amount**

**2.** (1) For the purposes of this Act, the base invoice amount for a billing period in respect of an eligible account is determined in accordance with the regulations and, unless otherwise prescribed by the regulations, includes, if the invoice is issued by a licensed distributor or a licensed retailer, amounts in respect of,

(a) the commodity price of the electricity;

(b) the rates and charges set out in the applicable rate order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998* that are not required under subsection (2) or the regulations to be excluded;

(c) any adjustment on the invoice required pursuant to section 25.33 of the *Electricity Act, 1998*;

(d) any debt retirement charge payable by the consumer under subsection 85 (4) of the *Electricity Act, 1998*; and

(e) anything else prescribed by the regulations.

**Exclusions**

(2) Except as otherwise prescribed by the regulations, the base invoice amount for a billing period must exclude,

(a) the balance of any amounts carried forward from previous invoices;

(b) all penalties and interest;

(c) any charges that do not relate to the consumption of electricity;

(d) the fixed monthly service charge payable by a generation facility, within the meaning of section 56 of the *Ontario Energy Board Act, 1998*, that is classified as “microFIT” in a rate order issued by the Board under subsection 78 (3) of that Act;

(e) charges labelled as “specific service charges” or “retail service charges” in the applicable rate order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998*;

(f) the amount of any harmonized sales tax payable under Part IX of the *Excise Tax Act* (Canada); and

(g) any other amounts prescribed by the regulations.

**Financial assistance**

**3.** (1) A consumer who has an eligible account during a billing period is entitled to receive financial assistance in respect of the cost of electricity during the billing period in an amount equal to 8 per cent of the base invoice amount for the billing period in respect of the eligible account.

**Exception**

(2) Despite subsection (1), a consumer is not entitled to receive financial assistance under this Act,

(a) in respect of electricity consumed in generation station service;

(b) in such circumstances as may be prescribed by the regulations; or

(c) if the regulations prescribe that the consumer is not entitled to receive financial assistance.

**Payment of financial assistance**

(3) The financial assistance to which a consumer is entitled under this Act shall be paid,

(a) by crediting the consumer's eligible account; or

(b) in such other manner as may be prescribed by the regulations.

**Money appropriated by the Legislature**

(4) The money required for the purposes of this Act shall be paid out of the money appropriated for those purposes by the Legislature.

**No assignment of financial assistance**

(5) An assignment by a consumer to another person or entity, including a licensed retailer, of the consumer's entitlement to any payment, rebate or credit does not apply to any financial assistance to which the consumer is entitled under this Act, whether the assignment was made before or after this subsection comes into force.

**Same**

(6) Subsection (7) applies if,

(a) a consumer provides to another person electricity in respect of which the consumer is entitled to financial assistance under subsection (1); and

(b) an invoice for the electricity is issued to the person by the consumer, by an agent of the consumer or by a unit sub-meter provider providing unit sub-metering for the consumer.

**Requirement to pass on benefit**

(7) Despite subsections (1) and (5), the consumer and every unit sub-meter provider providing unit sub-metering for the consumer shall ensure that each person who is liable to pay an invoice referred to in clause (6) (b) receives a credit, determined in the manner prescribed by the regulations, in respect of the financial assistance to which the consumer is entitled with respect to electricity the consumer provides to the person.

**Invoices**

**4.** (1) Unless otherwise prescribed by the regulations, every electricity vendor who issues an invoice for a billing period to a consumer in respect of an eligible account shall clearly show on the invoice,

(a) a credit equal to the amount of the financial assistance provided to the consumer for the billing period; and

(b) the net amount of the invoice after the credit.

**Invoice issued by consumer, etc.**

(2) An invoice that is issued by a consumer, an agent of a consumer, a unit sub-meter provider or another person prescribed by the regulations must be in the form required by the regulations and contain or be accompanied by the information required by the regulations.

**Transitional**

(3) If, for technical or operational reasons, an electricity vendor or a person referred to in subsection (2) is unable to adapt its invoices to comply with this Act and the regulations by the time it issues its first invoice for electricity consumed in 2017 in respect of an eligible account,

(a) the electricity vendor or person shall adapt its invoices as soon as possible and, in any event, no later than July 1, 2017; and

(b) consumers continue to be entitled to receive the financial assistance to which they are entitled under this Act and may receive it as a lump sum credit on the invoice for the first billing period after the invoices have been adapted or by such other means as may be prescribed by the regulations.

**Financial arrangements**
**Purposes**
**5.** (1) The purposes of this section are,

(a) to ensure that financial assistance under this Act and the regulations is provided to those persons entitled to receive it; and

(b) to authorize the making of financial arrangements to reimburse electricity vendors, and other persons prescribed by the regulations, for financial assistance provided under this Act and the regulations.

**Regulations**
(2) The Lieutenant Governor in Council may, for the purpose of this section, make regulations,

(a) authorizing the Minister of Energy to make payments to persons who are electricity vendors or persons prescribed by the regulations in respect of the amount of financial assistance to which consumers are entitled under this Act and prescribing methods for determining the amounts payable;

(b) requiring the IESO to make payments to licensed distributors, or to persons prescribed by the regulations, in respect of financial assistance provided under this Act or the regulations and prescribing methods for determining the amounts payable;

(c) requiring a licensed distributor to make payments to other licensed distributors or licensed retailers in respect of financial assistance under this Act and prescribing methods for determining the amounts payable;

(d) requiring a person who is an electricity vendor or a person prescribed by the regulations to make payments in respect of financial assistance to consumers or other persons entitled to receive the financial assistance and prescribing the circumstances in which such payments are to be made and methods for determining the amounts payable;

(e) authorizing the Minister of Energy to make payments of financial assistance directly to consumers and prescribing the circumstances when such payments are to be made;

(f) requiring a person who is an electricity vendor or a person prescribed by the regulations to make payments to the Minister of Finance in respect of amounts received by them or in circumstances prescribed by the regulations and prescribing methods for determining the amounts payable;

(g) authorizing payments referred to in clause (a), (b), (c), (d) or (f) to be made by way of set-offs and credits and prescribing conditions entitling or requiring amounts to be set off or credited;

(h) governing the payments required under clause (a), (b), (c), (d) or (f), including methods for paying the amounts payable and when the payments must be made, and governing methods for determining amounts to be set off or credited, including the times within which amounts must or may be set off or credited;

(i) for the purposes of this Act and the regulations, requiring persons who are electricity vendors or persons prescribed by the regulations to provide information to the Minister of Energy, the Minister of Finance, the IESO, the Board or licensed distributors and prescribing the information to be provided and when it must be provided;

(j) governing the establishment and maintenance of variance accounts required for the purposes of this Act.

**Conflict with market rules and codes**

(3) In the event of a conflict, a regulation made under subsection (2) prevails over the market rules to the extent of the conflict and prevails over a code issued by the Board under section 70.1 of the *Ontario Energy Board Act, 1998* to the extent of the conflict.

**Provision of information**

(4) A person may do anything required by a regulation made under clause (2) (i) despite any agreement to the contrary and, if the person does so,

(a) the person is not liable for doing the thing in contravention of any agreement to the contrary; and

(b) doing the thing is deemed not to constitute a breach, termination, repudiation or frustration of any contract.

**Limitation periods for financial assistance, reimbursement**

**Financial assistance**

**6.** (1) Despite any past entitlement of a consumer to financial assistance under this Act, no financial assistance is payable to a consumer after a limitation period prescribed by the regulations in respect of the consumer, other than in such circumstances as may be prescribed by the regulations.

**Reimbursement**

(2) Despite any requirement under this Act to reimburse an electricity vendor or other person for financial assistance provided by them to consumers, no amounts for reimbursement are payable to the electricity vendor or other person after a limitation period prescribed by the regulations in respect of the electricity vendor or other person, where such reimbursement is based on a consumer's past entitlement not yet paid or reimbursed under this Act, other than in such circumstances as may be prescribed by the regulations.

**Definition**

**7.** In sections 8, 9 and 10,

"Minister" means the Minister of Finance or such other member of the Executive Council to whom the administration of those sections is assigned under the *Executive Council Act*.

**Records**

**8.** (1) Every electricity vendor and every person prescribed by the regulations shall keep at a location in Ontario such records as are necessary to determine and verify compliance with this Act and the regulations and any records required by the regulations to be kept.

**Electronic records**

(2) If a person keeps records in an electronic form, the person shall ensure that, from the time the records are first made and for as long as they are required to be retained,

(a) they remain complete and unaltered, apart from any changes or additions made in the normal course of communication, storage or display; and

(b) they are capable of being printed and of being produced in electronically readable format for inspection, examination or audit.

**Retention of records**

(3) Records required to be kept under subsection (1) shall not be destroyed unless authorization has been given in writing by the Minister.

**Offence**

(4) Every person who fails to keep records in accordance with this section is guilty of an offence and, on conviction, is liable to a fine of not less than $50 and not more than $5,000.

**Inspections and inquiries**

**9.** (1) The Minister may appoint one or more inspectors who are authorized to exercise any of the powers and perform any of the duties of a person authorized by the Minister under subsection 31 (1) of the *Retail Sales Tax Act* for any purpose related to the administration and enforcement of this Act.

**Same**

(2) Subsections 31 (1), (2), (2.1) and (2.2) of the *Retail Sales Tax Act* apply, with necessary modifications, with respect to the administration and enforcement of this Act.

**Admission of evidence**

(3) The Minister, or a person authorized by the Minister, may, for any purpose related to the administration of this Act or the regulations, reproduce from original data stored electronically any information previously submitted as required under this Act or the regulations in any form by any person, and the electronically reproduced document shall be admissible in evidence and shall have the same probative force as the original document would have had if it had been proved in the ordinary way.

**Inquiry**

(4) The Minister may, for any purpose related to the administration of this Act or the regulations, authorize any person, whether or not the person is an employee in the Ministry of the Minister, to make such inquiry as the Minister considers necessary with reference to anything relating to the administration of this Act or the regulations.

**Copies**

(5) If a book, record or other document is examined or produced under this section, the person by whom it is examined or to whom it is produced or any officer of the Ministry may make, or cause to be made, one or more copies of it, and a document purporting to be certified by the person to be a copy made pursuant to this section is admissible in evidence and has the same probative force as the original document would have if proved in the ordinary way.

**Compliance**

(6) No person shall hinder or molest or interfere with any person doing anything that the person is authorized by this section to do or prevent or attempt to prevent any person doing any such thing.

**Same**

(7) Despite any other law to the contrary, every person shall, unless the person is unable to do so, do everything he, she or it is required by this section to do.

**Administration of oaths**

(8) Declarations or affidavits in connection with statements of information submitted pursuant to this section may be taken before any person having authority to administer an oath or before any person specially authorized for that purpose by the Lieutenant Governor in Council, but any person so specially authorized shall not charge any fee for doing so.

**Application of Public Inquiries Act, 2009**

(9) Section 33 of the *Public Inquiries Act, 2009* applies to an inquiry under subsection (4).

**Recovery of overpayments**

**Definitions**

**10.** (1) In this section,

"inspector" means an inspector referred to in section 9; ("inspecteur")

"overpayment" means an amount received by a person in excess of any reimbursement to which the person is entitled under this Act and the regulations. ("trop-perçu")

**Notice of overpayment**

(2) If it appears to an inspector that a person has received an overpayment, the Minister may send a written notice to the person advising the person of the following:

1. That the person has received an overpayment.

2. The amount of the overpayment and how it was calculated.

3. The required steps to be taken by the person with respect to the overpayment.

4. The date, not more than six months after the date of the notice, by which these steps must be completed.

5. That the Minister has the authority to assess the person for the amount of the overpayment, plus interest, if the person fails to complete the required steps by the specified date.

**Calculation of amount of overpayment**

(3) For the purposes of this section, an inspector shall calculate an overpayment or the outstanding balance of an overpayment in the manner and form and using such procedures as the Minister considers adequate and expedient.

**Assessment**

(4) If a person fails to complete the steps required in a notice under subsection (2) within the time specified in the notice, and any additional time requested by the person and permitted by the Minister, the Minister may assess or reassess the amount of the overpayment, or the outstanding balance of the overpayment, based on the inspector's calculation described in subsection (3).

**Penalty**

(5) If the Minister makes an assessment or reassessment under subsection (4) and is satisfied that the person's non-compliance with the required steps in the notice was attributable to neglect, carelessness, wilful default or fraud, the Minister may assess a penalty against the person equal to the outstanding balance of the overpayment when the penalty is assessed.

**Time limit**

(6) The Minister shall not assess or reassess under subsection (4) more than 48 months after the end of the month in which the person received the overpayment.

**Exception, where misrepresentation, etc.**

(7) Subsection (6) does not apply if the Minister establishes that the person has made a misrepresentation that is attributable to neglect, carelessness or wilful default or has committed any fraud in supplying information under this Act or the regulations or in omitting to disclose information.

**Deemed debt retirement charge**

(8) An amount assessed or reassessed by the Minister under this section is deemed for the purposes of the administration and enforcement of this Act to be a debt retirement charge, as defined in subsection 85 (1) of the *Electricity Act, 1998*, that has been collected, on the last day of the month in which the person received the overpayment, by the person as a collector appointed under subsection 85.3 (1) of the *Electricity Act, 1998* and, for those purposes,

(a) sections 85.11, 85.12, 85.14, 85.17 and 85.30 of that Act apply with necessary modifications;

(b) in the application of sections 85.11 and 85.14 of that Act and without limiting the generality of clause (a), references to the Financial Corporation are read as references to the Minister of Finance and references to the Minister of Finance are read as references to the Minister as defined in section 7 of this Act;

(c) the regulations made under that Act for the purposes of calculating the rate or rates of interest payable under section 85.11 of that Act and the manner of calculating the amount of interest apply with necessary modifications; and

(d) sections 23 and 36, subsections 37 (1), (1.1) and (2) and sections 37.1, 38 and 39 of the *Retail Sales Tax Act* apply with necessary modifications.

**Disposition of repaid amounts**

(9) If all or part of an overpayment is repaid to the Minister of Finance, the Minister of Energy shall make such financial arrangements and payments as may be necessary to ensure that any electricity vendor or other person entitled to all or part of the overpayment receives the appropriate amount.

**Confidentiality**

**11.** (1) Except as authorized by this section, no person employed by the Government of Ontario shall,

(a) knowingly communicate or knowingly allow to be communicated to any person any information obtained by or on behalf of the Minister of Energy or the Minister of Finance for the purposes of this Act; or

(b) knowingly allow any person to inspect or to have access to any record or thing obtained by or on behalf of either Minister for the purposes of this Act.

**Testimony**

(2) No person employed by the Government of Ontario shall be required, in connection with any legal proceedings,

(a) to give evidence relating to any information obtained by or on behalf of the Minister of Energy or Minister of Finance for the purposes of this Act; or

(b) to produce any record or thing obtained by or on behalf of either Minister for the purposes of this Act.

**Exception**

(3) Subsections (1) and (2) do not apply in respect of,

(a) criminal proceedings under any Act of the Parliament of Canada;

(b) proceedings in respect of the trial of any person for an offence under an Act of the Legislature; or

(c) proceedings relating to the administration or enforcement of this Act or Part V.1 or VI of the *Electricity Act, 1998*.

**Communication**

(4) A person employed by the Government of Ontario may, in the course of duties in connection with the administration or enforcement of this Act,

(a) communicate or allow to be communicated to another person employed by the Government of Ontario in the administration or enforcement of any law or to an employee of the Board information obtained by or on behalf of either Minister for the purposes of this Act; and

(b) allow another person employed by the Government of Ontario in the administration or enforcement of any law or an employee of the Board to inspect or have access to any record or thing obtained by or on behalf of either Minister for the purposes of this Act.

**Reciprocal communication**

(5) A person who receives information or obtains access to any record or thing under subsection (4) has a duty to communicate or furnish to that Minister on a reciprocal basis any information, record or thing obtained by the person that affects the administration or enforcement of this Act.

**Use of information**

(6) Any information, record or thing communicated or furnished under this section may be used only for the administration or enforcement of this Act or an Act that is administered or enforced by the person receiving the information, record or thing.

**Same**

(7) The Minister of Finance may permit information or a copy of any record or thing obtained by or on behalf of the Minister of Finance for the purposes of this Act to be given to,

(a) the person from whom the information, record or thing was obtained;

(b) any person by whom an amount is payable or has been paid under this Act; or

(c) the legal representative of a person mentioned in clause (a) or (b) or the agent of the person authorized in writing in that behalf.

**Information**

(8) The Minister of Finance may permit information or a copy of any record or thing obtained by or on behalf of the Minister of Finance for the purposes of this Act to be given to any person employed by any government if,

(a) the information, record or thing obtained by that government for the purpose of any Act that imposes a tax or duty are communicated or furnished on a reciprocal basis to the Minister; and

(b) the information, record or thing will not be used for any purpose other than the administration or enforcement of a law that provides for the imposition of a tax or duty.

**Offence**

(9) Every person who contravenes any provision of this section is guilty of an offence and on conviction is liable to a fine of not more than $2,000.

**Offences**

**False statements, etc., and fraud**

**12.** (1) Every person who engages in any of the following acts or omissions is guilty of an offence:

1. Making, participating in, assenting to or acquiescing in the making of a false or deceptive statement in any document or answer required or submitted under this Act or the regulations.

2. Destroying, altering, mutilating, hiding or otherwise disposing of information or records of an electricity vendor or other person, for the purpose of evading compliance with this Act or the regulations.

3. Making, assenting to or acquiescing in the making of a false or deceptive entry of a material particular in a record of an electricity vendor or other person required to maintain records for the purposes of this Act.

4. Omitting to make or assenting to or acquiescing in the omission of an entry of a material particular in a record of an electricity vendor or other person required to maintain records for the purposes of this Act.

5. Wilfully evading or attempting to evade, in any manner, compliance with an obligation under this Act or the regulations.

**Penalty upon conviction**

(2) A person convicted of an offence under subsection (1) is liable to either or both of the following penalties in addition to any other penalty assessed under this Act:

1. A fine in an amount that is not less than $1,000 and not more than $10,000.

2. Imprisonment for a term of not more than two years.

**General offence**

(3) Every person who contravenes, by any act or omission, a requirement imposed under this Act is guilty of an offence and, on conviction, is liable, where no other penalty is provided for the offence, to a fine of not less than $50 and not more than $5,000.

**Limitation period**

**13.** A proceeding to prosecute an offence under this Act must be commenced within six years after the date on which the matter of the offence arose.

**Payment of fines**

**14.** Fines imposed on conviction of an offence under this Act are payable to the Minister of Finance on behalf of the Crown in right of Ontario.

**Regulations**

**15.** (1) The Lieutenant Governor in Council may make regulations,

(a) subject to the Minister of Energy's powers under subsection (2), prescribing anything required to be or referred to in this Act as being prescribed by the regulations;

(b) defining any word or expression used in this Act that is not already expressly defined in this Act;

(c) requiring any person to take such action or refrain from taking such action as may be necessary for the purposes of or in connection with any regulation made under this Act;

(d) governing information that must or may be provided to consumers concerning this Act and eligibility for financial assistance under it;

(e) governing the determination of the base invoice amount for a billing period with respect to a class of electricity vendors or a class of consumers;

(f) prescribing a method of paying or crediting to a consumer an amount of financial assistance to which the consumer is entitled under this Act and the circumstances in which the method applies;

(g) requiring a unit sub-meter provider to provide financial assistance in respect of the cost of electricity and prescribing,

(i) the circumstances in which the financial assistance is to be provided,

(ii) the person or class of persons entitled to receive the financial assistance,

(iii) the method of determining the amount of the financial assistance to be provided,

(iv) the manner for paying or otherwise providing the financial assistance;

(h) setting out one or more limitation periods for the purposes of subsection 6 (1) or (2), and governing the circumstances in which that subsection does not apply;

(i) respecting records to be kept by electricity vendors or by persons prescribed by the regulations;

(j) providing for matters which, in the opinion of the Lieutenant Governor in Council, are necessary or desirable to facilitate the implementation of this Act and the regulations.

**Regulations, Minister of Energy**

(2) The Minister of Energy may make regulations,

(a) prescribing information that must or may be included on invoices issued to consumers or that must or may accompany invoices issued to consumers or payments of financial assistance under this Act;

(b) governing the presentation of financial assistance under this Act on invoices issued to consumers;

(c) prescribing anything required to be or referred to in section 4 as being prescribed by the regulations.

**Retroactive regulations**

(3) A regulation made under this Act is, if it so provides, effective with reference to a period before it is filed.

**Subdelegation**

(4) The Lieutenant Governor in Council may, by regulation, delegate to the Minister of Energy the power to make some or all of the regulations under subsection (1).

***Ontario Clean Energy Benefit Act, 2010***

**16. (1) The *Ontario Clean Energy Benefit Act, 2010* is amended by adding the following section:**

**Cut-off dates for financial assistance, reimbursement**
**Financial assistance**

**6.1** (1) Despite any entitlement of consumers to financial assistance under this Act, no financial assistance is payable to a consumer after the date prescribed by the regulations in respect of the consumer, other than in such circumstances as may be prescribed by the regulations.

**Reimbursement**

(2) Despite any requirement under this Act to reimburse an electricity vendor or other person for financial assistance provided by them to consumers, no amounts for reimbursement are payable to the electricity vendor or other person after the date prescribed by the regulations in respect of the electricity vendor or other person, other than in such circumstances as may be prescribed by the regulations.

**(2) Subsection 15 (1) of the Act is amended by adding the following clause:**

(i.1) setting out one or more dates for the purposes of subsection 6.1 (1) or (2), and governing the circumstances in which that subsection does not apply;

***Ontario Energy Board Act, 1998***

**17. (1) The definition of "enforceable provision" in section 3 of the *Ontario Energy Board Act, 1998* is amended by adding the following clause:**

(c.2) a provision of the *Ontario Rebate for Electricity Consumers Act, 2016* or the regulations made under it,

**(2) Section 70 of the Act is amended by adding the following subsection:**

**Deemed condition of licences, unit sub-meter provider, *Ontario Rebate for Electricity Consumers Act, 2016***

(2.3) Every licence issued to a unit sub-meter provider is deemed to contain the condition that the unit sub-meter provider is required to comply with the *Ontario Rebate for Electricity Consumers Act, 2016* and the regulations made under it.

**Commencement**

**18. Subject to subsection (2), this Act comes into force on the later of January 1, 2017 and the day it receives Royal Assent.**

**Short title**

**19. The short title of this Act is the *Ontario Rebate for Electricity Consumers Act, 2016*.**

***Policy***

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

i) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

ii) Increase the total amount of rate protection available to R2 with low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2004.

iii) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

iv) Expanding eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

2. ENERGY seek necessary TB/MBC approvals.

3. ENERGY seek approvals for:

i) the proposed *Ontario Rebate for Electricity Consumers Act, 2016* – **NTD-LSB – please confirm what title to use.]** and any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments and consequential legislative amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*, subject to the Legislature's approval of the Act, including the following elements:

   i. The rebate would be available starting January 1, 2017;
   ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
   iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers electricity bills;
   iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way

in which electricity vendors providing the rebate are to be reimbursed;

v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;
vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments.
vii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date.

4. ENERGY notes the following amendments:

i) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the *Electricity Act, 1998* to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

ii) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density rural electricity customers and provide for a periodic adjustment mechanism.

5. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

6. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan.

***TB/MBC***

TBC with TBS

***LRC***

Cabinet approved version [name] of this draft legislation for introduction, subject to the following:

1. The Office of Legislative Counsel is authorized to prepare a French version and to make minor adjustments to the English version, for the purpose of ensuring consistency between the two versions and making other improvements or correcting mistakes discovered in the translation process

# Electricity Price Mitigation

## Ministry of Energy

## WORKING DRAFT

## Date: September 14, 2016

Minister

Deputy Minister

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

- Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables.
  - This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%.

- Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online.

- The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers.

# Electricity Consumer Classes

- There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

**** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

# Current Rate Base Mitigation Programs

- Ontario has implemented several programs to help electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers;
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods; and
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- These programs have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial) as shown in the table below:

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

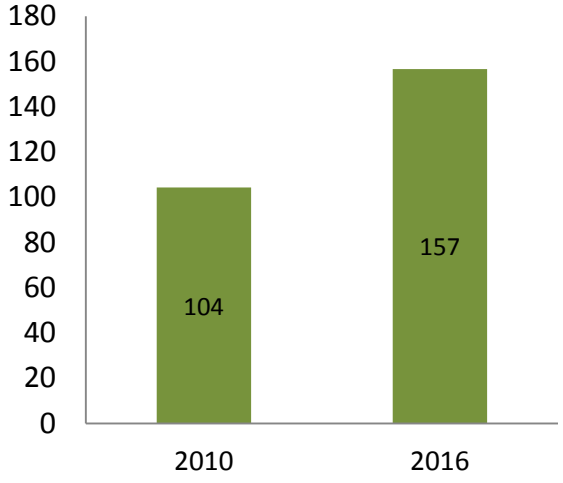
**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

# Prices by Electricity Consumer Class

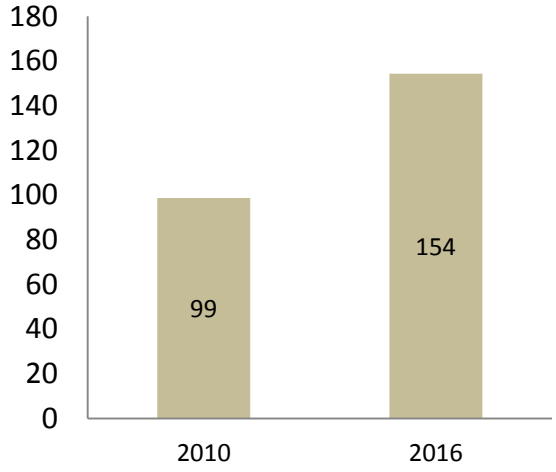
- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.

- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers.

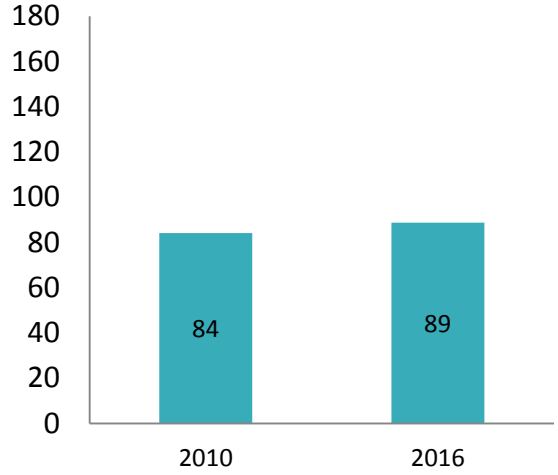
**Typical Residential Bill (750/kWh per month)**




**Typical Class B (Commercial) Price ($/MWh)**




**Typical Class A (Industrial) Price ($/MWh)**



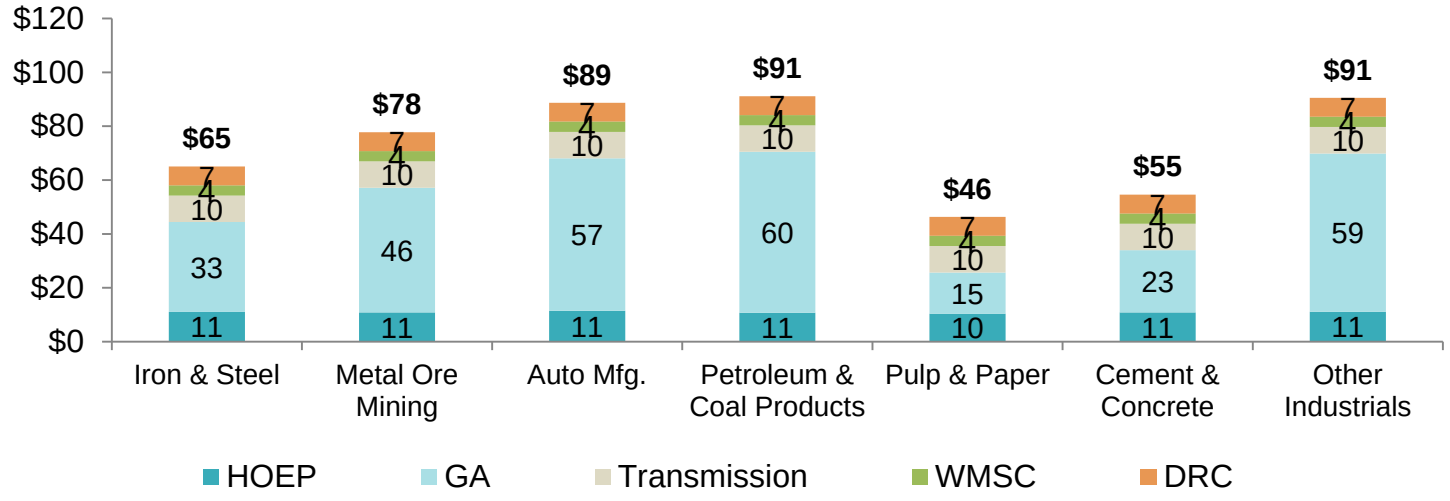

**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

# Industrial Electricity Prices Vary by Sector

- While Class A (industrial consumers) benefit from participation in the ICI program, there is a significant amount of variability in the ability to shift away from peak periods across customer classes, impacting the savings achieved.

- The below chart shows the prices paid in 2015 across a number of industrial sectors. Consumers in the north that receive rebates under the Northern Industrial Electricity Rate Program (NIERP) achieve rates that are $20/MWh lower than the below.

**Average all-in Class A, Transmission-connected Electricity Prices by Industrial Sector (estimated $/MWh), Year-to-Date June 2016**




**Note:** HOEP = Hourly Ontario Energy Price, GA = Global Adjustment, WMSC = Wholesale Market Service Charges, DRC = Debt Retirement Charge

# Recent Actions to Bend the Cost Curve

- Since 2010, a number of actions have been taken to reduce overall electricity system costs:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

# Rate Mitigation

- The 2016 Budget committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) committed $1.3 billion from the Greenhouse Gas Reduction Account (GGRA) over the first compliance period (2017-2020).

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:

  - **Tax-based Lever:**
    - Provide an on-bill rebate funded from the tax-base to all consumers or specific classes of consumers (i.e., the Ontario Clean Energy Benefit (OCEB) provided a rebate for eligible electricity consumers).

  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.

  - **Cap and Trade Proceeds Lever:**
    - Redirect cap and trade proceeds to offset the cost of existing initiatives that help reduce greenhouse gas (GHG) emissions (i.e., the CCAP committed to offset the impact of cap and trade and to keep electricity rates affordable).

# Rate Mitigation Proposal

- The Ministry of Energy is proposing to implement the following electricity price mitigation initiatives. The approach identified below would provide relief across all electricity consumer classes:

  1) Provide an 8% rebate equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms) and update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers

  2) Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial) and redirect cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

- The following slides provide additional information on the above initiatives.

***Notes:** Eligibility for the 8% rebate would be similar to OCEB and include some customers not on the Regulated Price Plan (RPP), such as Independent Power Authority consumers and consumers that have opted-out of RPP. See Appendix for discussion on HST considerations.

# Rate Mitigation Proposal – Illustrative Impacts

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Impact | | Class B (Commercial) Impact* | Class A (Industrial) Impact* | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)*** | *Rural*** (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br><br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br><br>(-8%) | -$45/ month<br><br>(-20%) | -$1/MWh<br><br>(-1%) | -$1/ MWh<br><br>(-1%) | Up to -$52/MWh<br><br>(-34%) |

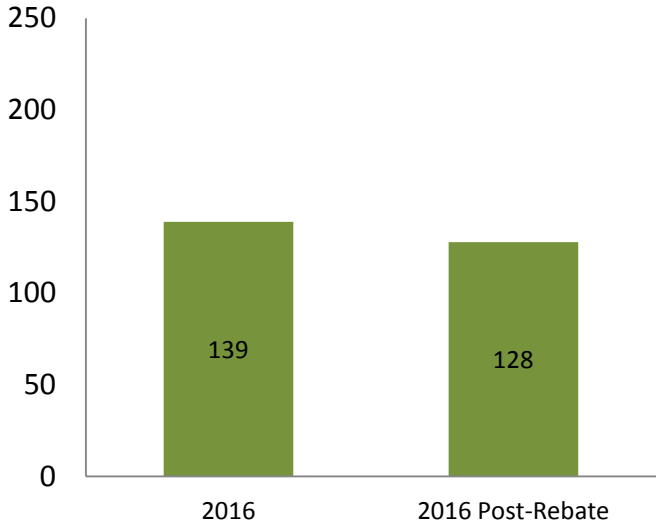
***Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes.

**** Note:** Average Regulated Price Plan Impact represents a pre-tax value of the 8% rebate and does not include the impact of ICI expansion and RRRP update (total impact of $1.31/month based on 750 kWh/month).

*****Note**: Rural customers refers to customers of Hydro One eligible to receive RRRP (R2 rate class customers). Impact shown is pre-tax and does not include the impact of ICI expansion and RRRP update (total impact of $1.74/month based on 1000 kWh/month).

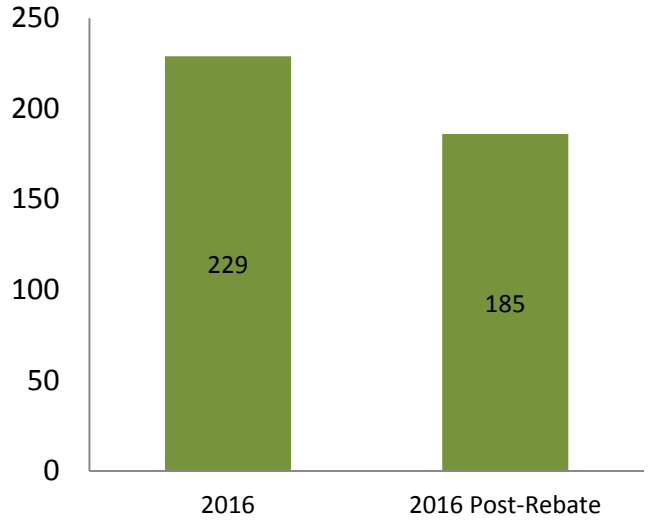
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class

**Typical Residential Bill**
**750/kWh per month, 8% only**




The pre-tax impact of a 8% reduction.

**Rural (R2) Residential Bill**
**1,000/kWh per month, 8% and RRRP update**

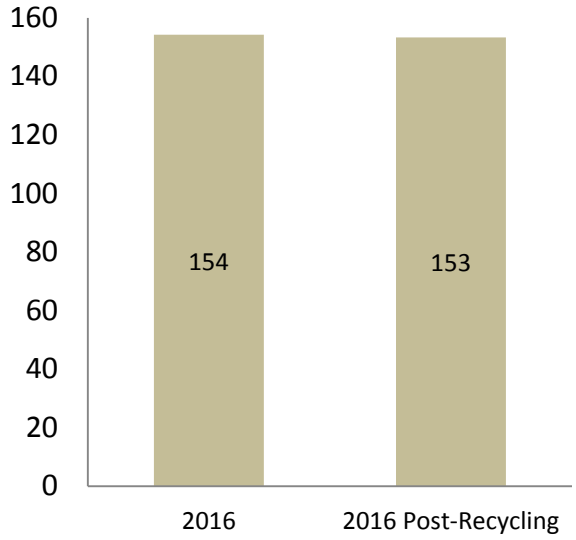



The pre-tax impact of the rate mitigation initiatives is a 19% reduction.

**Note:** Residential bills reflect electricity rates as per the Regulated Rate Plan (RRP) which came into effect on May 1, 2016. Commercial and industrial electricity prices reflect YTD June 2016.

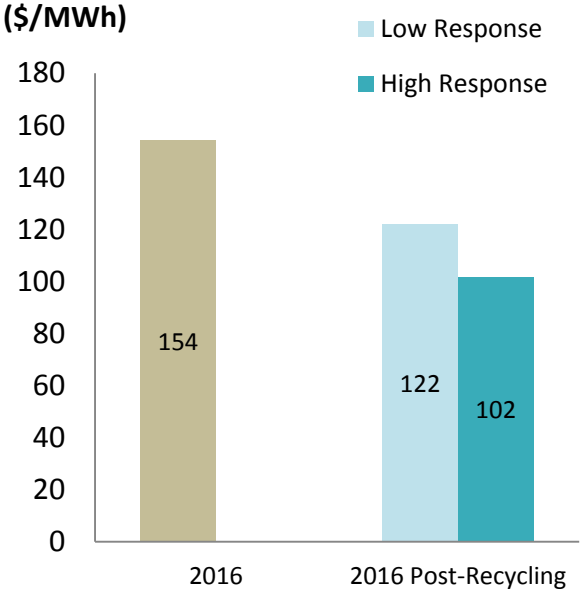
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class (cont'd)

**Typical Class B (Commercial) Price ($/MWh)**



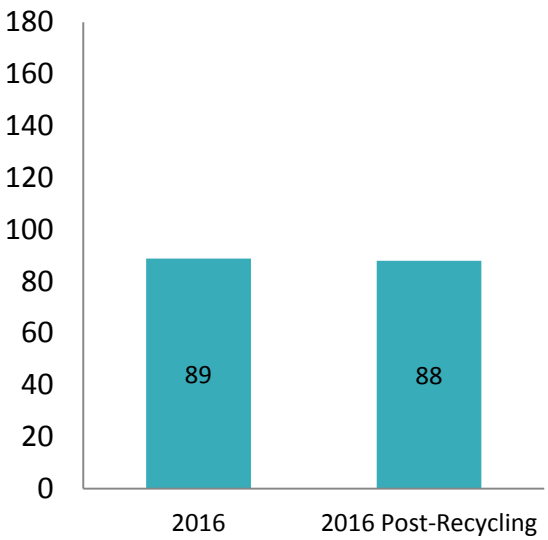

**Class B:** The net impact of the rate mitigation initiatives is a 1% reduction.

**Typical New Class A Price ($/MWh)**




**New Class A:** The net impact of the rate mitigation initiatives is a reduction of up to 21% and 34% for low and high response respectively.

**Typical Class A (Industrial) Price ($/MWh)**




**Existing Class A:** The net impact of the rate mitigation initiatives is a 1% reduction.

**Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

# 1) Regulated Price Plan Eligible Consumers and Rural or Remote Rate Protection Update

# 8% Rebate to Regulated Price Plan Eligible Consumers

- Legislation/regulation will be introduced to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit.
  - This would be equivalent to the provincial portion of the HST*.

| **Eligible for the 8% rebate**<br>(< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate**<br>(> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>  − Coffee / snack retailer<br>  − Convenience store<br>  − Apparel store<br>  − Hair salon<br>  − Small insurance office | • Class A consumers<br>  − Manufacturer<br>  − Large grocery store<br>  − Mines<br>  − Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>  − Commercial offices (low rise)<br>  − Hotel<br>  − General warehousing |

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).

***Note:** An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

# Placeholder – Electricity Bill Mock-Up

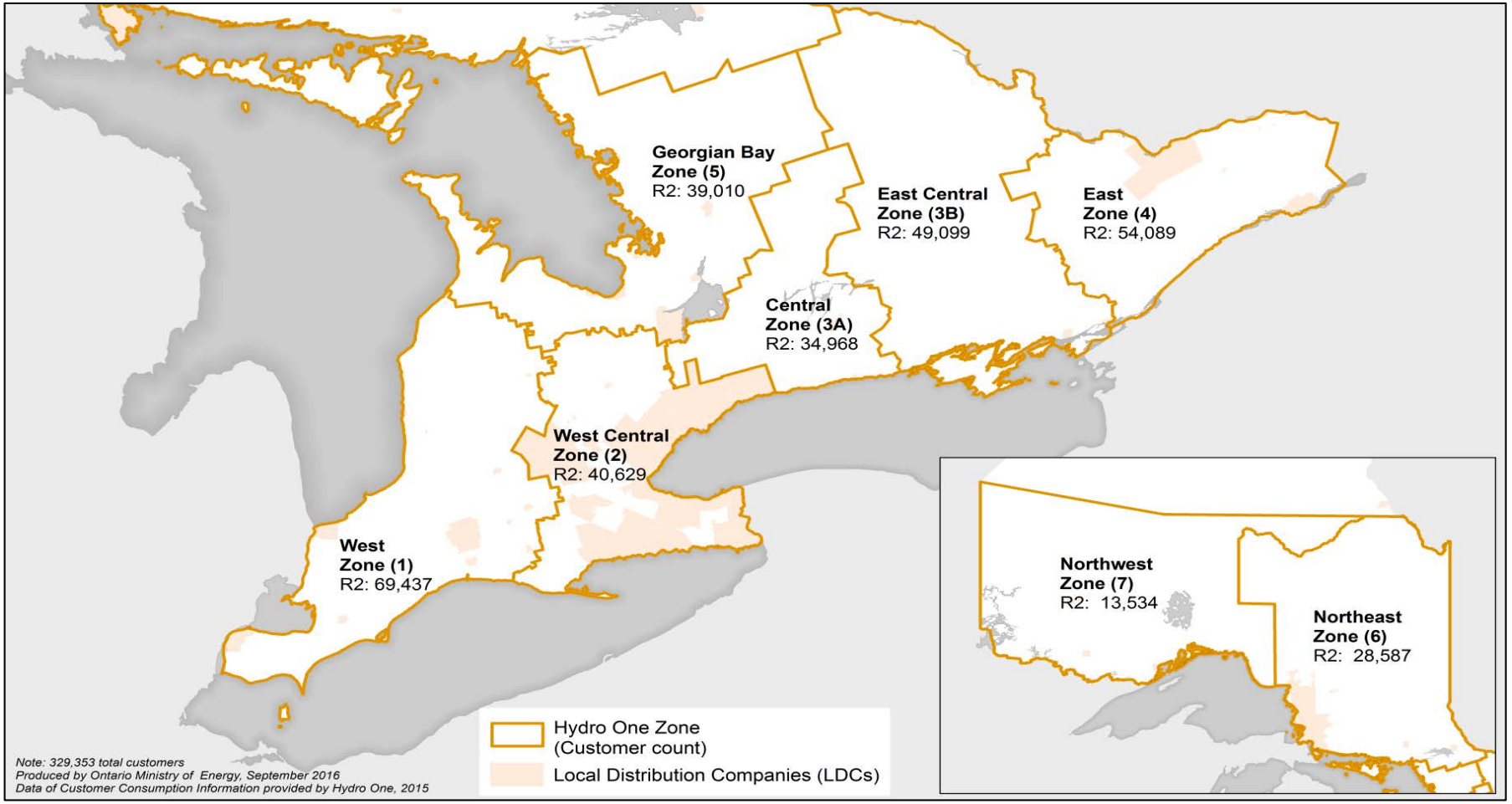
# Rural or Remote Rate Protection (RRRP) Update

- ENERGY is proposing to amend O.Reg 442/01 to provide an additional $110 million in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

- RRRP is a rate-based funded subsidy program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.
  - Today, RRRP is a $175-million program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
  - The majority of the program funding ($125.5 million) provides a subsidy to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a monthly subsidy for R2 customers of $31.50.
  - RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

- An additional $110 million in program funding would see an increased subsidy of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.
  - This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
  - The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the subsidy remains constant.

# Rural or Remote Rate Protection (RRRP) Update – R2 Customers by Region



## 2) Expand Industrial Conservation Initiative and Redirect Cap and Trade Proceeds

# Industrial Conservation Initiative (ICI) Expansion

- ENERGY is proposing to amend O. Reg. 429/04 to expand ICI eligibility effective [X placeholder date].

- Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers).
  - Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

- ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:
  - Reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods;
  - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
  - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

# ICI Expansion – Projected Impact

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

- The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility
  - Short-term refers to the expected impact once ICI billing begins for new Class A consumers (one year after expanded eligibility takes place).
  - Long-term is the expected impact once new Class A consumers have had time to significantly change their behaviour and investment decisions in response to the ICI.

- The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating.

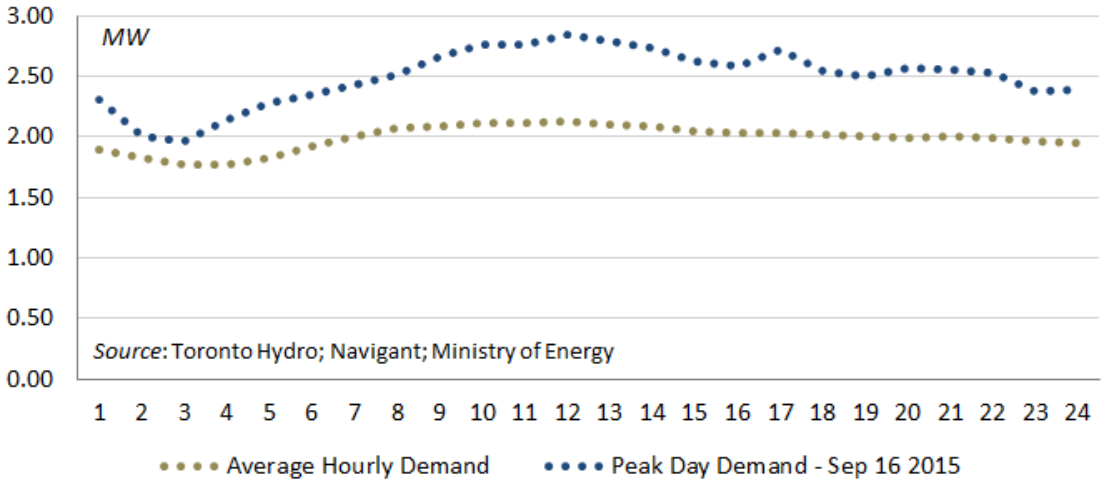
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.

# ICI Expansion – Illustrative Example of Newly Eligible Consumer

- Plastics manufacturers, such as Poly Five Plastics in Toronto, are among the consumers that would become eligible if the threshold was lowered.
- Such manufacturers fall under NAICS* code 32 and have relatively flat load profiles, reflecting around the clock production. This means they would be beneficiaries of ICI even with no change in consumption behaviour.
- Companies like Poly Five Plastics could expect to see greater savings if they are willing and able to respond to the higher prices during high demand hours.

**Typical Demand Profile, 2-3 MW Consumer**

*Manufacturer, NAICS Code 32 - Nov 2014 to Oct 2015*




**Illustrative Bill Savings, 2-3 MW Consumer**

| | *Status Quo* | *No Price Response* | *Short Term Response* | *Long Term Response* |
|---|---|---|---|---|
| | **Class B** | **Class A** | **Class A** | **Class A** |
| GA | 75.26 | 58.06 | 43.55 | 32.03 |
| Total bill | **126.28** | **109.09** | **94.58** | **83.06** |
| *Savings* | | *-14%* | *-25%* | *-34%* |

Source: Navigant; Ministry of Energy

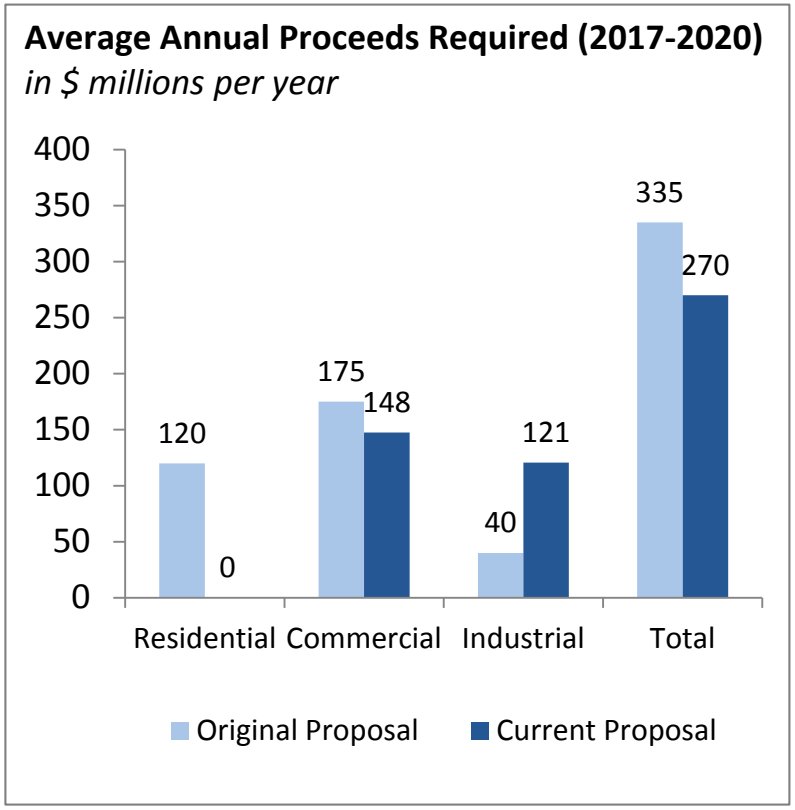
*** Note:** North American Industry Classification System (NAICS) is the standard used by statistical agencies in classifying business establishments.

# Redirect Cap and Trade Proceeds Recycling

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.
  - To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).

- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

- The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $0.24 billion over the first compliance period).




**Note:** The original proposal was to offset the impact of cap and trade via GA to the average industrial, and would provide a benefit to commercial and residential consumers. Current proposal would recycle proceeds volumetrically to industrial and commercial consumers.

# Redirect Cap and Trade Proceeds Recycling

- Redirecting cap and trade auction proceeds to lower the cost of electricity would offset consumers' contributions to non-emitting generation.

- Redirecting helps pay for committed investments/initiatives which reduce GHGs (e.g., non-emitting generation and conservation programs).
  - Due to the long-term nature (typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period. These costs will continue well beyond the timelines described in the CCAP.

- Redirecting cap and trade auction proceeds volumetrically to Class B (commercial) and Class A (industrial) consumers maintains the incentive to shift consumption from on-peak to off-peak hours.

- Using cap and trade auction proceeds to lower the cost of electricity would make it more competitive with traditionally cheaper fossil fuels.

- By using the proceeds to lower the cost of electricity, there is potential to incent fuel-switching away from fossil fuels toward much cleaner grid-connected electricity and support CCAP goals of electrification.

# Considerations

# Implementation

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010.
  - If passed, the legislation would require a general regulation.
  - Amendments would also be required to various regulations to expand ICI and RRRP.
- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. ENERGY (possibly through Ontario Energy Board) will consult with LDCs to accurately assess these impacts once the program has been announced.
  - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - Timing concerns may be alleviated by allowing LDCs to provide retroactive rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- Detailed messaging on bills (for "low-volume" consumer bills ) could be implemented by amending O. Reg. 275/04 (made under the Ontario Energy Board Act, 1998).
  - The rebate would not be directly linked to HST.
  - With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.
- While the impact of cap and trade would be added to electricity bills as of January 2017, the offsetting effect of proceeds recycling may not occur immediately depending on implementation and potential alignment with the first auction expected in March 2017.
- ENERGY will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

# Fiscal

- The Climate Change Action Plan (CCAP) committed about $1.3 billion over four years for electricity mitigation for industrial, commercial and residential consumers from GGRA proceeds.
  - The current rate mitigation proposal requires approximately 20% less in proceeds, saving approximately $240 million relative to the CCAP commitment over the first compliance period (2017-2020).

- The 8% rebate is expected to cost about $1 billion per year (i.e., $4 billion from 2017-2020), representing an additional pressure on the fiscal plan.
  - Consideration could be given to allocating the $240 million in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset.

- In the absence of any offset strategies, the full cost of the rate mitigation approach would add to the pressures and risks that need to be managed in order for the government to balance the budget in 2017-18 and stay balanced in 2018-19 and beyond.

# Legal

- In order to avoid characterization as an unconstitutional tax, a non-tax levy must have a sufficient nexus between those who pay and the regulatory scheme in the sense that those who pay have caused the need for or benefit from the regulatory scheme. Although the case law is not developed on the extent to which some regulated actors can be required to subsidize others, risk is reduced to the extent that any cross-subsidization serves true regulatory goals rather than revenue re-distribution goals.

- HST Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):
  - Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

- ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):
  - Shifting costs to some consumers to lower rates for others without more carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

- RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):
  - Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

- Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):
  - To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

# Communications

- Public high-profile communications would coincide with introduction of legislation (September 2016).
  - Stakeholder outreach/technical briefings with LDCs, Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.
  - Echo public announcements in southwest and north; proactive provincial/local media.

- **Positioning:**
  - A fiscally prudent plan to benefit all ratepayers in a lasting, meaningful way.
  - Rural customers will receive the largest single rate relief ever.
  - Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.

- **Issues Considerations:**
  - Significant benefit for rural and remote residential customers; net gain for all residential customers.
  - More complex to communicate, but can be presented as a full plan that includes reforms and improvements to the system.
  - Consistent with cap-and-trade commitment that no business sector will be left worse off, though small businesses outside ICI will benefit the least.

# Key Messages

- We are taking unprecedented action to help people in their everyday lives.
- Residential ratepayers and other RPP eligible ratepayers will receive an eight per cent rebate on their electricity bill, equivalent to the provincial portion of the HST.
- Modernizing the RRRP will benefit 330,000 families in rural Ontario with significant reductions to their electricity bills – $28 a month, in addition to the eight per cent rebate.
- Over a thousand more Ontario businesses will be eligible to benefit from the ICI program, helping them stay competitive and grow.
- These actions will assist over five million families, farms and small businesses across Ontario.
- These actions today join our many existing initiatives too help keep electricity in Ontario clean, reliable and affordable.

# Proposed Cabinet Minute

PLACEHOLDER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# Appendix

# Illustrative Bill Impacts

| | Current Bill (after tax) (before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (after tax) (before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $139 /month | N/A | 8% pre-tax rebate: - $11 | $128 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $229 /month | RRRP: –$32 | 8% pre-tax rebate: - $16<br>Updated RRRP: - $28 | $185 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $101 /month | OESP: -$38 | 8% pre-tax rebate: - $8 | $93 /month |
| Small Business (Toronto – 403,200 kWh/month) | $148 /MWh | N/A | 8% pre-tax rebate: - $12/MWh | $136 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $202 /MWh | N/A | 8% pre-tax rebate: - $16/MWh | $186 /MWh |

***Note:** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as $1,332 per year for a family.
** income of less than $28,000, family of 4.

Totals may not add due to rounding.

# Illustrative Bill Impacts (cont'd)

| | Current Rate | Current Rate mitigation initiatives* | Cost of new initiatives (RRRP and ICI) | New Rate Mitigation initiatives | Net Impact | New Rate |
|---|---|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | -$0.90 /MWh (-1%) | $107 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI: -$49/MWh NIERP: -$20/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $68 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh<br>ICI: -$51.30/MWh | -$52 /MWh (-34%) | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $151 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh | $153 /MWh |

**Notes:**

1) There is the potential for a consumer eligible for the Regulated Price Plan to opt-out of the Regulated Price Plan to opt-in to Class A and receive all three benefits (i.e., Regulated Price Plan, ICI, proceeds recycling).

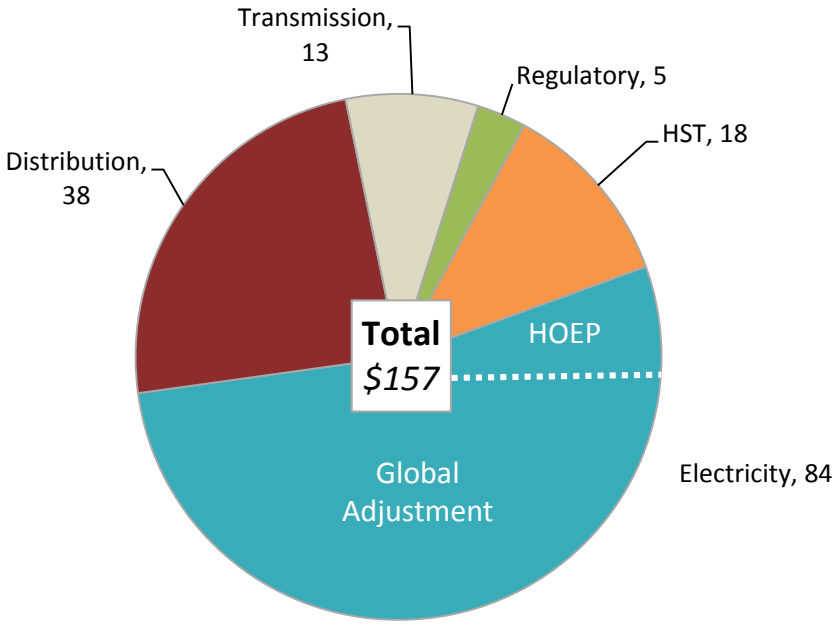
2) The impact of cap and trade would not be added to electricity bills until 2017 and varies per year over the course of the first compliance period. For illustrative purposes, the estimated average benefit of proceeds recycling is shown above.

# Residential Electricity Prices

- There are approximately 5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of May 1, 2016 (750 kWh/month)*




*Source*: OEB, Toronto Hydro

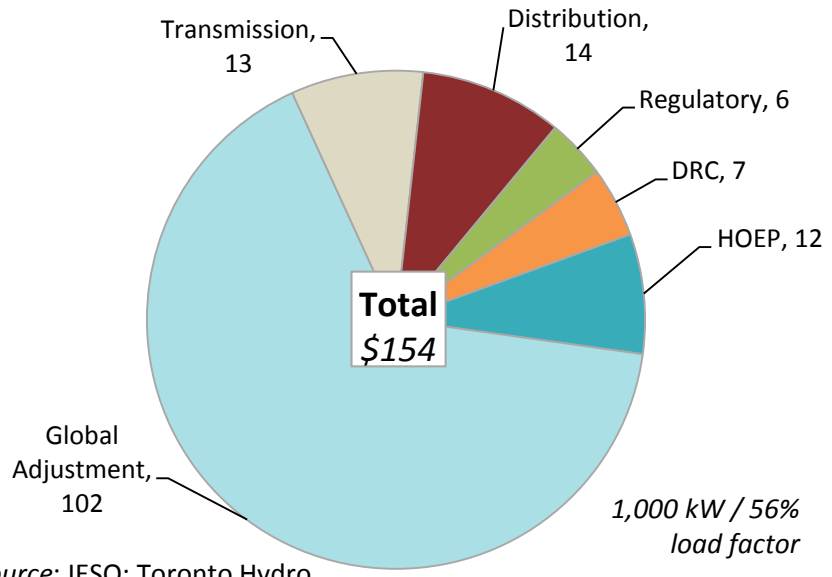
# Commercial Electricity Prices

- There are approximately 400,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.

- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




*Source*: IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.

- Targeted pricing programs are currently not available for Class B consumers.

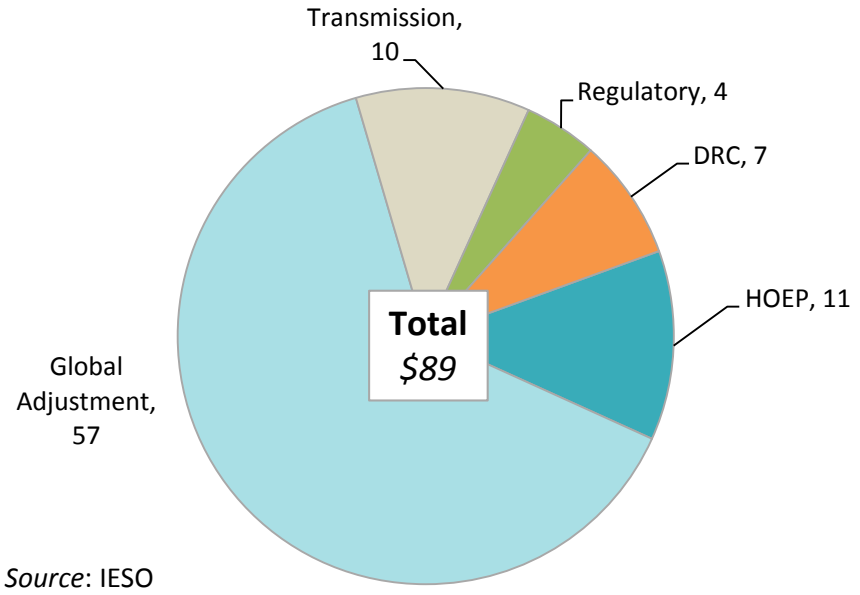
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*




*Source*: IESO

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $64/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Sales Tax Treatment in Other Jurisdictions

| Jurisdiction | Tax | Tax Paid by Business Consumers | Tax Paid by Residential Consumers | Comment |
|---|---|---|---|---|
| **British Columbia** | PST | Yes – 7% | No | • PST does not apply to residential energy, including electricity, acquired solely for residential use in a residential dwelling<br>• BC's carbon tax does not apply to electricity bills. |
| **Alberta** | None | N/A | N/A | • Alberta does not have a provincial sales tax. |
| **Saskatchewan** | PST | Yes – 5%<br>Except for electricity purchased to heat a building. | No | • PST does not apply to electricity purchased for use in a residential dwelling.<br>• PST does not apply to electricity purchased for use in heating a building that is heated solely by the electricity. |
| **Manitoba** | PST | Yes – 8%<br>Reduced rate of 1.6% applies to electricity used by a qualifying business to operate machinery | Yes – 8%<br>Electricity purchased for mixed use, 80% of which is home heating, has a reduced rate of 1.4%. Electricity solely to heat the purchaser's home is exempt. | • Winnipeg also applies a tax of 2.5% on residential and 5% on commercial. |
| **Ontario** | HST | Yes (less ITC (input tax credits)) | Yes – 8% | |
| **Quebec** | QST | Yes (less ITCs) | Yes – 9.975% | |
| **Nova Scotia** | HST | Yes (less ITCs) | Yes – 10% less provincially administered rebate. | • Rebate is equal to the provincial portion of the HST, and is administered similar to OCEB, but applies to many energy sources. |
| **New Brunswick** | HST | Yes (less ITCs) | Yes – 10% | |
| **Prince Edward Island** | HST | Yes (less ITCs) | Yes – 9% (10% beginning Oct 1, 2016) | |
| **Newfoundland and Labrador** | HST | Yes (less ITCs) | Yes – 10% | • Had a provincially administered Home Heating Rebate program until July 2015. |
| **Federal** | GST | Yes (less ITCs) | Yes – 5% | |

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | John Kim |
| **Subject:** | FW: Major Projects this week |
| **Date:** | Thursday, September 08, 2016 12:34:25 PM |
| **Attachments:** | GOV2016.091.e08 (Clean Energy Rebate).docx<br>Cab min Sept2-16 CO MOF Edits CLEAN.DOCX<br>Cabinet Submission - Electricity Price Mitigation 20160907 CLEAN V2.pptx |

This was the note we spoke about at the meeting today. I'll review and revise our Cab Note as necessary.

Do you want to send to TBS?

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

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**From:** DeSouza, Jenarra (MOF) [mailto:Jenarra.DeSouza@ontario.ca]
**Sent:** Thursday, September 08, 2016 12:30 PM
**To:** Michael Waterston (MOF) <Michael.Waterston@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Ann Langleben (MOF) <Ann.Langleben@ontario.ca>; Lynn Lawson (MOF) <Lynn.Lawson@ontario.ca>; Sriram Subrahmanyan (MOF) <Sriram.Subrahmanyan@ontario.ca>; Shannon Lewis (MOF) <Shannon.Lewis@ontario.ca>; Patel, Lesley (MOF) <Lesley.Patel@ontario.ca>; John Kim <John.Kim@ofina.on.ca>; Dianne Lone (MOF) <Dianne.Lone@ontario.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Fish, Tim (MOF) <Tim.Fish@ontario.ca>
**Cc:** Gwendolynne Young (ENE) <Gwendolynne.Young@ontario.ca>; Sriram Subrahmanyan (MOF) <Sriram.Subrahmanyan@ontario.ca>
**Subject:** FW: Major Projects this week

Hi everyone

Attached are materials from Major Projects

Cheers
Bernice

- for Jenarra DeSouza

---

**From:** Subrahmanyan, Sriram (MOF)
**Sent:** September 8, 2016 12:28 PM
**To:** DeSouza, Jenarra (MOF)
**Subject:** FW: Major Projects this week

**From:** Katona, Keley (ENERGY)
**Sent:** September 8, 2016 12:23 PM
**To:** Subrahmanyan, Sriram (MOF)
**Subject:** FW: Major Projects this week

FYI

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**From:** Katona, Keley (ENERGY)
**Sent:** September-08-16 12:22 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

For your records, attached is what was circulated at Major Projects today.

---

**From:** Katona, Keley (ENERGY)
**Sent:** September-07-16 3:38 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

We're making edits based on comments from our MO. Could be this evening or tomorrow morning.

---

**From:** Kwamena, Boafoa (CAB)
**Sent:** September-07-16 3:33 PM
**To:** Katona, Keley (ENERGY); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

Hi

Will be likely receive material  later today or tomorrow?

Thanks

---

**From:** Katona, Keley (ENERGY)
**Sent:** September-07-16 10:12 AM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** Re: Major Projects this week

Sorry, disregard, we'll make it work on our end. Thanks.

---

**From:** Katona, Keley (ENERGY)
**Sent:** Wednesday, September 7, 2016 10:06 AM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

Hi Boafoa,

Wondering if it's possible for the electricity item to be last on the agenda tomorrow. We have a Minister's briefing which conflicts with Major Projects, involving the same staff and it would be very helpful if we could be on at 11am.

Thanks,
Keley

---

**From:** Kwamena, Boafoa (CAB)
**Sent:** September-06-16 5:29 PM
**To:** Katona, Keley (ENERGY); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** Major Projects this week

Hi Keley/David

We will be adding the Electricity Pricing Mitigation item to Major Projects this Thursday. This will be an opportunity to ensure everyone is on the same page in advance of the TB trip next week. Major Projects is scheduled from 10:30 to 11:30 on Thursday. This item will be the first–10:30 to 11:00. Please let me know if this time doesn't work or if there are any concerns.

Thanks
Boafoa

Boafoa Kwamena
Special Advisor
Office of the Secretary of the Cabinet
Cabinet Office
416-325-4400
Boafoa.kwamena2@ontario.ca

**CONFIDENTIAL**
GOV2016.091.e
8-LT/RA

# Ontario Rebate for Electricity Consumers Act, 2016

## EXPLANATORY NOTE

The *Ontario Rebate for Electricity Consumers Act, 2016* authorizes financial assistance for certain Ontario electricity consumers in respect of electricity costs. Consumers receive the financial assistance by means of an 8 per cent reduction in the amount payable before tax under their electricity accounts for each billing period. The amount of financial assistance for a billing period is required to be shown on invoices issued to consumers for the billing period.

The Act authorizes the making of regulations to reimburse electricity vendors for amounts credited to consumers' accounts under the Act. The Act authorizes the making of various other regulations, including to set out other ways for consumers to receive financial assistance, to alter the default rules in the Act for how to calculate the financial assistance and to limit or alter who is entitled to financial assistance. The Act amends the *Ontario Clean Energy Benefit Act, 2010* to authorize the making of regulations under that Act in respect of cut-off dates for financial assistance under that Act.

The Act contains administrative and enforcement provisions, including requirements relating to record keeping by electricity vendors and authorization for inspections and inquiries with respect to amounts of financial assistance provided and reimbursements to electricity vendors. The *Ontario Energy Board Act, 1998* is amended so that provisions of the *Ontario Rebate for Electricity Consumers Act, 2016* and regulations made under it will be enforceable by the Ontario Energy Board.

# An Act in respect of the cost of electricity

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| 5. | Financial arrangements |
| 6. | Cut-off dates and limitation periods for financial assistance, reimbursement |
| 7. | Definition |
| 8. | Records |
| 9. | Inspections and inquiries |
| 10. | Recovery of overpayments |
| 11. | Confidentiality |
| 12. | Offences |
| 13. | Limitation period |
| 14. | Payment of fines |
| 15. | Regulations |
| 16. | Repeal |
| 17. | Ontario Clean Energy Benefit Act, 2010 |
| 6.1 | Cut-off dates for financial assistance, reimbursement |
| 18. | Ontario Energy Board Act, 1998 |
| 19. | Commencement |
| 20. | Short title |


Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

## Definitions

**1.** (1) In this Act,

"billing period" means a period of time that is wholly or partly in the eligible period and for which an invoice in respect of an eligible account is issued; ("période de facturation")

"Board" means the Ontario Energy Board; ("Commission")

"consumer" means a person,

(a) to whom an invoice is issued in respect of an eligible account for a billing period, or

(b) who is prescribed by the regulations or who satisfies such conditions as may be prescribed by the regulations; ("consommateur")

"distribution system" has the same meaning as in section 3 of the *Ontario Energy Board Act, 1998*; ("réseau de distribution")

"electricity vendor" means the IESO, a licensed distributor, a licensed retailer or a person prescribed by the regulations; ("vendeur d'électricité")

"eligible account" means, in respect of a consumer, an account with an electricity vendor, or with a person prescribed by the regulations, for the provision of electricity in Ontario if,

(a) the consumer has a demand for electricity of 50 kilowatts or less, or such other amount of demand for electricity as may be prescribed,

(b) the consumer annually uses not more than 250,000 kilowatt hours of electricity, or such other amount of use of electricity as may be prescribed,

(c) the consumer,

(i) carries on a business that is a farming business for the purposes of the *Farm Registration and Farm Organizations Funding Act, 1993*, and

(ii) holds a valid registration number assigned under that Act or the consumer's obligation to file a farming business registration form was waived pursuant to an order made under subsection 22 (6) of that Act,

(d) the account relates to,

(i) a dwelling,

(ii) a property, within the meaning of the *Condominium Act, 1998*,

(iii) a residential complex, within the meaning of subsection 2 (1) of the *Residential Tenancies Act, 2006*, without regard to section 5 of that Act, or

(iv) a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the *Co-operative Corporations Act*, or

(e) the consumer or the account satisfies such conditions as may be prescribed by the regulations; ("compte admissible")

"eligible period" means the period commencing January 1, 2017; ("période admissible")

"IESO" has the same meaning as in subsection 2 (1) of the *Electricity Act, 1998*; ("SIERE")

"licensed distributor" means a person licensed under Part V of the *Ontario Energy Board Act, 1998* to own or operate a distribution system; ("distributeur titulaire d'un permis")

"licensed retailer" means a person who is licensed under Part V of the *Ontario Energy Board Act, 1998* to retail electricity; ("détaillant titulaire d'un permis")

"market rules" means the market rules made under section 32 of the *Electricity Act, 1998*; (règles du marché")

"regulations" means the regulations made under this Act; ("règlement")

"retail" has the same meaning as in section 56 of the *Ontario Energy Board Act, 1998*; ("vendre au détail")

"unit sub-metering" means activities that are unit sub-metering for the purposes of the *Ontario Energy Board Act, 1998*; ("activités liées aux compteurs divisionnaires d'unité")

"unit sub-meter provider" means a person who is licensed to engage in unit sub-metering by the Board under Part V of the *Ontario Energy Board Act, 1998*. ("fournisseur de compteurs divisionnaires d'unité")

**Eligible account**

(2) For the purposes of this Act, if a consumer would, but for this subsection, have an eligible account with a licensed retailer and with a licensed distributor, but only one of them issues an invoice to the consumer for a billing period for all amounts payable by the consumer to them for the billing period,

(a) the consumer is deemed to have an eligible account for the billing period only with whichever of them issues the invoice for the billing period; and

(b) the licensed distributor or licensed retailer who issues the invoice for the billing period is deemed to be imposing all charges and other amounts payable under the invoice for the purposes of determining the amount of financial assistance to which the consumer is entitled.

**Base invoice amount**

**2.** (1) For the purposes of this Act, the base invoice amount for a billing period in respect of an eligible account is determined in accordance with the regulations and, unless otherwise prescribed by the regulations, includes, if the invoice is issued by a licensed distributor or a licensed retailer, amounts in respect of,

(a) the commodity price of the electricity;

(b) the rates and charges set out in the applicable rate order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998* that are not required under subsection (2) or the regulations to be excluded;

(c) any adjustment on the invoice required pursuant to section 25.33 of the *Electricity Act, 1998*;

(d) any debt retirement charge payable by the consumer under subsection 85 (4) of the *Electricity Act, 1998*; and

(e) anything else prescribed by the regulations.

**Exclusions**

(2) Except as otherwise prescribed by the regulations, the base invoice amount for a billing period must exclude,

(a) the balance of any amounts carried forward from previous invoices;

(b) all penalties and interest;

(c) any charges that do not relate to the consumption of electricity;

(d) the fixed monthly service charge payable by a generation facility, within the meaning of section 56 of the *Ontario Energy Board Act, 1998*, that is classified as “microFIT” in a rate order issued by the Board under subsection 78 (3) of that Act;

(e) charges labelled as “specific service charges” or “retail service charges” in the applicable rate order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998*;

(f) the amount of any harmonized sales tax payable under Part IX of the *Excise Tax Act* (Canada); and

(g) any other amounts prescribed by the regulations.

**Financial assistance**

**3.** (1) A consumer who has an eligible account during a billing period is entitled to receive financial assistance in respect of the cost of electricity during the billing period in an amount equal to 8 per cent of the base invoice amount for the billing period in respect of the eligible account.

**Exception**

(2) Despite subsection (1), a consumer is not entitled to receive financial assistance under this Act,

(a) in respect of electricity consumed in generation station service;

(b) in such circumstances as may be prescribed by the regulations; or

(c) if the regulations prescribe that the consumer is not entitled to receive financial assistance.

**Payment of financial assistance**

(3) The financial assistance to which a consumer is entitled under this Act shall be paid,

(a) by crediting the consumer's eligible account; or

(b) in such other manner as may be prescribed by the regulations.

**Money appropriated by the Legislature**

(4) The money required for the purposes of this Act shall be paid out of the money appropriated for those purposes by the Legislature.

**No assignment of financial assistance**

(5) An assignment by a consumer to another person or entity, including a licensed retailer, of the consumer's entitlement to any payment, rebate or credit does not apply to any financial assistance to which the consumer is entitled under this Act, whether the assignment was made before or after this subsection comes into force.

**Same**

(6) Subsection (7) applies if,

(a) a consumer provides to another person electricity in respect of which the consumer is entitled to financial assistance under subsection (1); and

(b) an invoice for the electricity is issued to the person by the consumer, by an agent of the consumer or by a unit sub-meter provider providing unit sub-metering for the consumer.

**Requirement to pass on benefit**

(7) Despite subsections (1) and (5), the consumer and every unit sub-meter provider providing unit sub-metering for the consumer shall ensure that each person who is liable to pay an invoice referred to in clause (6) (b) receives a credit, determined in the manner prescribed by the regulations, in respect of the financial assistance to which the consumer is entitled with respect to electricity the consumer provides to the person.

**Invoices**

**4.** (1) Unless otherwise prescribed by the regulations, every electricity vendor who issues an invoice for a billing period to a consumer in respect of an eligible account shall clearly show on the invoice,

(a) a credit equal to the amount of the financial assistance provided to the consumer for the billing period; and

(b) the net amount of the invoice after the credit.

**Invoice issued by consumer, etc.**

(2) An invoice that is issued by a consumer, an agent of a consumer, a unit sub-meter provider or another person prescribed by the regulations must be in the form required by the regulations and contain or be accompanied by the information required by the regulations.

**Transitional**

(3) If, for technical or operational reasons, an electricity vendor or a person referred to in subsection (2) is unable to adapt its invoices to comply with this Act and the regulations by the time it issues its first invoice for electricity consumed in 2017 in respect of an eligible account,

(a) the electricity vendor or person shall adapt its invoices as soon as possible and, in any event, no later than July 1, 2017; and

(b) consumers continue to be entitled to receive the financial assistance to which they are entitled under this Act and may receive it as a lump sum credit on the invoice for the first billing period after the invoices have been adapted or by such other means as may be prescribed by the regulations.

**Financial arrangements**
**Purposes**
**5.** (1) The purposes of this section are,

(a) to ensure that financial assistance under this Act and the regulations is provided to those persons entitled to receive it; and

(b) to authorize the making of financial arrangements to reimburse electricity vendors, and other persons prescribed by the regulations, for financial assistance provided under this Act and the regulations.

**Regulations**
(2) The Lieutenant Governor in Council may, for the purpose of this section, make regulations,

(a) authorizing the Minister of Energy to make payments to persons who are electricity vendors or persons prescribed by the regulations in respect of the amount of financial assistance to which consumers are entitled under this Act and prescribing methods for determining the amounts payable;

(b) requiring the IESO to make payments to licensed distributors, or to persons prescribed by the regulations, in respect of financial assistance provided under this Act or the regulations and prescribing methods for determining the amounts payable;

(c) requiring a licensed distributor to make payments to other licensed distributors or licensed retailers in respect of financial assistance under this Act and prescribing methods for determining the amounts payable;

(d) requiring a person who is an electricity vendor or a person prescribed by the regulations to make payments in respect of financial assistance to consumers or other persons entitled to receive the financial assistance and prescribing the circumstances in which such payments are to be made and methods for determining the amounts payable;

(e) authorizing the Minister of Energy to make payments of financial assistance directly to consumers and prescribing the circumstances when such payments are to be made;

(f) requiring a person who is an electricity vendor or a person prescribed by the regulations to make payments to the Minister of Finance in respect of amounts received by them or in circumstances prescribed by the regulations and prescribing methods for determining the amounts payable;

(g) authorizing payments referred to in clause (a), (b), (c), (d) or (f) to be made by way of set-offs and credits and prescribing conditions entitling or requiring amounts to be set off or credited;

(h) governing the payments required under clause (a), (b), (c), (d) or (f), including methods for paying the amounts payable and when the payments must be made, and governing methods for determining amounts to be set off or credited, including the times within which amounts must or may be set off or credited;

(i) for the purposes of this Act and the regulations, requiring persons who are electricity vendors or persons prescribed by the regulations to provide information to the Minister of Energy, the Minister of Finance, the IESO, the Board or licensed distributors and prescribing the information to be provided and when it must be provided;

(j) governing the establishment and maintenance of variance accounts required for the purposes of this Act.

**Conflict with market rules and codes**

(3) In the event of a conflict, a regulation made under subsection (2) prevails over the market rules to the extent of the conflict and prevails over a code issued by the Board under section 70.1 of the *Ontario Energy Board Act, 1998* to the extent of the conflict.

**Provision of information**

(4) A person may do anything required by a regulation made under clause (2) (i) despite any agreement to the contrary and, if the person does so,

(a) the person is not liable for doing the thing in contravention of any agreement to the contrary; and

(b) doing the thing is deemed not to constitute a breach, termination, repudiation or frustration of any contract.

**Limitation periods for financial assistance, reimbursement**

**Financial assistance**

**6.** (1) Despite any past entitlement of a consumer to financial assistance under this Act, no financial assistance is payable to a consumer after a limitation period prescribed by the regulations in respect of the consumer, other than in such circumstances as may be prescribed by the regulations.

**Reimbursement**

(2) Despite any requirement under this Act to reimburse an electricity vendor or other person for financial assistance provided by them to consumers, no amounts for reimbursement are payable to the electricity vendor or other person after a limitation period prescribed by the regulations in respect of the electricity vendor or other person, where such reimbursement is based on a consumer's past entitlement not yet paid or reimbursed under this Act, other than in such circumstances as may be prescribed by the regulations.

**Definition**

**7.** In sections 8, 9 and 10,

"Minister" means the Minister of Finance or such other member of the Executive Council to whom the administration of those sections is assigned under the *Executive Council Act*.

**Records**

**8.** (1) Every electricity vendor and every person prescribed by the regulations shall keep at a location in Ontario such records as are necessary to determine and verify compliance with this Act and the regulations and any records required by the regulations to be kept.

**Electronic records**

(2) If a person keeps records in an electronic form, the person shall ensure that, from the time the records are first made and for as long as they are required to be retained,

(a) they remain complete and unaltered, apart from any changes or additions made in the normal course of communication, storage or display; and

(b) they are capable of being printed and of being produced in electronically readable format for inspection, examination or audit.

**Retention of records**

(3) Records required to be kept under subsection (1) shall not be destroyed unless authorization has been given in writing by the Minister.

**Offence**

(4) Every person who fails to keep records in accordance with this section is guilty of an offence and, on conviction, is liable to a fine of not less than $50 and not more than $5,000.

**Inspections and inquiries**

**9.** (1) The Minister may appoint one or more inspectors who are authorized to exercise any of the powers and perform any of the duties of a person authorized by the Minister under subsection 31 (1) of the *Retail Sales Tax Act* for any purpose related to the administration and enforcement of this Act.

**Same**

(2) Subsections 31 (1), (2), (2.1) and (2.2) of the *Retail Sales Tax Act* apply, with necessary modifications, with respect to the administration and enforcement of this Act.

**Admission of evidence**

(3) The Minister, or a person authorized by the Minister, may, for any purpose related to the administration of this Act or the regulations, reproduce from original data stored electronically any information previously submitted as required under this Act or the regulations in any form by any person, and the electronically reproduced document shall be admissible in evidence and shall have the same probative force as the original document would have had if it had been proved in the ordinary way.

**Inquiry**

(4) The Minister may, for any purpose related to the administration of this Act or the regulations, authorize any person, whether or not the person is an employee in the Ministry of the Minister, to make such inquiry as the Minister considers necessary with reference to anything relating to the administration of this Act or the regulations.

**Copies**

(5) If a book, record or other document is examined or produced under this section, the person by whom it is examined or to whom it is produced or any officer of the Ministry may make, or cause to be made, one or more copies of it, and a document purporting to be certified by the person to be a copy made pursuant to this section is admissible in evidence and has the same probative force as the original document would have if proved in the ordinary way.

**Compliance**

(6) No person shall hinder or molest or interfere with any person doing anything that the person is authorized by this section to do or prevent or attempt to prevent any person doing any such thing.

**Same**

(7) Despite any other law to the contrary, every person shall, unless the person is unable to do so, do everything he, she or it is required by this section to do.

**Administration of oaths**

(8) Declarations or affidavits in connection with statements of information submitted pursuant to this section may be taken before any person having authority to administer an oath or before any person specially authorized for that purpose by the Lieutenant Governor in Council, but any person so specially authorized shall not charge any fee for doing so.

**Application of Public Inquiries Act, 2009**

(9) Section 33 of the *Public Inquiries Act, 2009* applies to an inquiry under subsection (4).

**Recovery of overpayments**

**Definitions**

**10.** (1) In this section,

"inspector" means an inspector referred to in section 9; ("inspecteur")

"overpayment" means an amount received by a person in excess of any reimbursement to which the person is entitled under this Act and the regulations. ("trop-perçu")

**Notice of overpayment**

(2) If it appears to an inspector that a person has received an overpayment, the Minister may send a written notice to the person advising the person of the following:

1. That the person has received an overpayment.

2. The amount of the overpayment and how it was calculated.

3. The required steps to be taken by the person with respect to the overpayment.

4. The date, not more than six months after the date of the notice, by which these steps must be completed.

5. That the Minister has the authority to assess the person for the amount of the overpayment, plus interest, if the person fails to complete the required steps by the specified date.

**Calculation of amount of overpayment**

(3) For the purposes of this section, an inspector shall calculate an overpayment or the outstanding balance of an overpayment in the manner and form and using such procedures as the Minister considers adequate and expedient.

**Assessment**

(4) If a person fails to complete the steps required in a notice under subsection (2) within the time specified in the notice, and any additional time requested by the person and permitted by the Minister, the Minister may assess or reassess the amount of the overpayment, or the outstanding balance of the overpayment, based on the inspector's calculation described in subsection (3).

**Penalty**

(5) If the Minister makes an assessment or reassessment under subsection (4) and is satisfied that the person's non-compliance with the required steps in the notice was attributable to neglect, carelessness, wilful default or fraud, the Minister may assess a penalty against the person equal to the outstanding balance of the overpayment when the penalty is assessed.

**Time limit**

(6) The Minister shall not assess or reassess under subsection (4) more than 48 months after the end of the month in which the person received the overpayment.

**Exception, where misrepresentation, etc.**

(7) Subsection (6) does not apply if the Minister establishes that the person has made a misrepresentation that is attributable to neglect, carelessness or wilful default or has committed any fraud in supplying information under this Act or the regulations or in omitting to disclose information.

**Deemed debt retirement charge**

(8) An amount assessed or reassessed by the Minister under this section is deemed for the purposes of the administration and enforcement of this Act to be a debt retirement charge, as defined in subsection 85 (1) of the *Electricity Act, 1998*, that has been collected, on the last day of the month in which the person received the overpayment, by the person as a collector appointed under subsection 85.3 (1) of the *Electricity Act, 1998* and, for those purposes,

(a) sections 85.11, 85.12, 85.14, 85.17 and 85.30 of that Act apply with necessary modifications;

(b) in the application of sections 85.11 and 85.14 of that Act and without limiting the generality of clause (a), references to the Financial Corporation are read as references to the Minister of Finance and references to the Minister of Finance are read as references to the Minister as defined in section 7 of this Act;

(c) the regulations made under that Act for the purposes of calculating the rate or rates of interest payable under section 85.11 of that Act and the manner of calculating the amount of interest apply with necessary modifications; and

(d) sections 23 and 36, subsections 37 (1), (1.1) and (2) and sections 37.1, 38 and 39 of the *Retail Sales Tax Act* apply with necessary modifications.

**Disposition of repaid amounts**

(9) If all or part of an overpayment is repaid to the Minister of Finance, the Minister of Energy shall make such financial arrangements and payments as may be necessary to ensure that any electricity vendor or other person entitled to all or part of the overpayment receives the appropriate amount.

**Confidentiality**

**11.** (1) Except as authorized by this section, no person employed by the Government of Ontario shall,

(a) knowingly communicate or knowingly allow to be communicated to any person any information obtained by or on behalf of the Minister of Energy or the Minister of Finance for the purposes of this Act; or

(b) knowingly allow any person to inspect or to have access to any record or thing obtained by or on behalf of either Minister for the purposes of this Act.

**Testimony**

(2) No person employed by the Government of Ontario shall be required, in connection with any legal proceedings,

(a) to give evidence relating to any information obtained by or on behalf of the Minister of Energy or Minister of Finance for the purposes of this Act; or

(b) to produce any record or thing obtained by or on behalf of either Minister for the purposes of this Act.

**Exception**

(3) Subsections (1) and (2) do not apply in respect of,

(a) criminal proceedings under any Act of the Parliament of Canada;

(b) proceedings in respect of the trial of any person for an offence under an Act of the Legislature; or

(c) proceedings relating to the administration or enforcement of this Act or Part V.1 or VI of the *Electricity Act, 1998*.

**Communication**

(4) A person employed by the Government of Ontario may, in the course of duties in connection with the administration or enforcement of this Act,

(a) communicate or allow to be communicated to another person employed by the Government of Ontario in the administration or enforcement of any law or to an employee of the Board information obtained by or on behalf of either Minister for the purposes of this Act; and

(b) allow another person employed by the Government of Ontario in the administration or enforcement of any law or an employee of the Board to inspect or have access to any record or thing obtained by or on behalf of either Minister for the purposes of this Act.

**Reciprocal communication**

(5) A person who receives information or obtains access to any record or thing under subsection (4) has a duty to communicate or furnish to that Minister on a reciprocal basis any information, record or thing obtained by the person that affects the administration or enforcement of this Act.

**Use of information**

(6) Any information, record or thing communicated or furnished under this section may be used only for the administration or enforcement of this Act or an Act that is administered or enforced by the person receiving the information, record or thing.

**Same**

(7) The Minister of Finance may permit information or a copy of any record or thing obtained by or on behalf of the Minister of Finance for the purposes of this Act to be given to,

(a) the person from whom the information, record or thing was obtained;

(b) any person by whom an amount is payable or has been paid under this Act; or

(c) the legal representative of a person mentioned in clause (a) or (b) or the agent of the person authorized in writing in that behalf.

**Information**

(8) The Minister of Finance may permit information or a copy of any record or thing obtained by or on behalf of the Minister of Finance for the purposes of this Act to be given to any person employed by any government if,

(a) the information, record or thing obtained by that government for the purpose of any Act that imposes a tax or duty are communicated or furnished on a reciprocal basis to the Minister; and

(b) the information, record or thing will not be used for any purpose other than the administration or enforcement of a law that provides for the imposition of a tax or duty.

**Offence**

(9) Every person who contravenes any provision of this section is guilty of an offence and on conviction is liable to a fine of not more than $2,000.

**Offences**

**False statements, etc., and fraud**

**12.** (1) Every person who engages in any of the following acts or omissions is guilty of an offence:

1. Making, participating in, assenting to or acquiescing in the making of a false or deceptive statement in any document or answer required or submitted under this Act or the regulations.

2. Destroying, altering, mutilating, hiding or otherwise disposing of information or records of an electricity vendor or other person, for the purpose of evading compliance with this Act or the regulations.

3. Making, assenting to or acquiescing in the making of a false or deceptive entry of a material particular in a record of an electricity vendor or other person required to maintain records for the purposes of this Act.

4. Omitting to make or assenting to or acquiescing in the omission of an entry of a material particular in a record of an electricity vendor or other person required to maintain records for the purposes of this Act.

5. Wilfully evading or attempting to evade, in any manner, compliance with an obligation under this Act or the regulations.

**Penalty upon conviction**

(2) A person convicted of an offence under subsection (1) is liable to either or both of the following penalties in addition to any other penalty assessed under this Act:

1. A fine in an amount that is not less than $1,000 and not more than $10,000.

2. Imprisonment for a term of not more than two years.

**General offence**

(3) Every person who contravenes, by any act or omission, a requirement imposed under this Act is guilty of an offence and, on conviction, is liable, where no other penalty is provided for the offence, to a fine of not less than $50 and not more than $5,000.

**Limitation period**

**13.** A proceeding to prosecute an offence under this Act must be commenced within six years after the date on which the matter of the offence arose.

**Payment of fines**

**14.** Fines imposed on conviction of an offence under this Act are payable to the Minister of Finance on behalf of the Crown in right of Ontario.

**Regulations**

**15.** (1) The Lieutenant Governor in Council may make regulations,

(a) subject to the Minister of Energy's powers under subsection (2), prescribing anything required to be or referred to in this Act as being prescribed by the regulations;

(b) defining any word or expression used in this Act that is not already expressly defined in this Act;

(c) requiring any person to take such action or refrain from taking such action as may be necessary for the purposes of or in connection with any regulation made under this Act;

(d) governing information that must or may be provided to consumers concerning this Act and eligibility for financial assistance under it;

(e) governing the determination of the base invoice amount for a billing period with respect to a class of electricity vendors or a class of consumers;

(f) prescribing a method of paying or crediting to a consumer an amount of financial assistance to which the consumer is entitled under this Act and the circumstances in which the method applies;

(g) requiring a unit sub-meter provider to provide financial assistance in respect of the cost of electricity and prescribing,

(i) the circumstances in which the financial assistance is to be provided,

(ii) the person or class of persons entitled to receive the financial assistance,

(iii) the method of determining the amount of the financial assistance to be provided,

(iv) the manner for paying or otherwise providing the financial assistance;

(h) setting out one or more limitation periods for the purposes of subsection 6 (1) or (2), and governing the circumstances in which that subsection does not apply;

(i) respecting records to be kept by electricity vendors or by persons prescribed by the regulations;

(j) providing for matters which, in the opinion of the Lieutenant Governor in Council, are necessary or desirable to facilitate the implementation of this Act and the regulations.

**Regulations, Minister of Energy**

(2) The Minister of Energy may make regulations,

(a) prescribing information that must or may be included on invoices issued to consumers or that must or may accompany invoices issued to consumers or payments of financial assistance under this Act;

(b) governing the presentation of financial assistance under this Act on invoices issued to consumers;

(c) prescribing anything required to be or referred to in section 4 as being prescribed by the regulations.

**Retroactive regulations**

(3) A regulation made under this Act is, if it so provides, effective with reference to a period before it is filed.

**Subdelegation**

(4) The Lieutenant Governor in Council may, by regulation, delegate to the Minister of Energy the power to make some or all of the regulations under subsection (1).

***Ontario Clean Energy Benefit Act, 2010***

**16. (1) The *Ontario Clean Energy Benefit Act, 2010* is amended by adding the following section:**

**Cut-off dates for financial assistance, reimbursement**
**Financial assistance**

**6.1** (1) Despite any entitlement of consumers to financial assistance under this Act, no financial assistance is payable to a consumer after the date prescribed by the regulations in respect of the consumer, other than in such circumstances as may be prescribed by the regulations.

**Reimbursement**

(2) Despite any requirement under this Act to reimburse an electricity vendor or other person for financial assistance provided by them to consumers, no amounts for reimbursement are payable to the electricity vendor or other person after the date prescribed by the regulations in respect of the electricity vendor or other person, other than in such circumstances as may be prescribed by the regulations.

**(2) Subsection 15 (1) of the Act is amended by adding the following clause:**

(i.1) setting out one or more dates for the purposes of subsection 6.1 (1) or (2), and governing the circumstances in which that subsection does not apply;

***Ontario Energy Board Act, 1998***

**17. (1) The definition of "enforceable provision" in section 3 of the *Ontario Energy Board Act, 1998* is amended by adding the following clause:**

(c.2) a provision of the *Ontario Rebate for Electricity Consumers Act, 2016* or the regulations made under it,

**(2) Section 70 of the Act is amended by adding the following subsection:**

**Deemed condition of licences, unit sub-meter provider, *Ontario Rebate for Electricity Consumers Act, 2016***

(2.3) Every licence issued to a unit sub-meter provider is deemed to contain the condition that the unit sub-meter provider is required to comply with the *Ontario Rebate for Electricity Consumers Act, 2016* and the regulations made under it.

**Commencement**

**18. Subject to subsection (2), this Act comes into force on the later of January 1, 2017 and the day it receives Royal Assent.**

**Short title**

**19. The short title of this Act is the *Ontario Rebate for Electricity Consumers Act, 2016*.**

***Policy***

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

i) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

ii) Increase the total amount of rate protection available to R2 with low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2004.

iii) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

iv) Expanding eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

2. ENERGY seek necessary TB/MBC approvals.

3. ENERGY seek approvals for:

i) the proposed *Ontario Rebate for Electricity Consumers Act, 2016* – **NTD-LSB – please confirm what title to use.]** and any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments and consequential legislative amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*, subject to the Legislature's approval of the Act, including the following elements:

   i. The rebate would be available starting January 1, 2017;
   ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
   iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers electricity bills;
   iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way

in which electricity vendors providing the rebate are to be reimbursed;

v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;
vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments.
vii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date.

4. ENERGY notes the following amendments:

i) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the *Electricity Act, 1998* to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

ii) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density rural electricity customers and provide for a periodic adjustment mechanism.

5. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

6. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan.

***TB/MBC***

TBC with TBS

***LRC***

Cabinet approved version [name] of this draft legislation for introduction, subject to the following:

1. The Office of Legislative Counsel is authorized to prepare a French version and to make minor adjustments to the English version, for the purpose of ensuring consistency between the two versions and making other improvements or correcting mistakes discovered in the translation process

# Electricity Price Mitigation

## Ministry of Energy

## WORKING DRAFT

## Date: September 14, 2016

Minister

Deputy Minister

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

- Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables.
  - This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%.

- Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online.

- The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers.

# Electricity Consumer Classes

- There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

**** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

# Current Rate Base Mitigation Programs

- Ontario has implemented several programs to help electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers;
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods; and
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- These programs have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial) as shown in the table below:

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

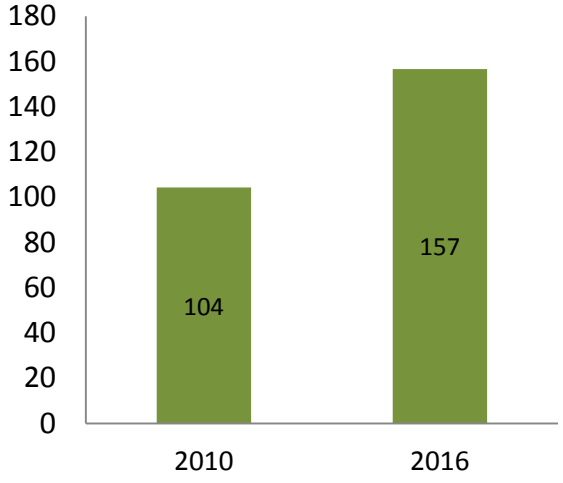
**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

# Prices by Electricity Consumer Class

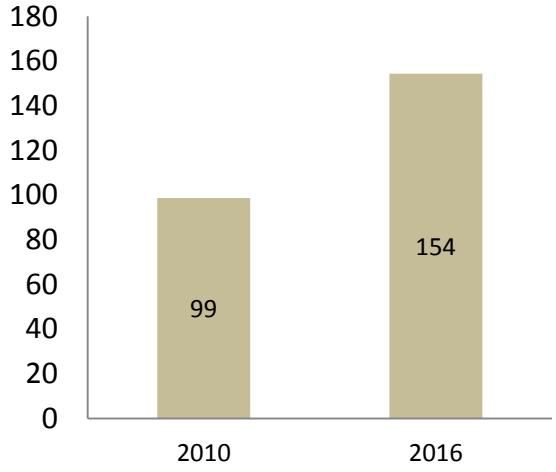
- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.

- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers.

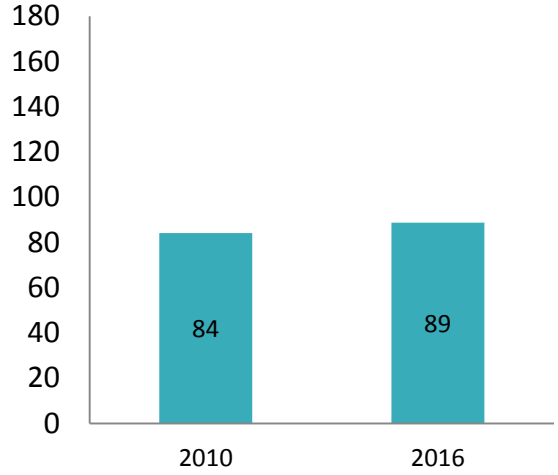
**Typical Residential Bill (750/kWh per month)**




**Typical Class B (Commercial) Price ($/MWh)**




**Typical Class A (Industrial) Price ($/MWh)**



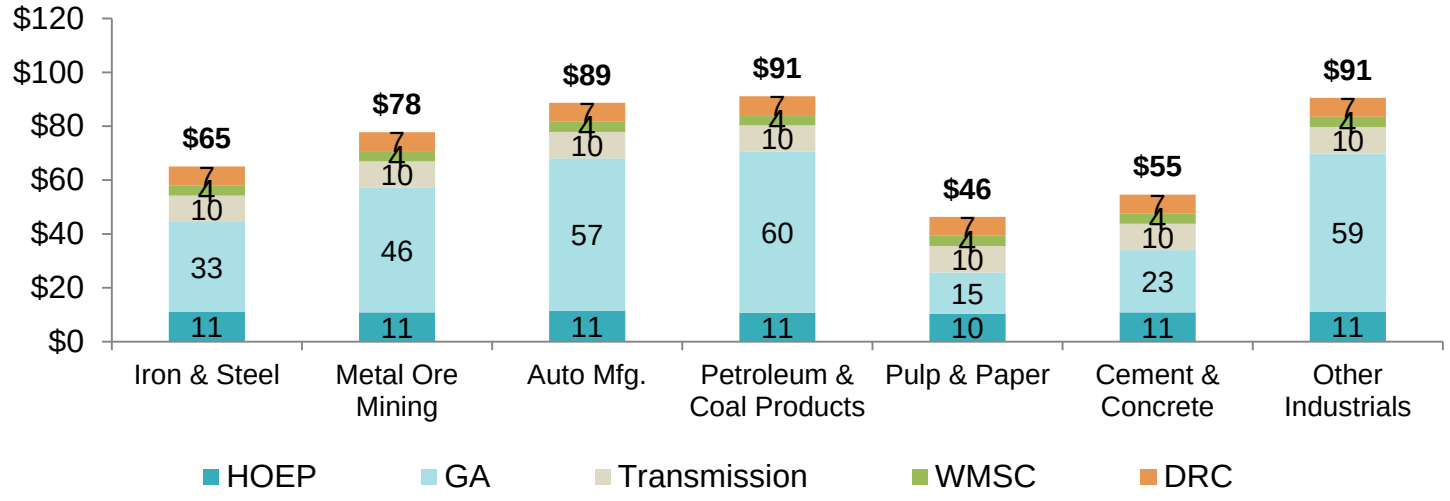

**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

# Industrial Electricity Prices Vary by Sector

- While Class A (industrial consumers) benefit from participation in the ICI program, there is a significant amount of variability in the ability to shift away from peak periods across customer classes, impacting the savings achieved.

- The below chart shows the prices paid in 2015 across a number of industrial sectors. Consumers in the north that receive rebates under the Northern Industrial Electricity Rate Program (NIERP) achieve rates that are $20/MWh lower than the below.

**Average all-in Class A, Transmission-connected Electricity Prices by Industrial Sector (estimated $/MWh), Year-to-Date June 2016**




**Note:** HOEP = Hourly Ontario Energy Price, GA = Global Adjustment, WMSC = Wholesale Market Service Charges, DRC = Debt Retirement Charge

# Recent Actions to Bend the Cost Curve

- Since 2010, a number of actions have been taken to reduce overall electricity system costs:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

# Rate Mitigation

- The 2016 Budget committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) committed $1.3 billion from the Greenhouse Gas Reduction Account (GGRA) over the first compliance period (2017-2020).

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:

  - **Tax-based Lever:**
    - Provide an on-bill rebate funded from the tax-base to all consumers or specific classes of consumers (i.e., the Ontario Clean Energy Benefit (OCEB) provided a rebate for eligible electricity consumers).

  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.

  - **Cap and Trade Proceeds Lever:**
    - Redirect cap and trade proceeds to offset the cost of existing initiatives that help reduce greenhouse gas (GHG) emissions (i.e., the CCAP committed to offset the impact of cap and trade and to keep electricity rates affordable).

# Rate Mitigation Proposal

- The Ministry of Energy is proposing to implement the following electricity price mitigation initiatives. The approach identified below would provide relief across all electricity consumer classes:

  1) Provide an 8% rebate equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms) and update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers

  2) Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial) and redirect cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

- The following slides provide additional information on the above initiatives.

***Notes:** Eligibility for the 8% rebate would be similar to OCEB and include some customers not on the Regulated Price Plan (RPP), such as Independent Power Authority consumers and consumers that have opted-out of RPP. See Appendix for discussion on HST considerations.

# Rate Mitigation Proposal – Illustrative Impacts

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Impact | | Class B (Commercial) Impact* | Class A (Industrial) Impact* | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)*** | *Rural*** (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br><br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br><br>(-8%) | -$45/ month<br><br>(-20%) | -$1/MWh<br><br>(-1%) | -$1/ MWh<br><br>(-1%) | Up to -$52/MWh<br><br>(-34%) |

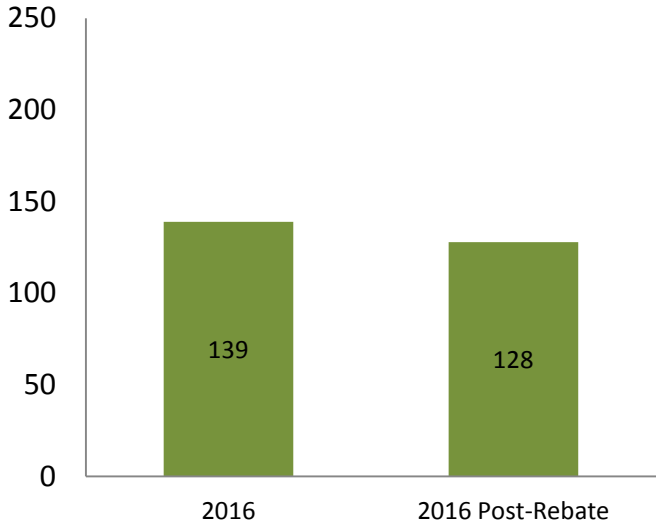
***Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes.

**** Note:** Average Regulated Price Plan Impact represents a pre-tax value of the 8% rebate and does not include the impact of ICI expansion and RRRP update (total impact of $1.31/month based on 750 kWh/month).

*****Note**: Rural customers refers to customers of Hydro One eligible to receive RRRP (R2 rate class customers). Impact shown is pre-tax and does not include the impact of ICI expansion and RRRP update (total impact of $1.74/month based on 1000 kWh/month).

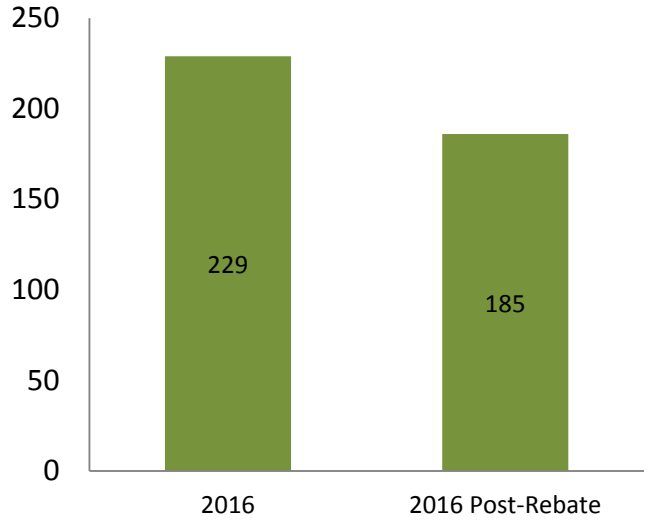
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class

**Typical Residential Bill**
**750/kWh per month, 8% only**




The pre-tax impact of a 8% reduction.

**Rural (R2) Residential Bill**
**1,000/kWh per month, 8% and RRRP update**

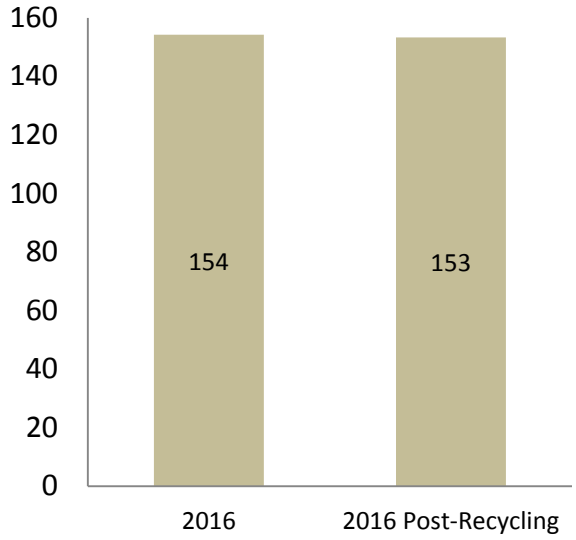



The pre-tax impact of the rate mitigation initiatives is a 19% reduction.

**Note:** Residential bills reflect electricity rates as per the Regulated Rate Plan (RRP) which came into effect on May 1, 2016. Commercial and industrial electricity prices reflect YTD June 2016.

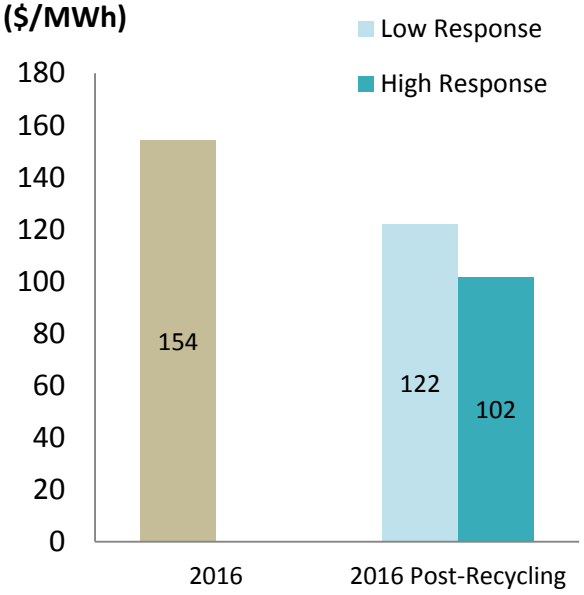
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class (cont'd)

**Typical Class B (Commercial) Price ($/MWh)**



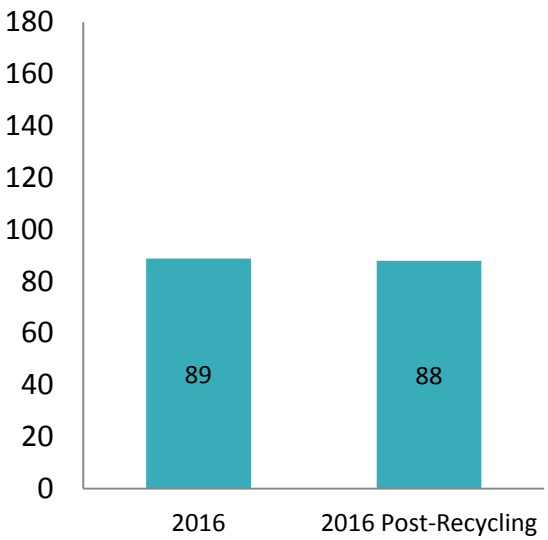

**Class B:** The net impact of the rate mitigation initiatives is a 1% reduction.

**Typical New Class A Price ($/MWh)**




**New Class A:** The net impact of the rate mitigation initiatives is a reduction of up to 21% and 34% for low and high response respectively.

**Typical Class A (Industrial) Price ($/MWh)**




**Existing Class A:** The net impact of the rate mitigation initiatives is a 1% reduction.

**Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

# 1) Regulated Price Plan Eligible Consumers and Rural or Remote Rate Protection Update

# 8% Rebate to Regulated Price Plan Eligible Consumers

- Legislation/regulation will be introduced to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit.
  - This would be equivalent to the provincial portion of the HST*.

| **Eligible for the 8% rebate**<br>(< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate**<br>(> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>  − Coffee / snack retailer<br>  − Convenience store<br>  − Apparel store<br>  − Hair salon<br>  − Small insurance office | • Class A consumers<br>  − Manufacturer<br>  − Large grocery store<br>  − Mines<br>  − Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>  − Commercial offices (low rise)<br>  − Hotel<br>  − General warehousing |

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).

***Note:** An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

# Placeholder – Electricity Bill Mock-Up

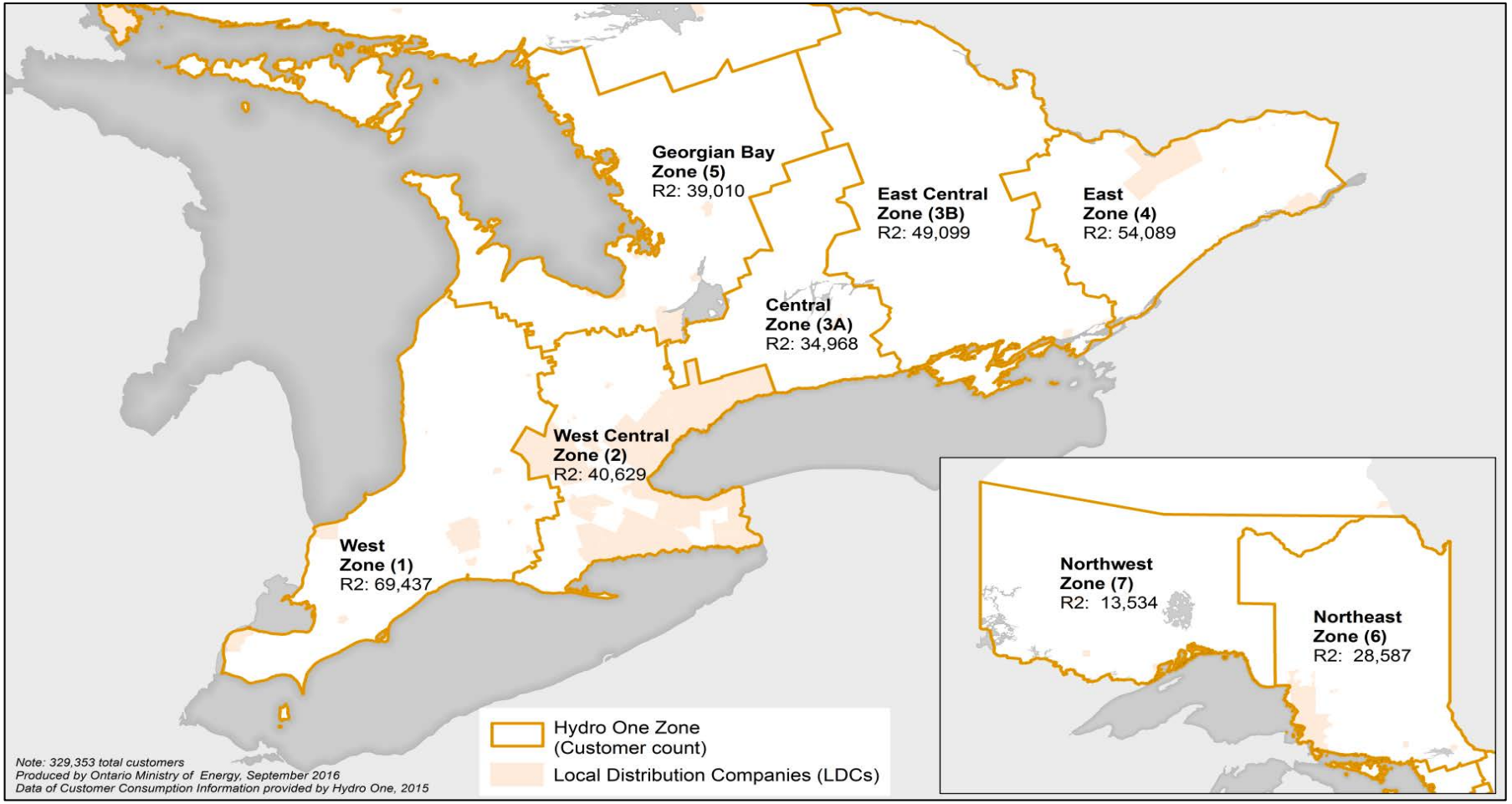
# Rural or Remote Rate Protection (RRRP) Update

- ENERGY is proposing to amend O.Reg 442/01 to provide an additional $110 million in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

- RRRP is a rate-based funded subsidy program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.
  - Today, RRRP is a $175-million program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
  - The majority of the program funding ($125.5 million) provides a subsidy to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a monthly subsidy for R2 customers of $31.50.
  - RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

- An additional $110 million in program funding would see an increased subsidy of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.
  - This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
  - The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the subsidy remains constant.

# Rural or Remote Rate Protection (RRRP) Update – R2 Customers by Region



## 2) Expand Industrial Conservation Initiative and Redirect Cap and Trade Proceeds

# Industrial Conservation Initiative (ICI) Expansion

- ENERGY is proposing to amend O. Reg. 429/04 to expand ICI eligibility effective [X placeholder date].

- Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers).
  - Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

- ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:
  - Reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods;
  - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
  - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

# ICI Expansion – Projected Impact

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

- The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility
  - Short-term refers to the expected impact once ICI billing begins for new Class A consumers (one year after expanded eligibility takes place).
  - Long-term is the expected impact once new Class A consumers have had time to significantly change their behaviour and investment decisions in response to the ICI.

- The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating.

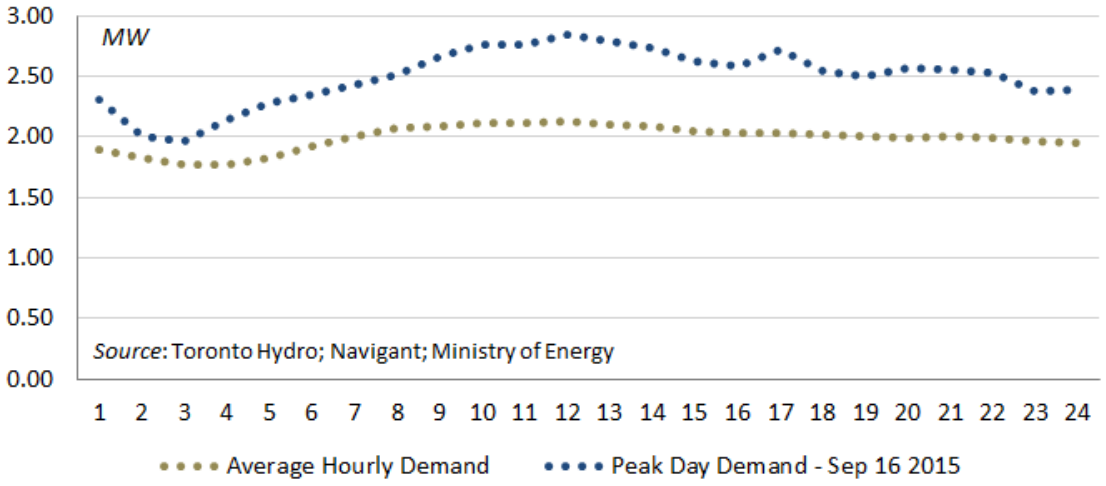
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.

# ICI Expansion – Illustrative Example of Newly Eligible Consumer

- Plastics manufacturers, such as Poly Five Plastics in Toronto, are among the consumers that would become eligible if the threshold was lowered.
- Such manufacturers fall under NAICS* code 32 and have relatively flat load profiles, reflecting around the clock production. This means they would be beneficiaries of ICI even with no change in consumption behaviour.
- Companies like Poly Five Plastics could expect to see greater savings if they are willing and able to respond to the higher prices during high demand hours.

**Typical Demand Profile, 2-3 MW Consumer**

*Manufacturer, NAICS Code 32 - Nov 2014 to Oct 2015*




**Illustrative Bill Savings, 2-3 MW Consumer**

| | *Status Quo* | *No Price Response* | *Short Term Response* | *Long Term Response* |
|---|---|---|---|---|
| | **Class B** | **Class A** | **Class A** | **Class A** |
| GA | 75.26 | 58.06 | 43.55 | 32.03 |
| Total bill | **126.28** | **109.09** | **94.58** | **83.06** |
| *Savings* | | *-14%* | *-25%* | *-34%* |

Source: Navigant; Ministry of Energy

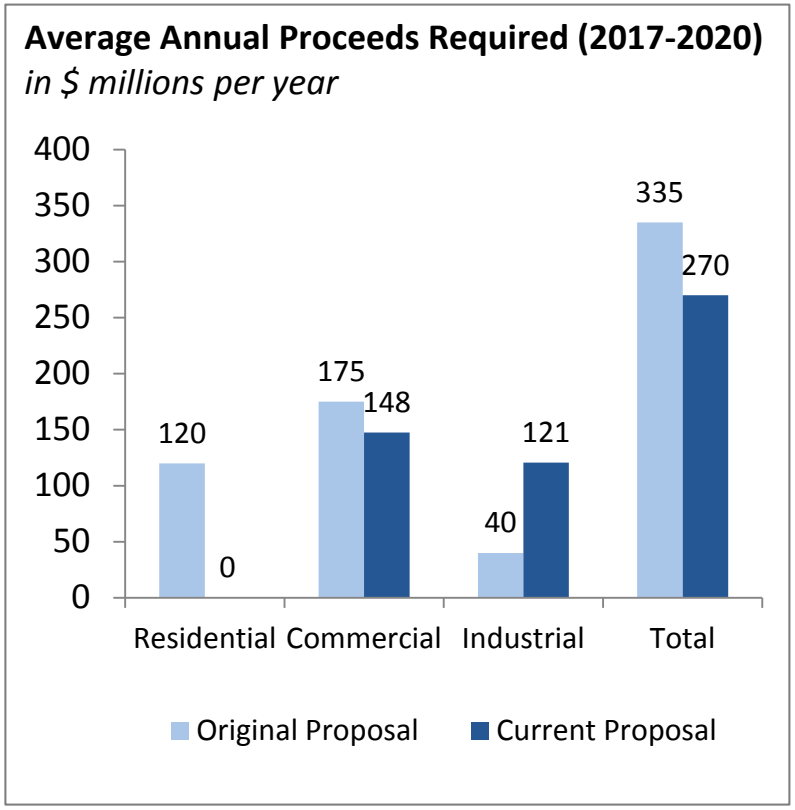
*** Note:** North American Industry Classification System (NAICS) is the standard used by statistical agencies in classifying business establishments.

# Redirect Cap and Trade Proceeds Recycling

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.
  - To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).

- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

- The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $0.24 billion over the first compliance period).




**Note:** The original proposal was to offset the impact of cap and trade via GA to the average industrial, and would provide a benefit to commercial and residential consumers. Current proposal would recycle proceeds volumetrically to industrial and commercial consumers.

# Redirect Cap and Trade Proceeds Recycling

- Redirecting cap and trade auction proceeds to lower the cost of electricity would offset consumers' contributions to non-emitting generation.

- Redirecting helps pay for committed investments/initiatives which reduce GHGs (e.g., non-emitting generation and conservation programs).
  - Due to the long-term nature (typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period. These costs will continue well beyond the timelines described in the CCAP.

- Redirecting cap and trade auction proceeds volumetrically to Class B (commercial) and Class A (industrial) consumers maintains the incentive to shift consumption from on-peak to off-peak hours.

- Using cap and trade auction proceeds to lower the cost of electricity would make it more competitive with traditionally cheaper fossil fuels.

- By using the proceeds to lower the cost of electricity, there is potential to incent fuel-switching away from fossil fuels toward much cleaner grid-connected electricity and support CCAP goals of electrification.

# Considerations

# Implementation

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010.
  - If passed, the legislation would require a general regulation.
  - Amendments would also be required to various regulations to expand ICI and RRRP.
- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. ENERGY (possibly through Ontario Energy Board) will consult with LDCs to accurately assess these impacts once the program has been announced.
  - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - Timing concerns may be alleviated by allowing LDCs to provide retroactive rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- Detailed messaging on bills (for "low-volume" consumer bills ) could be implemented by amending O. Reg. 275/04 (made under the Ontario Energy Board Act, 1998).
  - The rebate would not be directly linked to HST.
  - With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.
- While the impact of cap and trade would be added to electricity bills as of January 2017, the offsetting effect of proceeds recycling may not occur immediately depending on implementation and potential alignment with the first auction expected in March 2017.
- ENERGY will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

# Fiscal

- The Climate Change Action Plan (CCAP) committed about $1.3 billion over four years for electricity mitigation for industrial, commercial and residential consumers from GGRA proceeds.
  - The current rate mitigation proposal requires approximately 20% less in proceeds, saving approximately $240 million relative to the CCAP commitment over the first compliance period (2017-2020).

- The 8% rebate is expected to cost about $1 billion per year (i.e., $4 billion from 2017-2020), representing an additional pressure on the fiscal plan.
  - Consideration could be given to allocating the $240 million in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset.

- In the absence of any offset strategies, the full cost of the rate mitigation approach would add to the pressures and risks that need to be managed in order for the government to balance the budget in 2017-18 and stay balanced in 2018-19 and beyond.

# Legal

- In order to avoid characterization as an unconstitutional tax, a non-tax levy must have a sufficient nexus between those who pay and the regulatory scheme in the sense that those who pay have caused the need for or benefit from the regulatory scheme. Although the case law is not developed on the extent to which some regulated actors can be required to subsidize others, risk is reduced to the extent that any cross-subsidization serves true regulatory goals rather than revenue re-distribution goals.

- HST Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):
  - Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

- ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):
  - Shifting costs to some consumers to lower rates for others without more carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

- RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):
  - Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

- Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):
  - To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

# Communications

- Public high-profile communications would coincide with introduction of legislation (September 2016).
  - Stakeholder outreach/technical briefings with LDCs, Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.
  - Echo public announcements in southwest and north; proactive provincial/local media.

- **Positioning:**
  - A fiscally prudent plan to benefit all ratepayers in a lasting, meaningful way.
  - Rural customers will receive the largest single rate relief ever.
  - Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.

- **Issues Considerations:**
  - Significant benefit for rural and remote residential customers; net gain for all residential customers.
  - More complex to communicate, but can be presented as a full plan that includes reforms and improvements to the system.
  - Consistent with cap-and-trade commitment that no business sector will be left worse off, though small businesses outside ICI will benefit the least.

# Key Messages

- We are taking unprecedented action to help people in their everyday lives.
- Residential ratepayers and other RPP eligible ratepayers will receive an eight per cent rebate on their electricity bill, equivalent to the provincial portion of the HST.
- Modernizing the RRRP will benefit 330,000 families in rural Ontario with significant reductions to their electricity bills – $28 a month, in addition to the eight per cent rebate.
- Over a thousand more Ontario businesses will be eligible to benefit from the ICI program, helping them stay competitive and grow.
- These actions will assist over five million families, farms and small businesses across Ontario.
- These actions today join our many existing initiatives too help keep electricity in Ontario clean, reliable and affordable.

# Proposed Cabinet Minute

PLACEHOLDER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# Appendix

# Illustrative Bill Impacts

| | Current Bill (after tax) (before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (after tax) (before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $139 /month | N/A | 8% pre-tax rebate: - $11 | $128 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $229 /month | RRRP: –$32 | 8% pre-tax rebate: - $16<br>Updated RRRP: - $28 | $185 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $101 /month | OESP: -$38 | 8% pre-tax rebate: - $8 | $93 /month |
| Small Business (Toronto – 403,200 kWh/month) | $148 /MWh | N/A | 8% pre-tax rebate: - $12/MWh | $136 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $202 /MWh | N/A | 8% pre-tax rebate: - $16/MWh | $186 /MWh |

***Note:** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as $1,332 per year for a family.
** income of less than $28,000, family of 4.

Totals may not add due to rounding.

# Illustrative Bill Impacts (cont'd)

| | Current Rate | Current Rate mitigation initiatives* | Cost of new initiatives (RRRP and ICI) | New Rate Mitigation initiatives | Net Impact | New Rate |
|---|---|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | -$0.90 /MWh (-1%) | $107 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI: -$49/MWh NIERP: -$20/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $68 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh<br>ICI: -$51.30/MWh | -$52 /MWh (-34%) | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $151 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh | $153 /MWh |

**Notes:**

1) There is the potential for a consumer eligible for the Regulated Price Plan to opt-out of the Regulated Price Plan to opt-in to Class A and receive all three benefits (i.e., Regulated Price Plan, ICI, proceeds recycling).

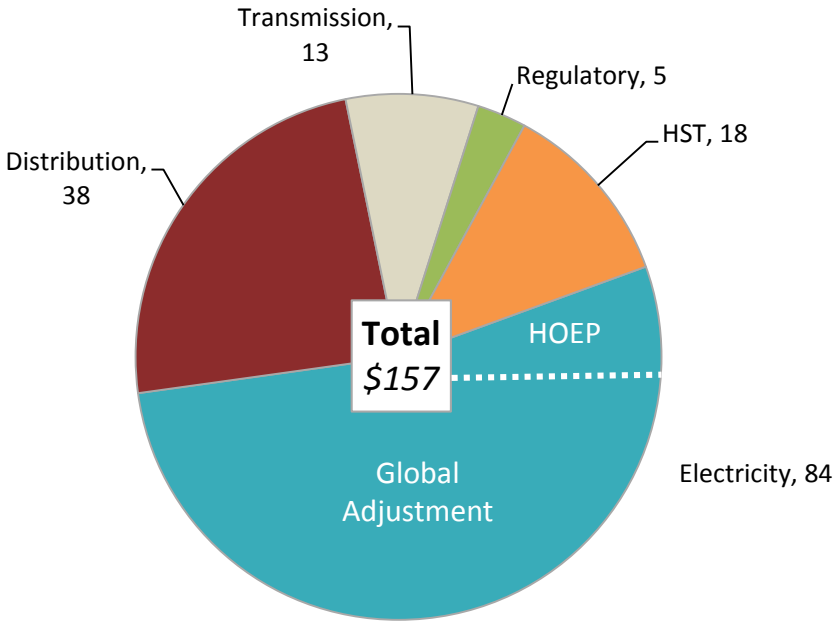
2) The impact of cap and trade would not be added to electricity bills until 2017 and varies per year over the course of the first compliance period. For illustrative purposes, the estimated average benefit of proceeds recycling is shown above.

# Residential Electricity Prices

- There are approximately 5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of May 1, 2016 (750 kWh/month)*




*Source*: OEB, Toronto Hydro

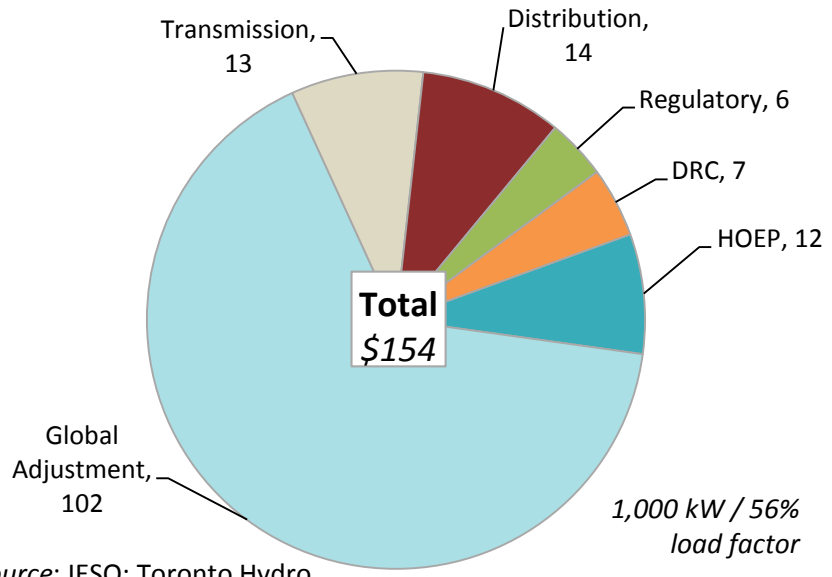
# Commercial Electricity Prices

- There are approximately 400,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.

- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




*Source*: IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.

- Targeted pricing programs are currently not available for Class B consumers.

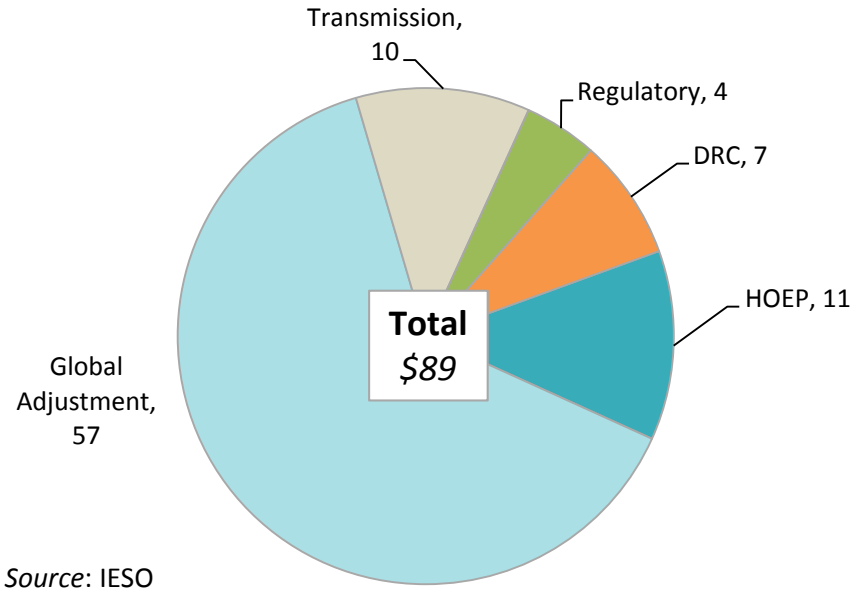
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*




*Source*: IESO

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $64/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Sales Tax Treatment in Other Jurisdictions

| Jurisdiction | Tax | Tax Paid by Business Consumers | Tax Paid by Residential Consumers | Comment |
|---|---|---|---|---|
| **British Columbia** | PST | Yes – 7% | No | • PST does not apply to residential energy, including electricity, acquired solely for residential use in a residential dwelling<br>• BC's carbon tax does not apply to electricity bills. |
| **Alberta** | None | N/A | N/A | • Alberta does not have a provincial sales tax. |
| **Saskatchewan** | PST | Yes – 5%<br>Except for electricity purchased to heat a building. | No | • PST does not apply to electricity purchased for use in a residential dwelling.<br>• PST does not apply to electricity purchased for use in heating a building that is heated solely by the electricity. |
| **Manitoba** | PST | Yes – 8%<br>Reduced rate of 1.6% applies to electricity used by a qualifying business to operate machinery | Yes – 8%<br>Electricity purchased for mixed use, 80% of which is home heating, has a reduced rate of 1.4%. Electricity solely to heat the purchaser's home is exempt. | • Winnipeg also applies a tax of 2.5% on residential and 5% on commercial. |
| **Ontario** | HST | Yes (less ITC (input tax credits)) | Yes – 8% | |
| **Quebec** | QST | Yes (less ITCs) | Yes – 9.975% | |
| **Nova Scotia** | HST | Yes (less ITCs) | Yes – 10% less provincially administered rebate. | • Rebate is equal to the provincial portion of the HST, and is administered similar to OCEB, but applies to many energy sources. |
| **New Brunswick** | HST | Yes (less ITCs) | Yes – 10% | |
| **Prince Edward Island** | HST | Yes (less ITCs) | Yes – 9% (10% beginning Oct 1, 2016) | |
| **Newfoundland and Labrador** | HST | Yes (less ITCs) | Yes – 10% | • Had a provincially administered Home Heating Rebate program until July 2015. |
| **Federal** | GST | Yes (less ITCs) | Yes – 5% | |

| | |
|---|---|
| **From:** | DeSouza, Jenarra (MOF) |
| **To:** | Michael Waterston (MOF); Ronald Kwan; Ann Langleben (MOF); Lynn Lawson (MOF); Sriram Subrahmanyan (MOF); Shannon Lewis (MOF); Patel, Lesley (MOF); John Kim; Dianne Lone (MOF); Shajee Kathirgamanathan; Fish, Tim (MOF) |
| **Cc:** | Gwendolynne Young (ENE); Sriram Subrahmanyan (MOF) |
| **Subject:** | FW: Major Projects this week |
| **Date:** | Thursday, September 08, 2016 12:29:55 PM |
| **Attachments:** | GOV2016.091.e08 (Clean Energy Rebate).docx<br>Cab min Sept2-16 CO MOF Edits CLEAN.DOCX<br>Cabinet Submission - Electricity Price Mitigation 20160907 CLEAN V2.pptx |

Hi everyone

Attached are materials from Major Projects

Cheers
Bernice

- for Jenarra DeSouza

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**From:** Subrahmanyan, Sriram (MOF)
**Sent:** September 8, 2016 12:28 PM
**To:** DeSouza, Jenarra (MOF)
**Subject:** FW: Major Projects this week

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**From:** Katona, Keley (ENERGY)
**Sent:** September 8, 2016 12:23 PM
**To:** Subrahmanyan, Sriram (MOF)
**Subject:** FW: Major Projects this week

FYI

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**From:** Katona, Keley (ENERGY)
**Sent:** September-08-16 12:22 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

For your records, attached is what was circulated at Major Projects today.

---

**From:** Katona, Keley (ENERGY)
**Sent:** September-07-16 3:38 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

We're making edits based on comments from our MO. Could be this evening or tomorrow morning.

---

**From:** Kwamena, Boafoa (CAB)
**Sent:** September-07-16 3:33 PM
**To:** Katona, Keley (ENERGY); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

Hi

Will be likely receive material  later today or tomorrow?

Thanks

---

**From:** Katona, Keley (ENERGY)
**Sent:** September-07-16 10:12 AM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** Re: Major Projects this week

Sorry, disregard, we'll make it work on our end. Thanks.

---

**From:** Katona, Keley (ENERGY)
**Sent:** Wednesday, September 7, 2016 10:06 AM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

Hi Boafoa,

Wondering if it's possible for the electricity item to be last on the agenda tomorrow. We have a Minister's briefing which conflicts with Major Projects, involving the same staff and it would be very helpful if we could be on at 11am.

Thanks,
Keley

---

**From:** Kwamena, Boafoa (CAB)
**Sent:** September-06-16 5:29 PM
**To:** Katona, Keley (ENERGY); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** Major Projects this week

Hi Keley/David

We will be adding the Electricity Pricing Mitigation item to Major Projects this Thursday. This will be an opportunity to ensure everyone is on the same page in advance of the TB trip next week.  Major Projects is scheduled from 10:30 to 11:30 on Thursday. This item will be the first–10:30 to 11:00. Please let me know if this time doesn't work or if there are any concerns.

Thanks
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# Ontario Rebate for Electricity Consumers Act, 2016

## EXPLANATORY NOTE

The *Ontario Rebate for Electricity Consumers Act, 2016* authorizes financial assistance for certain Ontario electricity consumers in respect of electricity costs. Consumers receive the financial assistance by means of an 8 per cent reduction in the amount payable before tax under their electricity accounts for each billing period. The amount of financial assistance for a billing period is required to be shown on invoices issued to consumers for the billing period.

The Act authorizes the making of regulations to reimburse electricity vendors for amounts credited to consumers' accounts under the Act. The Act authorizes the making of various other regulations, including to set out other ways for consumers to receive financial assistance, to alter the default rules in the Act for how to calculate the financial assistance and to limit or alter who is entitled to financial assistance. The Act amends the *Ontario Clean Energy Benefit Act, 2010* to authorize the making of regulations under that Act in respect of cut-off dates for financial assistance under that Act.

The Act contains administrative and enforcement provisions, including requirements relating to record keeping by electricity vendors and authorization for inspections and inquiries with respect to amounts of financial assistance provided and reimbursements to electricity vendors. The *Ontario Energy Board Act, 1998* is amended so that provisions of the *Ontario Rebate for Electricity Consumers Act, 2016* and regulations made under it will be enforceable by the Ontario Energy Board.

# An Act in respect of the cost of electricity

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Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

## Definitions

**1.** (1) In this Act,

"billing period" means a period of time that is wholly or partly in the eligible period and for which an invoice in respect of an eligible account is issued; ("période de facturation")

"Board" means the Ontario Energy Board; ("Commission")

"consumer" means a person,

(a) to whom an invoice is issued in respect of an eligible account for a billing period, or

(b) who is prescribed by the regulations or who satisfies such conditions as may be prescribed by the regulations; ("consommateur")

"distribution system" has the same meaning as in section 3 of the *Ontario Energy Board Act, 1998*; ("réseau de distribution")

"electricity vendor" means the IESO, a licensed distributor, a licensed retailer or a person prescribed by the regulations; ("vendeur d'électricité")

"eligible account" means, in respect of a consumer, an account with an electricity vendor, or with a person prescribed by the regulations, for the provision of electricity in Ontario if,

(a) the consumer has a demand for electricity of 50 kilowatts or less, or such other amount of demand for electricity as may be prescribed,

(b) the consumer annually uses not more than 250,000 kilowatt hours of electricity, or such other amount of use of electricity as may be prescribed,

(c) the consumer,

(i) carries on a business that is a farming business for the purposes of the *Farm Registration and Farm Organizations Funding Act, 1993*, and

(ii) holds a valid registration number assigned under that Act or the consumer's obligation to file a farming business registration form was waived pursuant to an order made under subsection 22 (6) of that Act,

(d) the account relates to,

(i) a dwelling,

(ii) a property, within the meaning of the *Condominium Act, 1998*,

(iii) a residential complex, within the meaning of subsection 2 (1) of the *Residential Tenancies Act, 2006*, without regard to section 5 of that Act, or

(iv) a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the *Co-operative Corporations Act*, or

(e) the consumer or the account satisfies such conditions as may be prescribed by the regulations; ("compte admissible")

"eligible period" means the period commencing January 1, 2017; ("période admissible")

"IESO" has the same meaning as in subsection 2 (1) of the *Electricity Act, 1998*; ("SIERE")

"licensed distributor" means a person licensed under Part V of the *Ontario Energy Board Act, 1998* to own or operate a distribution system; ("distributeur titulaire d'un permis")

"licensed retailer" means a person who is licensed under Part V of the *Ontario Energy Board Act, 1998* to retail electricity; ("détaillant titulaire d'un permis")

"market rules" means the market rules made under section 32 of the *Electricity Act, 1998*; (règles du marché")

"regulations" means the regulations made under this Act; ("règlement")

"retail" has the same meaning as in section 56 of the *Ontario Energy Board Act, 1998*; ("vendre au détail")

"unit sub-metering" means activities that are unit sub-metering for the purposes of the *Ontario Energy Board Act, 1998*; ("activités liées aux compteurs divisionnaires d'unité")

"unit sub-meter provider" means a person who is licensed to engage in unit sub-metering by the Board under Part V of the *Ontario Energy Board Act, 1998*. ("fournisseur de compteurs divisionnaires d'unité")

**Eligible account**

(2) For the purposes of this Act, if a consumer would, but for this subsection, have an eligible account with a licensed retailer and with a licensed distributor, but only one of them issues an invoice to the consumer for a billing period for all amounts payable by the consumer to them for the billing period,

(a) the consumer is deemed to have an eligible account for the billing period only with whichever of them issues the invoice for the billing period; and

(b) the licensed distributor or licensed retailer who issues the invoice for the billing period is deemed to be imposing all charges and other amounts payable under the invoice for the purposes of determining the amount of financial assistance to which the consumer is entitled.

**Base invoice amount**

**2.** (1) For the purposes of this Act, the base invoice amount for a billing period in respect of an eligible account is determined in accordance with the regulations and, unless otherwise prescribed by the regulations, includes, if the invoice is issued by a licensed distributor or a licensed retailer, amounts in respect of,

(a) the commodity price of the electricity;

(b) the rates and charges set out in the applicable rate order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998* that are not required under subsection (2) or the regulations to be excluded;

(c) any adjustment on the invoice required pursuant to section 25.33 of the *Electricity Act, 1998*;

(d) any debt retirement charge payable by the consumer under subsection 85 (4) of the *Electricity Act, 1998*; and

(e) anything else prescribed by the regulations.

**Exclusions**

(2) Except as otherwise prescribed by the regulations, the base invoice amount for a billing period must exclude,

(a) the balance of any amounts carried forward from previous invoices;

(b) all penalties and interest;

(c) any charges that do not relate to the consumption of electricity;

(d) the fixed monthly service charge payable by a generation facility, within the meaning of section 56 of the *Ontario Energy Board Act, 1998*, that is classified as “microFIT” in a rate order issued by the Board under subsection 78 (3) of that Act;

(e) charges labelled as “specific service charges” or “retail service charges” in the applicable rate order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998*;

(f) the amount of any harmonized sales tax payable under Part IX of the *Excise Tax Act* (Canada); and

(g) any other amounts prescribed by the regulations.

**Financial assistance**

**3.** (1) A consumer who has an eligible account during a billing period is entitled to receive financial assistance in respect of the cost of electricity during the billing period in an amount equal to 8 per cent of the base invoice amount for the billing period in respect of the eligible account.

**Exception**

(2) Despite subsection (1), a consumer is not entitled to receive financial assistance under this Act,

(a) in respect of electricity consumed in generation station service;

(b) in such circumstances as may be prescribed by the regulations; or

(c) if the regulations prescribe that the consumer is not entitled to receive financial assistance.

**Payment of financial assistance**

(3) The financial assistance to which a consumer is entitled under this Act shall be paid,

(a) by crediting the consumer's eligible account; or

(b) in such other manner as may be prescribed by the regulations.

**Money appropriated by the Legislature**

(4) The money required for the purposes of this Act shall be paid out of the money appropriated for those purposes by the Legislature.

**No assignment of financial assistance**

(5) An assignment by a consumer to another person or entity, including a licensed retailer, of the consumer's entitlement to any payment, rebate or credit does not apply to any financial assistance to which the consumer is entitled under this Act, whether the assignment was made before or after this subsection comes into force.

**Same**

(6) Subsection (7) applies if,

(a) a consumer provides to another person electricity in respect of which the consumer is entitled to financial assistance under subsection (1); and

(b) an invoice for the electricity is issued to the person by the consumer, by an agent of the consumer or by a unit sub-meter provider providing unit sub-metering for the consumer.

**Requirement to pass on benefit**

(7) Despite subsections (1) and (5), the consumer and every unit sub-meter provider providing unit sub-metering for the consumer shall ensure that each person who is liable to pay an invoice referred to in clause (6) (b) receives a credit, determined in the manner prescribed by the regulations, in respect of the financial assistance to which the consumer is entitled with respect to electricity the consumer provides to the person.

**Invoices**

**4.** (1) Unless otherwise prescribed by the regulations, every electricity vendor who issues an invoice for a billing period to a consumer in respect of an eligible account shall clearly show on the invoice,

(a) a credit equal to the amount of the financial assistance provided to the consumer for the billing period; and

(b) the net amount of the invoice after the credit.

**Invoice issued by consumer, etc.**

(2) An invoice that is issued by a consumer, an agent of a consumer, a unit sub-meter provider or another person prescribed by the regulations must be in the form required by the regulations and contain or be accompanied by the information required by the regulations.

**Transitional**

(3) If, for technical or operational reasons, an electricity vendor or a person referred to in subsection (2) is unable to adapt its invoices to comply with this Act and the regulations by the time it issues its first invoice for electricity consumed in 2017 in respect of an eligible account,

(a) the electricity vendor or person shall adapt its invoices as soon as possible and, in any event, no later than July 1, 2017; and

(b) consumers continue to be entitled to receive the financial assistance to which they are entitled under this Act and may receive it as a lump sum credit on the invoice for the first billing period after the invoices have been adapted or by such other means as may be prescribed by the regulations.

**Financial arrangements**
**Purposes**
**5.** (1) The purposes of this section are,

(a) to ensure that financial assistance under this Act and the regulations is provided to those persons entitled to receive it; and

(b) to authorize the making of financial arrangements to reimburse electricity vendors, and other persons prescribed by the regulations, for financial assistance provided under this Act and the regulations.

**Regulations**
(2) The Lieutenant Governor in Council may, for the purpose of this section, make regulations,

(a) authorizing the Minister of Energy to make payments to persons who are electricity vendors or persons prescribed by the regulations in respect of the amount of financial assistance to which consumers are entitled under this Act and prescribing methods for determining the amounts payable;

(b) requiring the IESO to make payments to licensed distributors, or to persons prescribed by the regulations, in respect of financial assistance provided under this Act or the regulations and prescribing methods for determining the amounts payable;

(c) requiring a licensed distributor to make payments to other licensed distributors or licensed retailers in respect of financial assistance under this Act and prescribing methods for determining the amounts payable;

(d) requiring a person who is an electricity vendor or a person prescribed by the regulations to make payments in respect of financial assistance to consumers or other persons entitled to receive the financial assistance and prescribing the circumstances in which such payments are to be made and methods for determining the amounts payable;

(e) authorizing the Minister of Energy to make payments of financial assistance directly to consumers and prescribing the circumstances when such payments are to be made;

(f) requiring a person who is an electricity vendor or a person prescribed by the regulations to make payments to the Minister of Finance in respect of amounts received by them or in circumstances prescribed by the regulations and prescribing methods for determining the amounts payable;

(g) authorizing payments referred to in clause (a), (b), (c), (d) or (f) to be made by way of set-offs and credits and prescribing conditions entitling or requiring amounts to be set off or credited;

(h) governing the payments required under clause (a), (b), (c), (d) or (f), including methods for paying the amounts payable and when the payments must be made, and governing methods for determining amounts to be set off or credited, including the times within which amounts must or may be set off or credited;

(i) for the purposes of this Act and the regulations, requiring persons who are electricity vendors or persons prescribed by the regulations to provide information to the Minister of Energy, the Minister of Finance, the IESO, the Board or licensed distributors and prescribing the information to be provided and when it must be provided;

(j) governing the establishment and maintenance of variance accounts required for the purposes of this Act.

**Conflict with market rules and codes**

(3) In the event of a conflict, a regulation made under subsection (2) prevails over the market rules to the extent of the conflict and prevails over a code issued by the Board under section 70.1 of the *Ontario Energy Board Act, 1998* to the extent of the conflict.

**Provision of information**

(4) A person may do anything required by a regulation made under clause (2) (i) despite any agreement to the contrary and, if the person does so,

(a) the person is not liable for doing the thing in contravention of any agreement to the contrary; and

(b) doing the thing is deemed not to constitute a breach, termination, repudiation or frustration of any contract.

**Limitation periods for financial assistance, reimbursement**

**Financial assistance**

**6.** (1) Despite any past entitlement of a consumer to financial assistance under this Act, no financial assistance is payable to a consumer after a limitation period prescribed by the regulations in respect of the consumer, other than in such circumstances as may be prescribed by the regulations.

**Reimbursement**

(2) Despite any requirement under this Act to reimburse an electricity vendor or other person for financial assistance provided by them to consumers, no amounts for reimbursement are payable to the electricity vendor or other person after a limitation period prescribed by the regulations in respect of the electricity vendor or other person, where such reimbursement is based on a consumer's past entitlement not yet paid or reimbursed under this Act, other than in such circumstances as may be prescribed by the regulations.

**Definition**

**7.** In sections 8, 9 and 10,

"Minister" means the Minister of Finance or such other member of the Executive Council to whom the administration of those sections is assigned under the *Executive Council Act*.

**Records**

**8.** (1) Every electricity vendor and every person prescribed by the regulations shall keep at a location in Ontario such records as are necessary to determine and verify compliance with this Act and the regulations and any records required by the regulations to be kept.

**Electronic records**

(2) If a person keeps records in an electronic form, the person shall ensure that, from the time the records are first made and for as long as they are required to be retained,

(a) they remain complete and unaltered, apart from any changes or additions made in the normal course of communication, storage or display; and

(b) they are capable of being printed and of being produced in electronically readable format for inspection, examination or audit.

**Retention of records**

(3) Records required to be kept under subsection (1) shall not be destroyed unless authorization has been given in writing by the Minister.

**Offence**

(4) Every person who fails to keep records in accordance with this section is guilty of an offence and, on conviction, is liable to a fine of not less than $50 and not more than $5,000.

**Inspections and inquiries**

**9.** (1) The Minister may appoint one or more inspectors who are authorized to exercise any of the powers and perform any of the duties of a person authorized by the Minister under subsection 31 (1) of the *Retail Sales Tax Act* for any purpose related to the administration and enforcement of this Act.

**Same**

(2) Subsections 31 (1), (2), (2.1) and (2.2) of the *Retail Sales Tax Act* apply, with necessary modifications, with respect to the administration and enforcement of this Act.

**Admission of evidence**

(3) The Minister, or a person authorized by the Minister, may, for any purpose related to the administration of this Act or the regulations, reproduce from original data stored electronically any information previously submitted as required under this Act or the regulations in any form by any person, and the electronically reproduced document shall be admissible in evidence and shall have the same probative force as the original document would have had if it had been proved in the ordinary way.

**Inquiry**

(4) The Minister may, for any purpose related to the administration of this Act or the regulations, authorize any person, whether or not the person is an employee in the Ministry of the Minister, to make such inquiry as the Minister considers necessary with reference to anything relating to the administration of this Act or the regulations.

**Copies**

(5) If a book, record or other document is examined or produced under this section, the person by whom it is examined or to whom it is produced or any officer of the Ministry may make, or cause to be made, one or more copies of it, and a document purporting to be certified by the person to be a copy made pursuant to this section is admissible in evidence and has the same probative force as the original document would have if proved in the ordinary way.

**Compliance**

(6) No person shall hinder or molest or interfere with any person doing anything that the person is authorized by this section to do or prevent or attempt to prevent any person doing any such thing.

**Same**

(7) Despite any other law to the contrary, every person shall, unless the person is unable to do so, do everything he, she or it is required by this section to do.

**Administration of oaths**

(8) Declarations or affidavits in connection with statements of information submitted pursuant to this section may be taken before any person having authority to administer an oath or before any person specially authorized for that purpose by the Lieutenant Governor in Council, but any person so specially authorized shall not charge any fee for doing so.

**Application of Public Inquiries Act, 2009**

(9) Section 33 of the *Public Inquiries Act, 2009* applies to an inquiry under subsection (4).

**Recovery of overpayments**

**Definitions**

**10.** (1) In this section,

"inspector" means an inspector referred to in section 9; ("inspecteur")

"overpayment" means an amount received by a person in excess of any reimbursement to which the person is entitled under this Act and the regulations. ("trop-perçu")

**Notice of overpayment**

(2) If it appears to an inspector that a person has received an overpayment, the Minister may send a written notice to the person advising the person of the following:

1. That the person has received an overpayment.

2. The amount of the overpayment and how it was calculated.

3. The required steps to be taken by the person with respect to the overpayment.

4. The date, not more than six months after the date of the notice, by which these steps must be completed.

5. That the Minister has the authority to assess the person for the amount of the overpayment, plus interest, if the person fails to complete the required steps by the specified date.

**Calculation of amount of overpayment**

(3) For the purposes of this section, an inspector shall calculate an overpayment or the outstanding balance of an overpayment in the manner and form and using such procedures as the Minister considers adequate and expedient.

**Assessment**

(4) If a person fails to complete the steps required in a notice under subsection (2) within the time specified in the notice, and any additional time requested by the person and permitted by the Minister, the Minister may assess or reassess the amount of the overpayment, or the outstanding balance of the overpayment, based on the inspector's calculation described in subsection (3).

**Penalty**

(5) If the Minister makes an assessment or reassessment under subsection (4) and is satisfied that the person's non-compliance with the required steps in the notice was attributable to neglect, carelessness, wilful default or fraud, the Minister may assess a penalty against the person equal to the outstanding balance of the overpayment when the penalty is assessed.

**Time limit**

(6) The Minister shall not assess or reassess under subsection (4) more than 48 months after the end of the month in which the person received the overpayment.

**Exception, where misrepresentation, etc.**

(7) Subsection (6) does not apply if the Minister establishes that the person has made a misrepresentation that is attributable to neglect, carelessness or wilful default or has committed any fraud in supplying information under this Act or the regulations or in omitting to disclose information.

**Deemed debt retirement charge**

(8) An amount assessed or reassessed by the Minister under this section is deemed for the purposes of the administration and enforcement of this Act to be a debt retirement charge, as defined in subsection 85 (1) of the *Electricity Act, 1998*, that has been collected, on the last day of the month in which the person received the overpayment, by the person as a collector appointed under subsection 85.3 (1) of the *Electricity Act, 1998* and, for those purposes,

(a) sections 85.11, 85.12, 85.14, 85.17 and 85.30 of that Act apply with necessary modifications;

(b) in the application of sections 85.11 and 85.14 of that Act and without limiting the generality of clause (a), references to the Financial Corporation are read as references to the Minister of Finance and references to the Minister of Finance are read as references to the Minister as defined in section 7 of this Act;

(c) the regulations made under that Act for the purposes of calculating the rate or rates of interest payable under section 85.11 of that Act and the manner of calculating the amount of interest apply with necessary modifications; and

(d) sections 23 and 36, subsections 37 (1), (1.1) and (2) and sections 37.1, 38 and 39 of the *Retail Sales Tax Act* apply with necessary modifications.

**Disposition of repaid amounts**

(9) If all or part of an overpayment is repaid to the Minister of Finance, the Minister of Energy shall make such financial arrangements and payments as may be necessary to ensure that any electricity vendor or other person entitled to all or part of the overpayment receives the appropriate amount.

**Confidentiality**

**11.** (1) Except as authorized by this section, no person employed by the Government of Ontario shall,

(a) knowingly communicate or knowingly allow to be communicated to any person any information obtained by or on behalf of the Minister of Energy or the Minister of Finance for the purposes of this Act; or

(b) knowingly allow any person to inspect or to have access to any record or thing obtained by or on behalf of either Minister for the purposes of this Act.

**Testimony**

(2) No person employed by the Government of Ontario shall be required, in connection with any legal proceedings,

(a) to give evidence relating to any information obtained by or on behalf of the Minister of Energy or Minister of Finance for the purposes of this Act; or

(b) to produce any record or thing obtained by or on behalf of either Minister for the purposes of this Act.

**Exception**

(3) Subsections (1) and (2) do not apply in respect of,

(a) criminal proceedings under any Act of the Parliament of Canada;

(b) proceedings in respect of the trial of any person for an offence under an Act of the Legislature; or

(c) proceedings relating to the administration or enforcement of this Act or Part V.1 or VI of the *Electricity Act, 1998*.

**Communication**

(4) A person employed by the Government of Ontario may, in the course of duties in connection with the administration or enforcement of this Act,

(a) communicate or allow to be communicated to another person employed by the Government of Ontario in the administration or enforcement of any law or to an employee of the Board information obtained by or on behalf of either Minister for the purposes of this Act; and

(b) allow another person employed by the Government of Ontario in the administration or enforcement of any law or an employee of the Board to inspect or have access to any record or thing obtained by or on behalf of either Minister for the purposes of this Act.

**Reciprocal communication**

(5) A person who receives information or obtains access to any record or thing under subsection (4) has a duty to communicate or furnish to that Minister on a reciprocal basis any information, record or thing obtained by the person that affects the administration or enforcement of this Act.

**Use of information**

(6) Any information, record or thing communicated or furnished under this section may be used only for the administration or enforcement of this Act or an Act that is administered or enforced by the person receiving the information, record or thing.

**Same**

(7) The Minister of Finance may permit information or a copy of any record or thing obtained by or on behalf of the Minister of Finance for the purposes of this Act to be given to,

(a) the person from whom the information, record or thing was obtained;

(b) any person by whom an amount is payable or has been paid under this Act; or

(c) the legal representative of a person mentioned in clause (a) or (b) or the agent of the person authorized in writing in that behalf.

**Information**

(8) The Minister of Finance may permit information or a copy of any record or thing obtained by or on behalf of the Minister of Finance for the purposes of this Act to be given to any person employed by any government if,

(a) the information, record or thing obtained by that government for the purpose of any Act that imposes a tax or duty are communicated or furnished on a reciprocal basis to the Minister; and

(b) the information, record or thing will not be used for any purpose other than the administration or enforcement of a law that provides for the imposition of a tax or duty.

**Offence**

(9) Every person who contravenes any provision of this section is guilty of an offence and on conviction is liable to a fine of not more than $2,000.

**Offences**

**False statements, etc., and fraud**

**12.** (1) Every person who engages in any of the following acts or omissions is guilty of an offence:

1. Making, participating in, assenting to or acquiescing in the making of a false or deceptive statement in any document or answer required or submitted under this Act or the regulations.

2. Destroying, altering, mutilating, hiding or otherwise disposing of information or records of an electricity vendor or other person, for the purpose of evading compliance with this Act or the regulations.

3. Making, assenting to or acquiescing in the making of a false or deceptive entry of a material particular in a record of an electricity vendor or other person required to maintain records for the purposes of this Act.

4. Omitting to make or assenting to or acquiescing in the omission of an entry of a material particular in a record of an electricity vendor or other person required to maintain records for the purposes of this Act.

5. Wilfully evading or attempting to evade, in any manner, compliance with an obligation under this Act or the regulations.

**Penalty upon conviction**

(2) A person convicted of an offence under subsection (1) is liable to either or both of the following penalties in addition to any other penalty assessed under this Act:

1. A fine in an amount that is not less than $1,000 and not more than $10,000.

2. Imprisonment for a term of not more than two years.

**General offence**

(3) Every person who contravenes, by any act or omission, a requirement imposed under this Act is guilty of an offence and, on conviction, is liable, where no other penalty is provided for the offence, to a fine of not less than $50 and not more than $5,000.

**Limitation period**

**13.** A proceeding to prosecute an offence under this Act must be commenced within six years after the date on which the matter of the offence arose.

**Payment of fines**

**14.** Fines imposed on conviction of an offence under this Act are payable to the Minister of Finance on behalf of the Crown in right of Ontario.

**Regulations**

**15.** (1) The Lieutenant Governor in Council may make regulations,

(a) subject to the Minister of Energy's powers under subsection (2), prescribing anything required to be or referred to in this Act as being prescribed by the regulations;

(b) defining any word or expression used in this Act that is not already expressly defined in this Act;

(c) requiring any person to take such action or refrain from taking such action as may be necessary for the purposes of or in connection with any regulation made under this Act;

(d) governing information that must or may be provided to consumers concerning this Act and eligibility for financial assistance under it;

(e) governing the determination of the base invoice amount for a billing period with respect to a class of electricity vendors or a class of consumers;

(f) prescribing a method of paying or crediting to a consumer an amount of financial assistance to which the consumer is entitled under this Act and the circumstances in which the method applies;

(g) requiring a unit sub-meter provider to provide financial assistance in respect of the cost of electricity and prescribing,

(i) the circumstances in which the financial assistance is to be provided,

(ii) the person or class of persons entitled to receive the financial assistance,

(iii) the method of determining the amount of the financial assistance to be provided,

(iv) the manner for paying or otherwise providing the financial assistance;

(h) setting out one or more limitation periods for the purposes of subsection 6 (1) or (2), and governing the circumstances in which that subsection does not apply;

(i) respecting records to be kept by electricity vendors or by persons prescribed by the regulations;

(j) providing for matters which, in the opinion of the Lieutenant Governor in Council, are necessary or desirable to facilitate the implementation of this Act and the regulations.

**Regulations, Minister of Energy**

(2) The Minister of Energy may make regulations,

(a) prescribing information that must or may be included on invoices issued to consumers or that must or may accompany invoices issued to consumers or payments of financial assistance under this Act;

(b) governing the presentation of financial assistance under this Act on invoices issued to consumers;

(c) prescribing anything required to be or referred to in section 4 as being prescribed by the regulations.

**Retroactive regulations**

(3) A regulation made under this Act is, if it so provides, effective with reference to a period before it is filed.

**Subdelegation**

(4) The Lieutenant Governor in Council may, by regulation, delegate to the Minister of Energy the power to make some or all of the regulations under subsection (1).

***Ontario Clean Energy Benefit Act, 2010***

**16. (1) The *Ontario Clean Energy Benefit Act, 2010* is amended by adding the following section:**

**Cut-off dates for financial assistance, reimbursement**
**Financial assistance**

**6.1** (1) Despite any entitlement of consumers to financial assistance under this Act, no financial assistance is payable to a consumer after the date prescribed by the regulations in respect of the consumer, other than in such circumstances as may be prescribed by the regulations.

**Reimbursement**

(2) Despite any requirement under this Act to reimburse an electricity vendor or other person for financial assistance provided by them to consumers, no amounts for reimbursement are payable to the electricity vendor or other person after the date prescribed by the regulations in respect of the electricity vendor or other person, other than in such circumstances as may be prescribed by the regulations.

**(2) Subsection 15 (1) of the Act is amended by adding the following clause:**

(i.1) setting out one or more dates for the purposes of subsection 6.1 (1) or (2), and governing the circumstances in which that subsection does not apply;

***Ontario Energy Board Act, 1998***

**17. (1) The definition of "enforceable provision" in section 3 of the *Ontario Energy Board Act, 1998* is amended by adding the following clause:**

(c.2) a provision of the *Ontario Rebate for Electricity Consumers Act, 2016* or the regulations made under it,

**(2) Section 70 of the Act is amended by adding the following subsection:**

**Deemed condition of licences, unit sub-meter provider, *Ontario Rebate for Electricity Consumers Act, 2016***

(2.3) Every licence issued to a unit sub-meter provider is deemed to contain the condition that the unit sub-meter provider is required to comply with the *Ontario Rebate for Electricity Consumers Act, 2016* and the regulations made under it.

**Commencement**

**18. Subject to subsection (2), this Act comes into force on the later of January 1, 2017 and the day it receives Royal Assent.**

**Short title**

**19. The short title of this Act is the *Ontario Rebate for Electricity Consumers Act, 2016*.**

***Policy***

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

i) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

ii) Increase the total amount of rate protection available to R2 with low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2004.

iii) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

iv) Expanding eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

2. ENERGY seek necessary TB/MBC approvals.

3. ENERGY seek approvals for:

i) the proposed *Ontario Rebate for Electricity Consumers Act, 2016* – **NTD-LSB – please confirm what title to use.]** and any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments and consequential legislative amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*, subject to the Legislature's approval of the Act, including the following elements:

   i. The rebate would be available starting January 1, 2017;
   ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
   iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers electricity bills;
   iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way

in which electricity vendors providing the rebate are to be reimbursed;

v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;
vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments.
vii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date.

4. ENERGY notes the following amendments:

i) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the *Electricity Act, 1998* to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

ii) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density rural electricity customers and provide for a periodic adjustment mechanism.

5. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

6. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan.

***TB/MBC***

TBC with TBS

***LRC***

Cabinet approved version [name] of this draft legislation for introduction, subject to the following:

1. The Office of Legislative Counsel is authorized to prepare a French version and to make minor adjustments to the English version, for the purpose of ensuring consistency between the two versions and making other improvements or correcting mistakes discovered in the translation process

# Electricity Price Mitigation

## Ministry of Energy

## WORKING DRAFT

## Date: September 14, 2016

Minister

Deputy Minister

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

- Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables.
  - This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%.

- Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online.

- The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers.

# Electricity Consumer Classes

- There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

**** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

# Current Rate Base Mitigation Programs

- Ontario has implemented several programs to help electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers;
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods; and
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- These programs have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial) as shown in the table below:

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

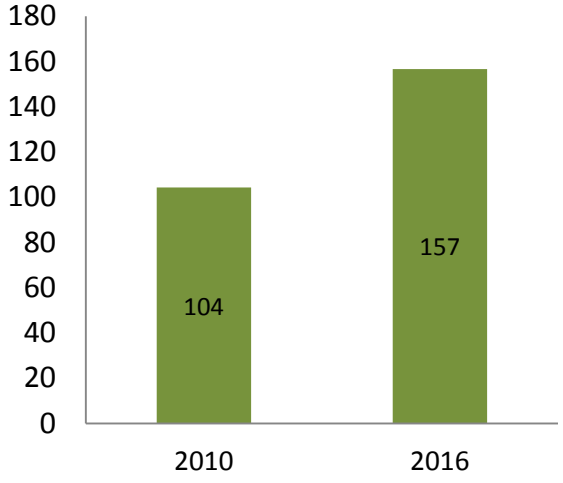
**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

# Prices by Electricity Consumer Class

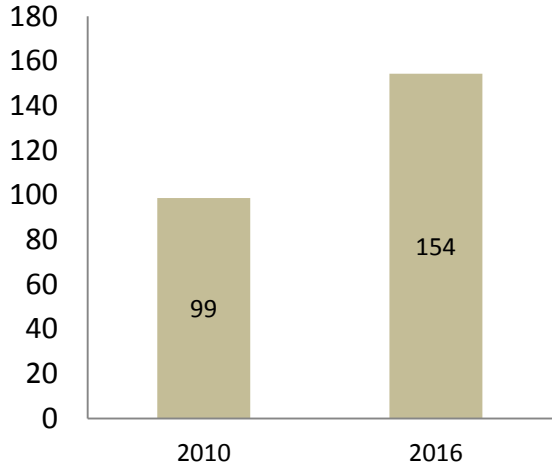
- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.

- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers.

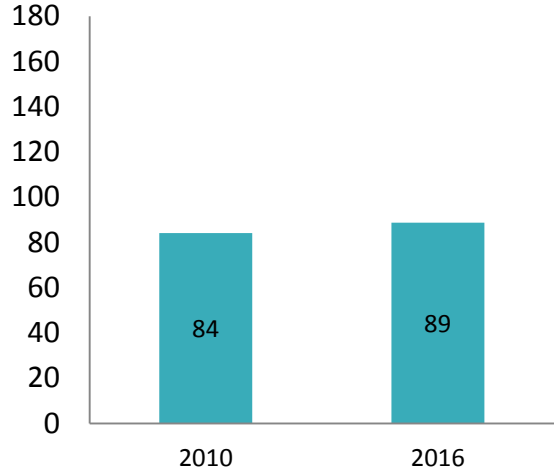
**Typical Residential Bill (750/kWh per month)**




**Typical Class B (Commercial) Price ($/MWh)**




**Typical Class A (Industrial) Price ($/MWh)**



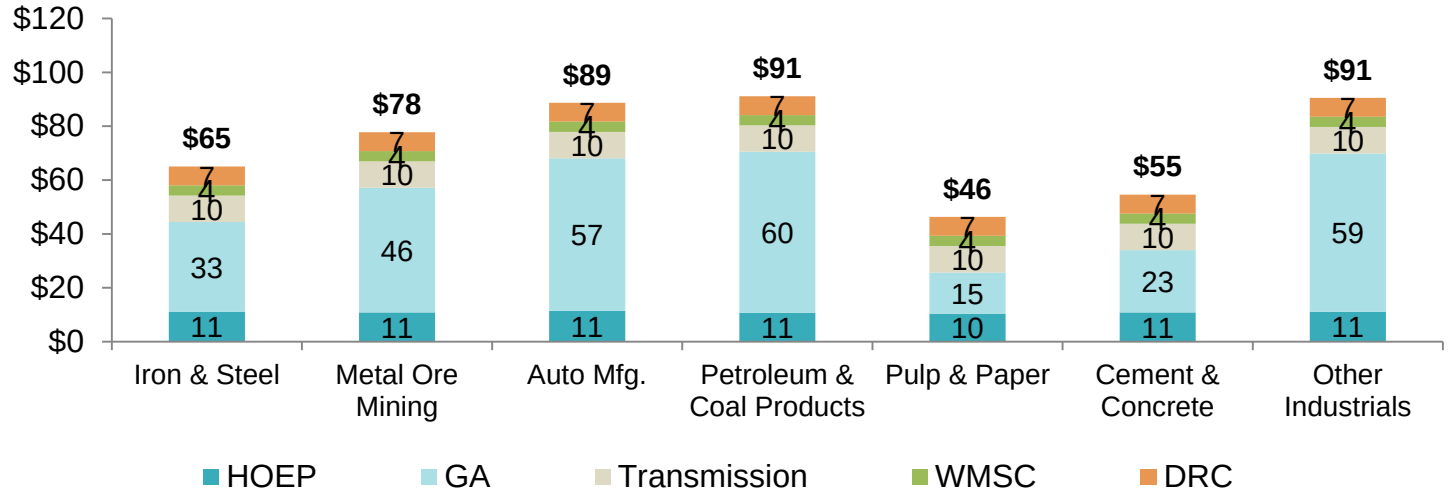

**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

# Industrial Electricity Prices Vary by Sector

- While Class A (industrial consumers) benefit from participation in the ICI program, there is a significant amount of variability in the ability to shift away from peak periods across customer classes, impacting the savings achieved.

- The below chart shows the prices paid in 2015 across a number of industrial sectors. Consumers in the north that receive rebates under the Northern Industrial Electricity Rate Program (NIERP) achieve rates that are $20/MWh lower than the below.

**Average all-in Class A, Transmission-connected Electricity Prices by Industrial Sector (estimated $/MWh), Year-to-Date June 2016**




**Note:** HOEP = Hourly Ontario Energy Price, GA = Global Adjustment, WMSC = Wholesale Market Service Charges, DRC = Debt Retirement Charge

# Recent Actions to Bend the Cost Curve

- Since 2010, a number of actions have been taken to reduce overall electricity system costs:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

# Rate Mitigation

- The 2016 Budget committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) committed $1.3 billion from the Greenhouse Gas Reduction Account (GGRA) over the first compliance period (2017-2020).

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:

  - **Tax-based Lever:**
    - Provide an on-bill rebate funded from the tax-base to all consumers or specific classes of consumers (i.e., the Ontario Clean Energy Benefit (OCEB) provided a rebate for eligible electricity consumers).

  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.

  - **Cap and Trade Proceeds Lever:**
    - Redirect cap and trade proceeds to offset the cost of existing initiatives that help reduce greenhouse gas (GHG) emissions (i.e., the CCAP committed to offset the impact of cap and trade and to keep electricity rates affordable).

# Rate Mitigation Proposal

- The Ministry of Energy is proposing to implement the following electricity price mitigation initiatives. The approach identified below would provide relief across all electricity consumer classes:

  1) Provide an 8% rebate equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms) and update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers

  2) Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial) and redirect cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

- The following slides provide additional information on the above initiatives.

***Notes:** Eligibility for the 8% rebate would be similar to OCEB and include some customers not on the Regulated Price Plan (RPP), such as Independent Power Authority consumers and consumers that have opted-out of RPP. See Appendix for discussion on HST considerations.

# Rate Mitigation Proposal – Illustrative Impacts

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Impact | | Class B (Commercial) Impact* | Class A (Industrial) Impact* | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)*** | *Rural*** (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br><br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br><br>(-8%) | -$45/ month<br><br>(-20%) | -$1/MWh<br><br>(-1%) | -$1/ MWh<br><br>(-1%) | Up to -$52/MWh<br><br>(-34%) |

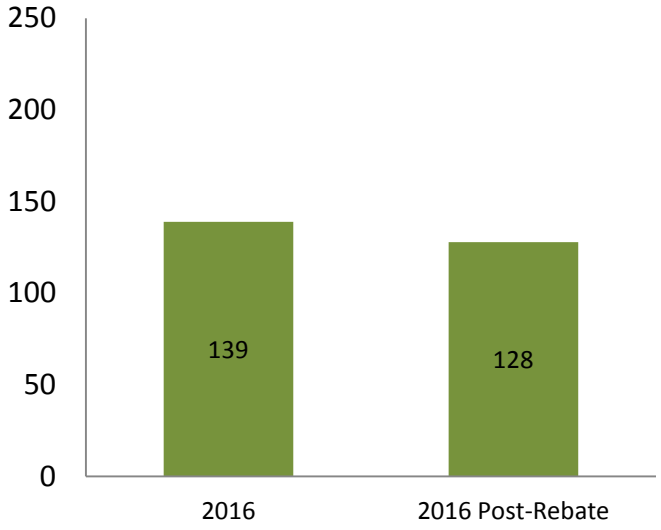
***Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes.

**** Note:** Average Regulated Price Plan Impact represents a pre-tax value of the 8% rebate and does not include the impact of ICI expansion and RRRP update (total impact of $1.31/month based on 750 kWh/month).

*****Note**: Rural customers refers to customers of Hydro One eligible to receive RRRP (R2 rate class customers). Impact shown is pre-tax and does not include the impact of ICI expansion and RRRP update (total impact of $1.74/month based on 1000 kWh/month).

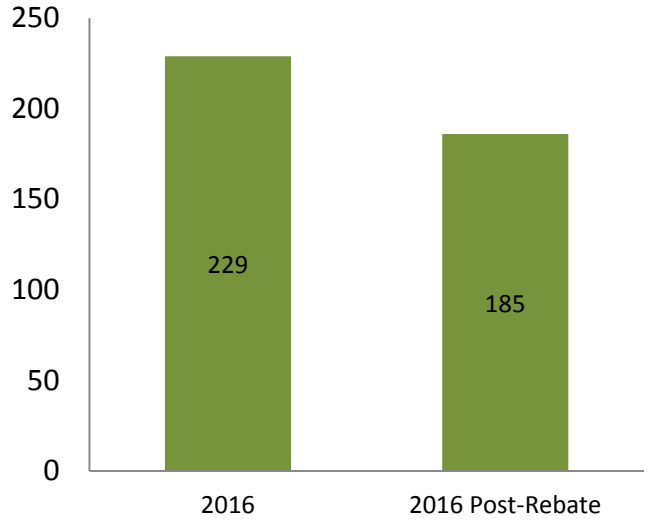
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class

**Typical Residential Bill**
**750/kWh per month, 8% only**




The pre-tax impact of a 8% reduction.

**Rural (R2) Residential Bill**
**1,000/kWh per month, 8% and RRRP update**

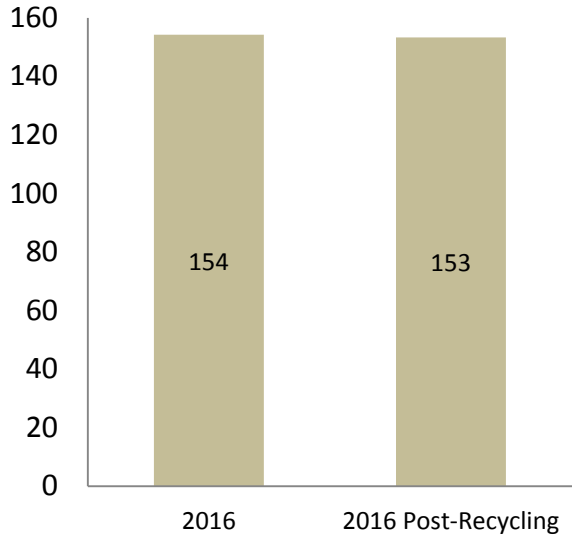



The pre-tax impact of the rate mitigation initiatives is a 19% reduction.

**Note:** Residential bills reflect electricity rates as per the Regulated Rate Plan (RRP) which came into effect on May 1, 2016. Commercial and industrial electricity prices reflect YTD June 2016.

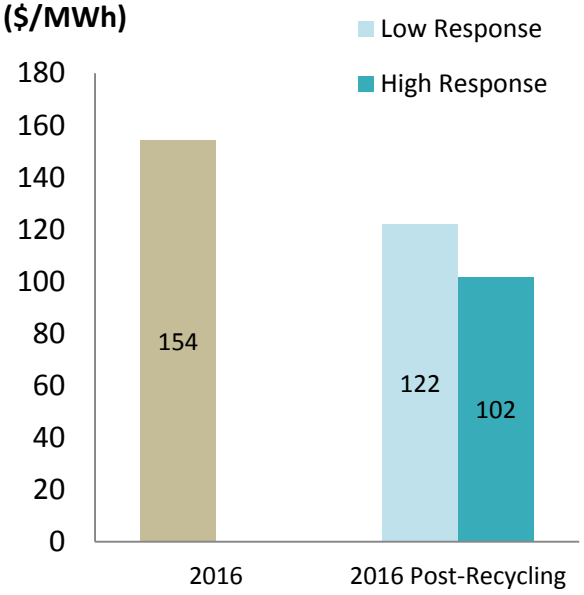
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class (cont'd)

**Typical Class B (Commercial) Price ($/MWh)**



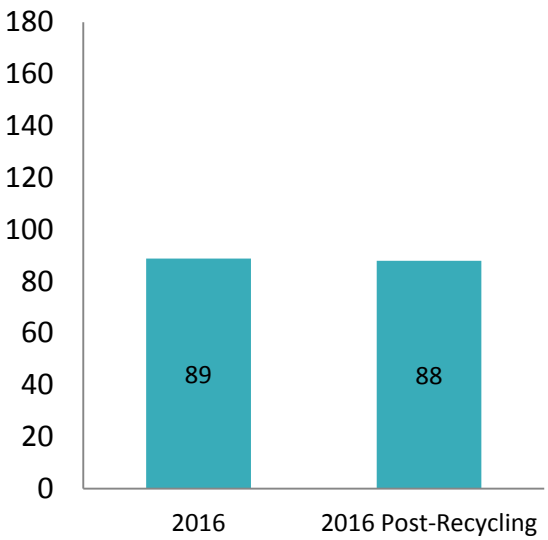

**Class B:** The net impact of the rate mitigation initiatives is a 1% reduction.

**Typical New Class A Price ($/MWh)**




**New Class A:** The net impact of the rate mitigation initiatives is a reduction of up to 21% and 34% for low and high response respectively.

**Typical Class A (Industrial) Price ($/MWh)**




**Existing Class A:** The net impact of the rate mitigation initiatives is a 1% reduction.

**Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

# 1) Regulated Price Plan Eligible Consumers and Rural or Remote Rate Protection Update

# 8% Rebate to Regulated Price Plan Eligible Consumers

- Legislation/regulation will be introduced to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit.
  - This would be equivalent to the provincial portion of the HST*.

| **Eligible for the 8% rebate**<br>(< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate**<br>(> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>  − Coffee / snack retailer<br>  − Convenience store<br>  − Apparel store<br>  − Hair salon<br>  − Small insurance office | • Class A consumers<br>  − Manufacturer<br>  − Large grocery store<br>  − Mines<br>  − Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>  − Commercial offices (low rise)<br>  − Hotel<br>  − General warehousing |

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).

***Note:** An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

# Placeholder – Electricity Bill Mock-Up

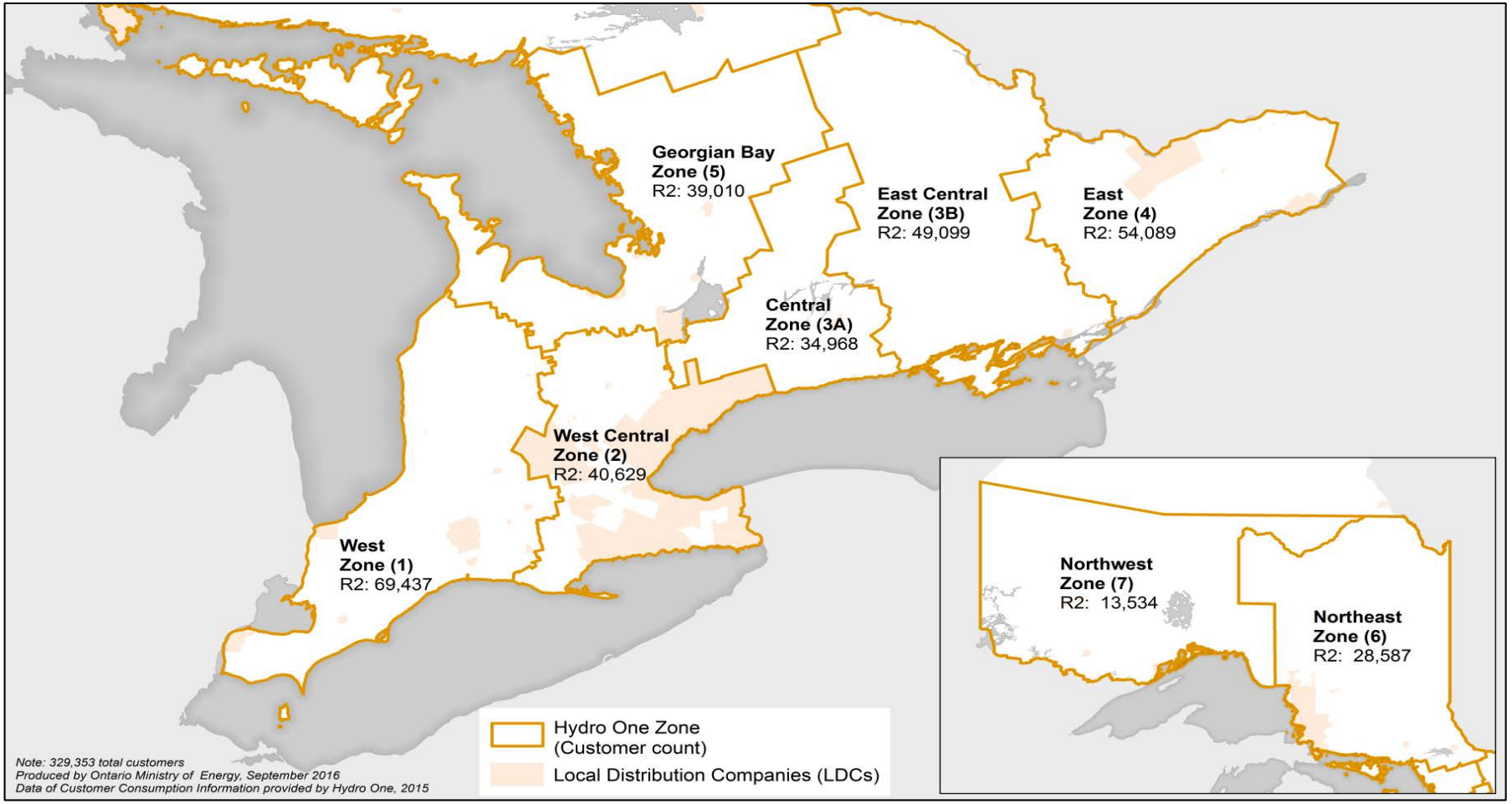
# Rural or Remote Rate Protection (RRRP) Update

- ENERGY is proposing to amend O.Reg 442/01 to provide an additional $110 million in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

- RRRP is a rate-based funded subsidy program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.
  - Today, RRRP is a $175-million program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
  - The majority of the program funding ($125.5 million) provides a subsidy to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a monthly subsidy for R2 customers of $31.50.
  - RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

- An additional $110 million in program funding would see an increased subsidy of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.
  - This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
  - The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the subsidy remains constant.

# Rural or Remote Rate Protection (RRRP) Update – R2 Customers by Region



## 2) Expand Industrial Conservation Initiative and Redirect Cap and Trade Proceeds

# Industrial Conservation Initiative (ICI) Expansion

- ENERGY is proposing to amend O. Reg. 429/04 to expand ICI eligibility effective [X placeholder date].

- Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers).
  - Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

- ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:
  - Reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods;
  - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
  - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

# ICI Expansion – Projected Impact

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

- The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility
  - Short-term refers to the expected impact once ICI billing begins for new Class A consumers (one year after expanded eligibility takes place).
  - Long-term is the expected impact once new Class A consumers have had time to significantly change their behaviour and investment decisions in response to the ICI.

- The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating.

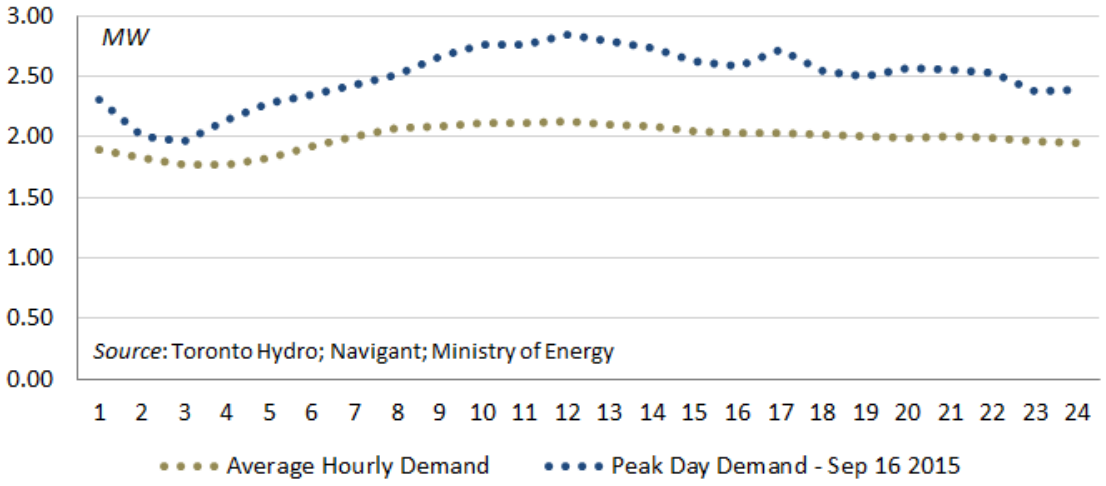
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.

# ICI Expansion – Illustrative Example of Newly Eligible Consumer

- Plastics manufacturers, such as Poly Five Plastics in Toronto, are among the consumers that would become eligible if the threshold was lowered.
- Such manufacturers fall under NAICS* code 32 and have relatively flat load profiles, reflecting around the clock production. This means they would be beneficiaries of ICI even with no change in consumption behaviour.
- Companies like Poly Five Plastics could expect to see greater savings if they are willing and able to respond to the higher prices during high demand hours.

**Typical Demand Profile, 2-3 MW Consumer**

*Manufacturer, NAICS Code 32 - Nov 2014 to Oct 2015*




**Illustrative Bill Savings, 2-3 MW Consumer**

| | *Status Quo* | *No Price Response* | *Short Term Response* | *Long Term Response* |
|---|---|---|---|---|
| | **Class B** | **Class A** | **Class A** | **Class A** |
| GA | 75.26 | 58.06 | 43.55 | 32.03 |
| Total bill | **126.28** | **109.09** | **94.58** | **83.06** |
| *Savings* | | *-14%* | *-25%* | *-34%* |

Source: Navigant; Ministry of Energy

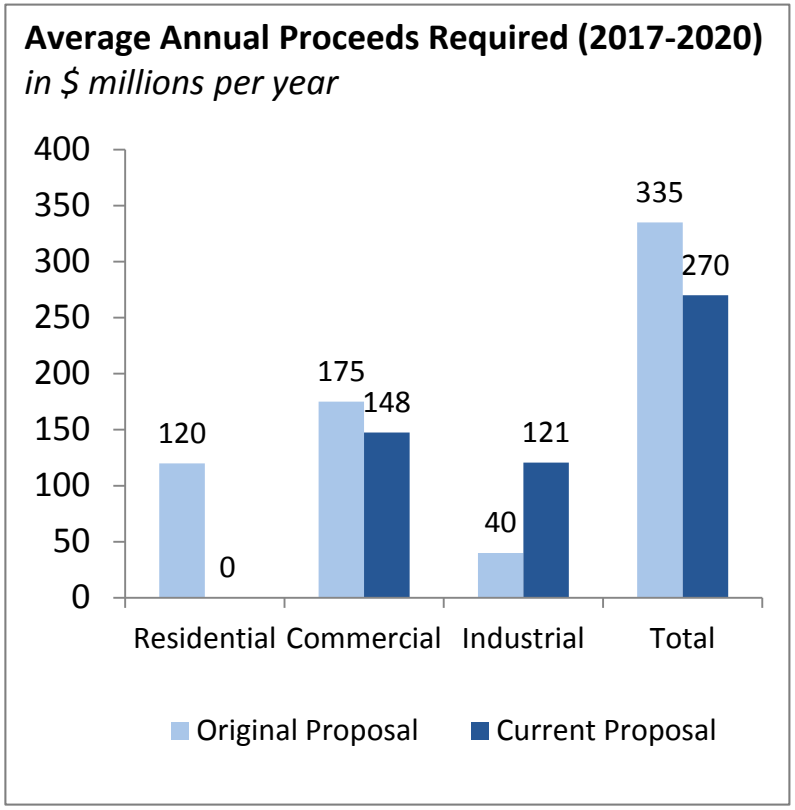
*** Note:** North American Industry Classification System (NAICS) is the standard used by statistical agencies in classifying business establishments.

# Redirect Cap and Trade Proceeds Recycling

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.
  - To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).

- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

- The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $0.24 billion over the first compliance period).




**Note:** The original proposal was to offset the impact of cap and trade via GA to the average industrial, and would provide a benefit to commercial and residential consumers. Current proposal would recycle proceeds volumetrically to industrial and commercial consumers.

# Redirect Cap and Trade Proceeds Recycling

- Redirecting cap and trade auction proceeds to lower the cost of electricity would offset consumers' contributions to non-emitting generation.

- Redirecting helps pay for committed investments/initiatives which reduce GHGs (e.g., non-emitting generation and conservation programs).
  - Due to the long-term nature (typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period. These costs will continue well beyond the timelines described in the CCAP.

- Redirecting cap and trade auction proceeds volumetrically to Class B (commercial) and Class A (industrial) consumers maintains the incentive to shift consumption from on-peak to off-peak hours.

- Using cap and trade auction proceeds to lower the cost of electricity would make it more competitive with traditionally cheaper fossil fuels.

- By using the proceeds to lower the cost of electricity, there is potential to incent fuel-switching away from fossil fuels toward much cleaner grid-connected electricity and support CCAP goals of electrification.

# Considerations

# Implementation

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010.
  - If passed, the legislation would require a general regulation.
  - Amendments would also be required to various regulations to expand ICI and RRRP.
- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. ENERGY (possibly through Ontario Energy Board) will consult with LDCs to accurately assess these impacts once the program has been announced.
  - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - Timing concerns may be alleviated by allowing LDCs to provide retroactive rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- Detailed messaging on bills (for "low-volume" consumer bills ) could be implemented by amending O. Reg. 275/04 (made under the Ontario Energy Board Act, 1998).
  - The rebate would not be directly linked to HST.
  - With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.
- While the impact of cap and trade would be added to electricity bills as of January 2017, the offsetting effect of proceeds recycling may not occur immediately depending on implementation and potential alignment with the first auction expected in March 2017.
- ENERGY will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

# Fiscal

- The Climate Change Action Plan (CCAP) committed about $1.3 billion over four years for electricity mitigation for industrial, commercial and residential consumers from GGRA proceeds.
  - The current rate mitigation proposal requires approximately 20% less in proceeds, saving approximately $240 million relative to the CCAP commitment over the first compliance period (2017-2020).

- The 8% rebate is expected to cost about $1 billion per year (i.e., $4 billion from 2017-2020), representing an additional pressure on the fiscal plan.
  - Consideration could be given to allocating the $240 million in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset.

- In the absence of any offset strategies, the full cost of the rate mitigation approach would add to the pressures and risks that need to be managed in order for the government to balance the budget in 2017-18 and stay balanced in 2018-19 and beyond.

# Legal

- In order to avoid characterization as an unconstitutional tax, a non-tax levy must have a sufficient nexus between those who pay and the regulatory scheme in the sense that those who pay have caused the need for or benefit from the regulatory scheme. Although the case law is not developed on the extent to which some regulated actors can be required to subsidize others, risk is reduced to the extent that any cross-subsidization serves true regulatory goals rather than revenue re-distribution goals.

- HST Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):
  - Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

- ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):
  - Shifting costs to some consumers to lower rates for others without more carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

- RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):
  - Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

- Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):
  - To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

# Communications

- Public high-profile communications would coincide with introduction of legislation (September 2016).
  - Stakeholder outreach/technical briefings with LDCs, Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.
  - Echo public announcements in southwest and north; proactive provincial/local media.

- **Positioning:**
  - A fiscally prudent plan to benefit all ratepayers in a lasting, meaningful way.
  - Rural customers will receive the largest single rate relief ever.
  - Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.

- **Issues Considerations:**
  - Significant benefit for rural and remote residential customers; net gain for all residential customers.
  - More complex to communicate, but can be presented as a full plan that includes reforms and improvements to the system.
  - Consistent with cap-and-trade commitment that no business sector will be left worse off, though small businesses outside ICI will benefit the least.

# Key Messages

- We are taking unprecedented action to help people in their everyday lives.
- Residential ratepayers and other RPP eligible ratepayers will receive an eight per cent rebate on their electricity bill, equivalent to the provincial portion of the HST.
- Modernizing the RRRP will benefit 330,000 families in rural Ontario with significant reductions to their electricity bills – $28 a month, in addition to the eight per cent rebate.
- Over a thousand more Ontario businesses will be eligible to benefit from the ICI program, helping them stay competitive and grow.
- These actions will assist over five million families, farms and small businesses across Ontario.
- These actions today join our many existing initiatives too help keep electricity in Ontario clean, reliable and affordable.

# Proposed Cabinet Minute

PLACEHOLDER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# Appendix

# Illustrative Bill Impacts

| | Current Bill (after tax) (before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (after tax) (before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $139 /month | N/A | 8% pre-tax rebate: - $11 | $128 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $229 /month | RRRP: –$32 | 8% pre-tax rebate: - $16<br>Updated RRRP: - $28 | $185 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $101 /month | OESP: -$38 | 8% pre-tax rebate: - $8 | $93 /month |
| Small Business (Toronto – 403,200 kWh/month) | $148 /MWh | N/A | 8% pre-tax rebate: - $12/MWh | $136 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $202 /MWh | N/A | 8% pre-tax rebate: - $16/MWh | $186 /MWh |

***Note:** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as $1,332 per year for a family.
** income of less than $28,000, family of 4.

Totals may not add due to rounding.

# Illustrative Bill Impacts (cont'd)

| | Current Rate | Current Rate mitigation initiatives* | Cost of new initiatives (RRRP and ICI) | New Rate Mitigation initiatives | Net Impact | New Rate |
|---|---|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | -$0.90 /MWh (-1%) | $107 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI: -$49/MWh NIERP: -$20/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $68 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh<br>ICI: -$51.30/MWh | -$52 /MWh (-34%) | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $151 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh | $153 /MWh |

**Notes:**

1) There is the potential for a consumer eligible for the Regulated Price Plan to opt-out of the Regulated Price Plan to opt-in to Class A and receive all three benefits (i.e., Regulated Price Plan, ICI, proceeds recycling).

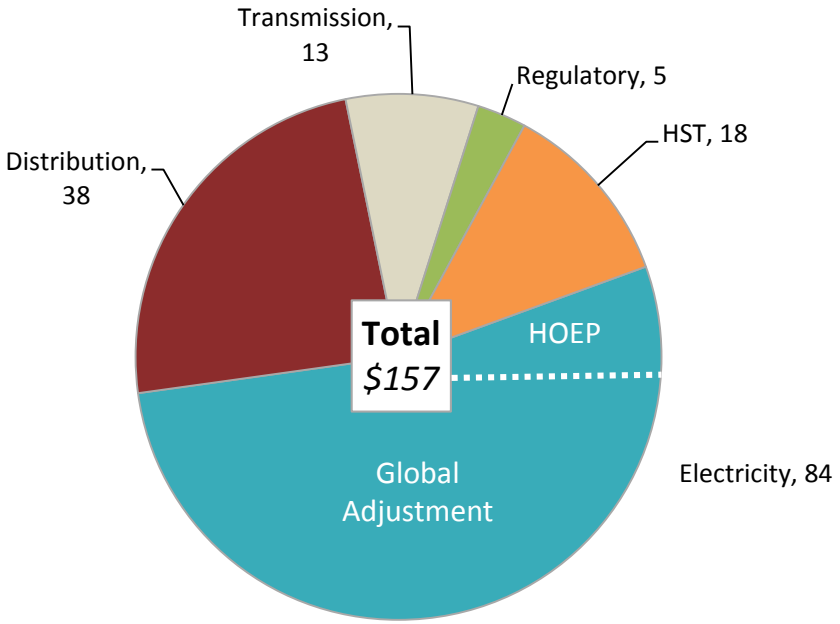
2) The impact of cap and trade would not be added to electricity bills until 2017 and varies per year over the course of the first compliance period. For illustrative purposes, the estimated average benefit of proceeds recycling is shown above.

# Residential Electricity Prices

- There are approximately 5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of May 1, 2016 (750 kWh/month)*




*Source*: OEB, Toronto Hydro

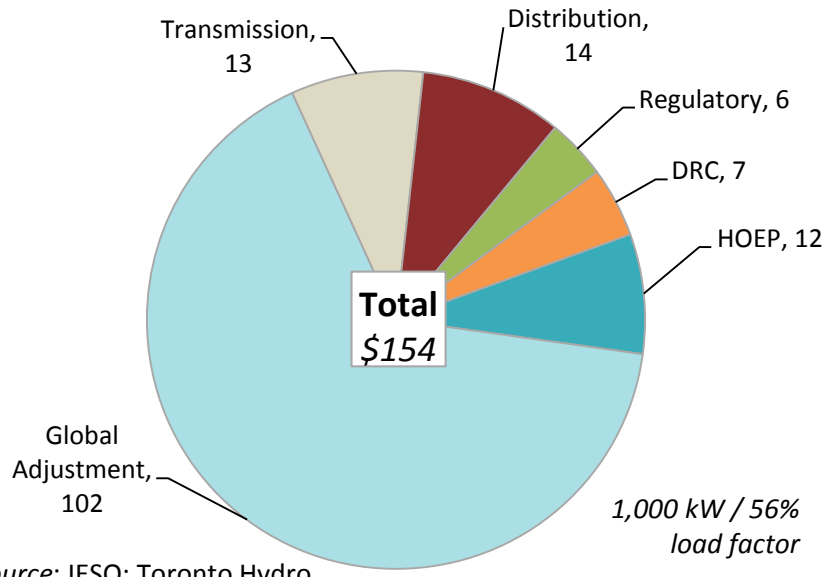
# Commercial Electricity Prices

- There are approximately 400,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.

- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




*Source*: IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.

- Targeted pricing programs are currently not available for Class B consumers.

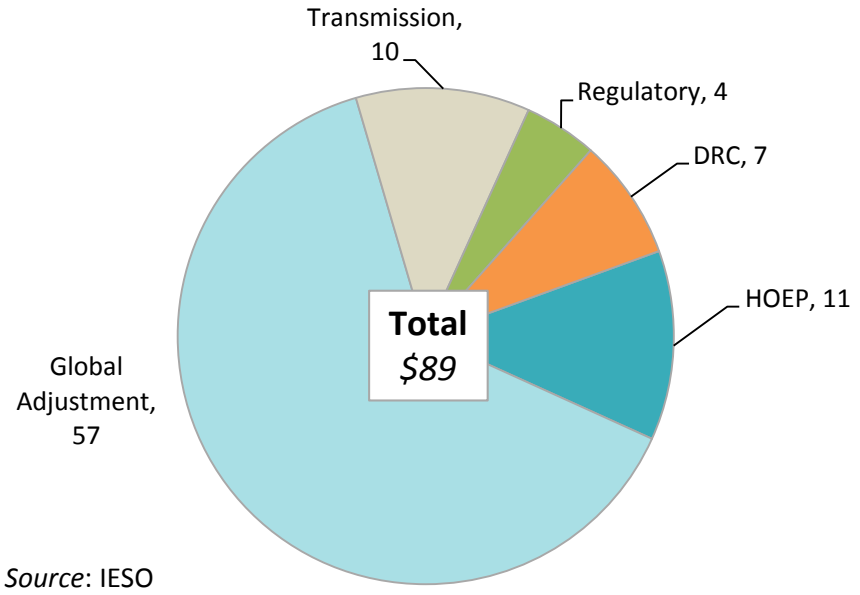
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*




*Source*: IESO

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $64/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Sales Tax Treatment in Other Jurisdictions

| Jurisdiction | Tax | Tax Paid by Business Consumers | Tax Paid by Residential Consumers | Comment |
|---|---|---|---|---|
| **British Columbia** | PST | Yes – 7% | No | • PST does not apply to residential energy, including electricity, acquired solely for residential use in a residential dwelling<br>• BC's carbon tax does not apply to electricity bills. |
| **Alberta** | None | N/A | N/A | • Alberta does not have a provincial sales tax. |
| **Saskatchewan** | PST | Yes – 5%<br>Except for electricity purchased to heat a building. | No | • PST does not apply to electricity purchased for use in a residential dwelling.<br>• PST does not apply to electricity purchased for use in heating a building that is heated solely by the electricity. |
| **Manitoba** | PST | Yes – 8%<br>Reduced rate of 1.6% applies to electricity used by a qualifying business to operate machinery | Yes – 8%<br>Electricity purchased for mixed use, 80% of which is home heating, has a reduced rate of 1.4%. Electricity solely to heat the purchaser's home is exempt. | • Winnipeg also applies a tax of 2.5% on residential and 5% on commercial. |
| **Ontario** | HST | Yes (less ITC (input tax credits)) | Yes – 8% | |
| **Quebec** | QST | Yes (less ITCs) | Yes – 9.975% | |
| **Nova Scotia** | HST | Yes (less ITCs) | Yes – 10% less provincially administered rebate. | • Rebate is equal to the provincial portion of the HST, and is administered similar to OCEB, but applies to many energy sources. |
| **New Brunswick** | HST | Yes (less ITCs) | Yes – 10% | |
| **Prince Edward Island** | HST | Yes (less ITCs) | Yes – 9% (10% beginning Oct 1, 2016) | |
| **Newfoundland and Labrador** | HST | Yes (less ITCs) | Yes – 10% | • Had a provincially administered Home Heating Rebate program until July 2015. |
| **Federal** | GST | Yes (less ITCs) | Yes – 5% | |

| | |
|---|---|
| **From:** | Tomasz Bugajski |
| **To:** | John Kim; Ronald Kwan |
| **Subject:** | FW: Major Projects this week |
| **Date:** | Friday, September 09, 2016 6:18:18 PM |
| **Attachments:** | Cabinet Submission - Electricity Price Mitigation - CLEAN TPD comment.pptx |

See below. Will you have comments today?

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

**From:** DeSouza, Jenarra (MOF) [mailto:Jenarra.DeSouza@ontario.ca]
**Sent:** Friday, September 09, 2016 6:13 PM
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
**Subject:** FW: Major Projects this week

Hi guys

Just checking – will there be any OFA / OB comments to come on this, for today
Pls let me know

Cheers
B

- for Jenarra DeSouza

**From:** DeSouza, Jenarra (MOF)
**Sent:** September 9, 2016 4:00 PM
**To:** Bugajski, Tomasz (OFA); Birks, Ryan (MOF); Tarin, Ghufran (MOF); Lewis, Shannon (MOF)
**Cc:** Kwan, Ronald (OFA); Schuurman, Tim (MOF); Lewis, Brian (MOF); Waterston, Michael (MOF); Subrahmanyan, Sriram (MOF)
**Subject:** FW: Major Projects this week

Attached are TPD comments for the Electricity CabSub

Could you pls review and let me know if your areas have any comments
TPD can coordinate and send back for MOF

Cheers
Bernice

- for Jenarra DeSouza

**From:** Lawson, Lynn (MOF)

**Sent:** September 9, 2016 3:23 PM
**To:** Subrahmanyan, Sriram (MOF); DeSouza, Jenarra (MOF)
**Cc:** Waterston, Michael (MOF); Langleben, Ann (MOF); Patel, Lesley (MOF); Lone, Dianne (MOF); Kennedy, Marta (MOF); Lam, Linda (MOF); Boxen, Simone (MOF); Diomin, Svetlana (MOF); Lewis, Shannon (MOF)
**Subject:** RE: Major Projects this week

The Cab Sub would benefit from some edits. We have comments on slides 10, 13, 14, 24, 26, 29 and Appendix slide 34. Please see attached

The wording of the Cabinet Minute in this Cab Sub is preferred over the stand-alone wording in the excerpt they provided.

---

**From:** Subrahmanyan, Sriram (MOF)
**Sent:** September 8, 2016 10:59 PM
**To:** Waterston, Michael (MOF); Lone, Dianne (MOF); Patel, Lesley (MOF); Langleben, Ann (MOF); Lawson, Lynn (MOF)
**Cc:** DeSouza, Jenarra (MOF)
**Subject:** Fw: Major Projects this week

Sent from my BlackBerry 10 smartphone on the Rogers network.

---

**From:** Young, Gwendolynne (MOF) <Gwendolynne.Young@ontario.ca>
**Sent:** Thursday, September 8, 2016 10:07 PM
**To:** Subrahmanyan, Sriram (MOF); DeSouza, Jenarra (MOF); Baig, Saad (MOF); Nguyen, Marianne (MOF); Schuurman, Tim (MOF); Kwan, Ronald (OFA); Pearce, Christopher (MOF); Birks, Ryan (MOF)
**Cc:** McLean, David (MOF)
**Subject:** Fw: Major Projects this week

Hi All - attached are updated materials from ENERGY.

Sent from my BlackBerry 10 smartphone on the Rogers network.

---

**From:** McLean, David (MOF) <David.McLean@ontario.ca>
**Sent:** Thursday, September 8, 2016 8:32 PM
**To:** Young, Gwendolynne (MOF)
**Subject:** FW: Major Projects this week

FYI

---

**From:** Katona, Keley (ENERGY)
**Sent:** September 8, 2016 8:32 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB); Moore, Karen (CAB)
**Subject:** RE: Major Projects this week

Hi,
Attached is the latest iteration of the Cabinet submission, including an updated minute. This is with our MO for review but wanted to keep you updated so you can continue to revise your TB / CAB notes. Note that some of the numbers have

changed to remain consistent with methodology throughout the submission.
Keley

---

**From:** Katona, Keley (ENERGY)
**Sent:** September-08-16 12:22 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

For your records, attached is what was circulated at Major Projects today.

---

**From:** Katona, Keley (ENERGY)
**Sent:** September-07-16 3:38 PM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

We're making edits based on comments from our MO. Could be this evening or tomorrow morning.

---

**From:** Kwamena, Boafoa (CAB)
**Sent:** September-07-16 3:33 PM
**To:** Katona, Keley (ENERGY); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

Hi

Will be likely receive material  later today or tomorrow?

Thanks

---

**From:** Katona, Keley (ENERGY)
**Sent:** September-07-16 10:12 AM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** Re: Major Projects this week

Sorry, disregard, we'll make it work on our end. Thanks.

---

**From:** Katona, Keley (ENERGY)
**Sent:** Wednesday, September 7, 2016 10:06 AM
**To:** Kwamena, Boafoa (CAB); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** RE: Major Projects this week

Hi Boafoa,

Wondering if it's possible for the electricity item to be last on the agenda tomorrow. We have a Minister's briefing which conflicts with Major Projects, involving the same staff and it would be very helpful if we could be on at 11am.

Thanks,
Keley

---

**From:** Kwamena, Boafoa (CAB)
**Sent:** September-06-16 5:29 PM
**To:** Katona, Keley (ENERGY); McLean, David (MOF)
**Cc:** Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
**Subject:** Major Projects this week

Hi Keley/David

We will be adding the Electricity Pricing Mitigation item to Major Projects this Thursday. This will be an opportunity to ensure everyone is on the same page in advance of the TB trip next week. Major Projects is scheduled from 10:30 to 11:30 on Thursday. This item will be the first–10:30 to 11:00. Please let me know if this time doesn't work or if there are any concerns.

Thanks
Boafoa

Boafoa Kwamena
Special Advisor
Office of the Secretary of the Cabinet
Cabinet Office
416-325-4400
Boafoa.kwamena2@ontario.ca

# Electricity Price Mitigation

## Ministry of Energy

## WORKING DRAFT

## Date: September 12, 2016

Minister

Deputy Minister

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

- Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables.
  - This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%.

- Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online.

- The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers.

# Electricity Consumer Classes

- There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

**** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

# Current Rate Base Mitigation Programs

- Ontario has implemented several programs to help electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers;
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs; and
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- These programs have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial) as shown in the table below:

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

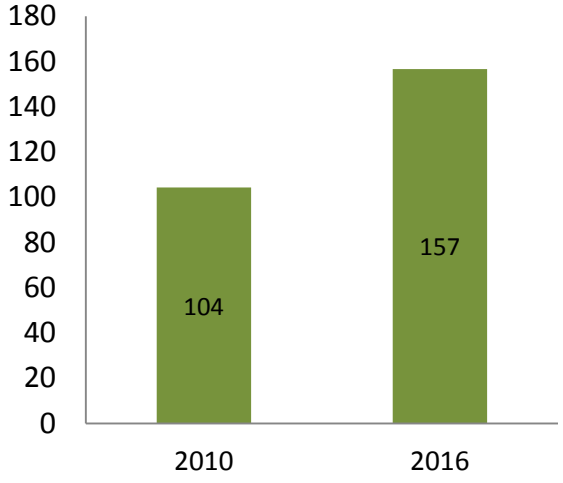
**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

# Prices by Electricity Consumer Class

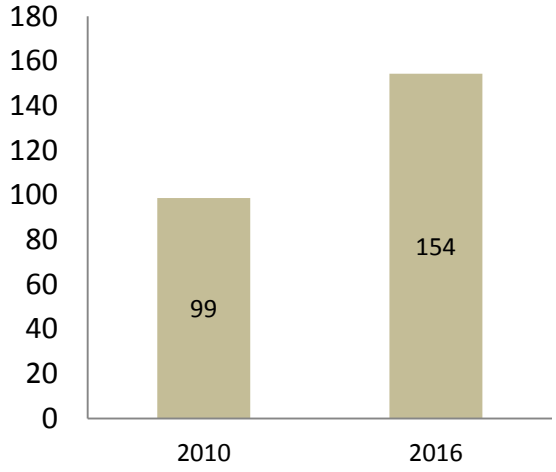
- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.

- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers.

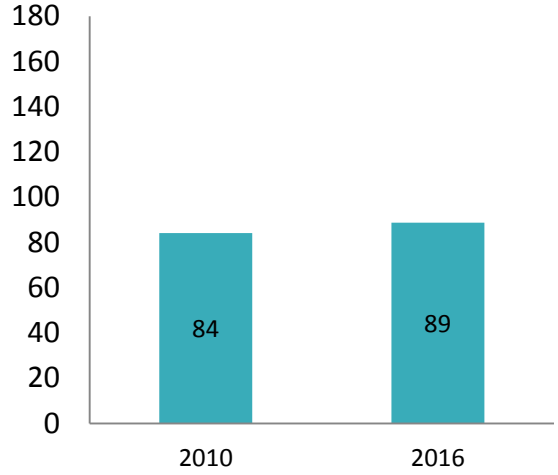
**Typical Residential Bill (750/kWh per month)**




**Typical Class B (Commercial) Price ($/MWh)**




**Typical Class A (Industrial) Price ($/MWh)**



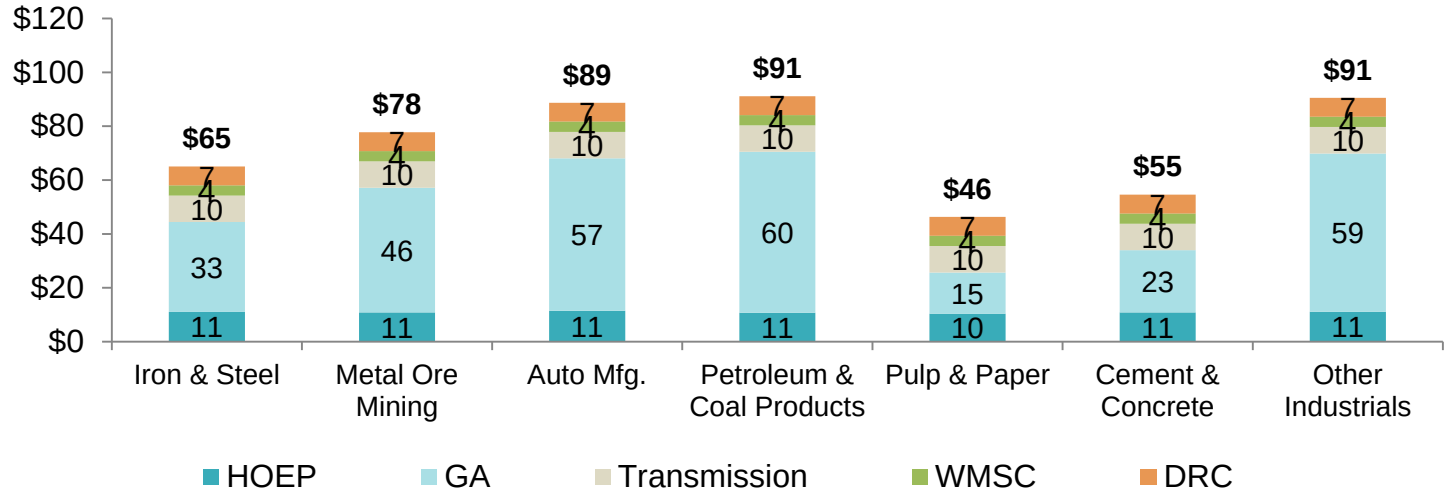

**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

# Industrial Electricity Prices Vary by Sector

- While Class A (industrial consumers) benefit from participation in the ICI program, there is a significant amount of variability in the ability to shift away from peak periods across customer classes, impacting the savings achieved.

- The below chart shows the prices paid in 2015 across a number of industrial sectors. Consumers in the north that receive rebates under the Northern Industrial Electricity Rate Program (NIERP) achieve rates that are $20/MWh lower than the below.

**Average all-in Class A, Transmission-connected Electricity Prices by Industrial Sector (estimated $/MWh), Year-to-Date June 2016**




**Note:** HOEP = Hourly Ontario Energy Price, GA = Global Adjustment, WMSC = Wholesale Market Service Charges, DRC = Debt Retirement Charge

# Recent Actions to Bend the Cost Curve

- Since 2013, a number of actions have been taken to reduce overall electricity system costs:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

# Rate Mitigation

- The 2016 Budget committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) committed $1.3 billion from the Greenhouse Gas Reduction Account (GGRA) over the first compliance period (2017-2020).

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:

  - **Tax-based Lever:**
    - Provide an on-bill rebate funded from the tax-base to all consumers or specific classes of consumers (i.e., the Ontario Clean Energy Benefit (OCEB) provided a rebate for eligible electricity consumers).

  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.

  - **Cap and Trade Proceeds Lever:**
    - Redirect cap and trade proceeds to offset the cost of existing initiatives that help reduce greenhouse gas (GHG) emissions (i.e., the CCAP committed to offset the impact of cap and trade and to keep electricity rates affordable).

# Rate Mitigation Proposal

- The Ministry of Energy is proposing to implement the following electricity price mitigation initiatives. The approach identified below would provide relief across all electricity consumer classes:

  1) Provide an 8% rebate equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms) and update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers; and

  2) Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial) and redirect cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

- The following slides provide additional information on the above initiatives.

***Note:** Eligibility for the 8% rebate would be similar to OCEB and include some customers not on the Regulated Price Plan (RPP), such as Independent Power Authority consumers and consumers that have opted-out of RPP.

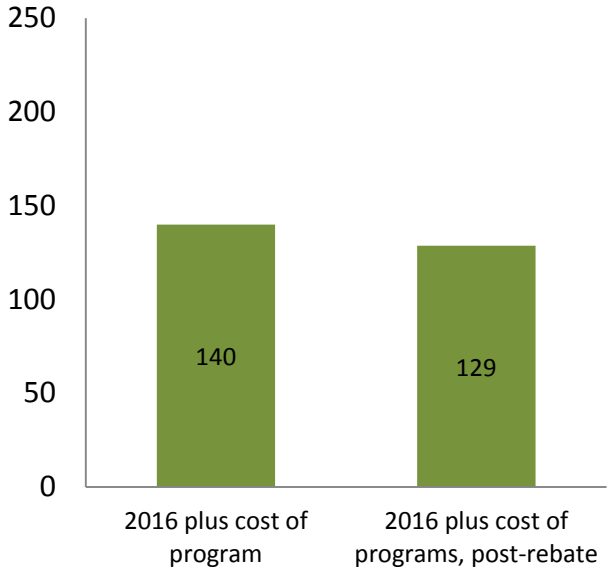
# Rate Mitigation Proposal – Illustrative Benefits*

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Benefit | | Class B (Commercial) Benefit | Class A (Industrial) Benefit | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural*** (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br><br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br><br>(-8%) | -$45/ month<br><br>(-20%) | -$3/MWh<br><br>(-2%) | -$3/ MWh<br><br>(-3%) | Up to -$52/MWh<br><br>(-34%) |

- **Notes:** The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh. The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. Proceeds recycling is an estimated average over the first compliance period (2017-2020).

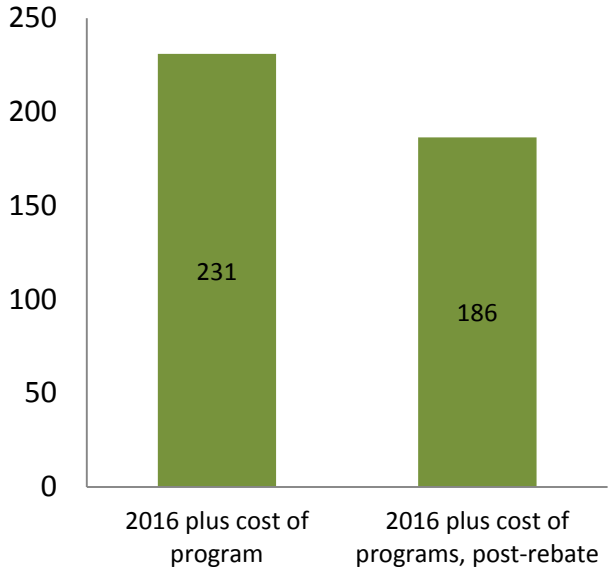
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class

**Typical Residential Bill**
**750 kWh per month, 8% only**




The pre-tax impact is a 8% reduction.

**Rural (R2) Residential Bill**
**1,000 kWh per month, 8% and RRRP Update**

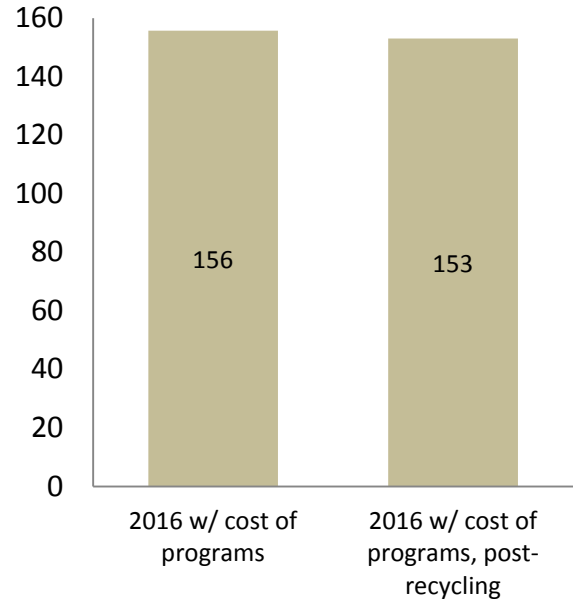



The pre-tax impact of the rate mitigation initiatives is a 20% reduction.

**Note:** Residential bills reflect electricity rates as per the Regulated Rate Plan (RRP) which came into effect on May 1, 2016.

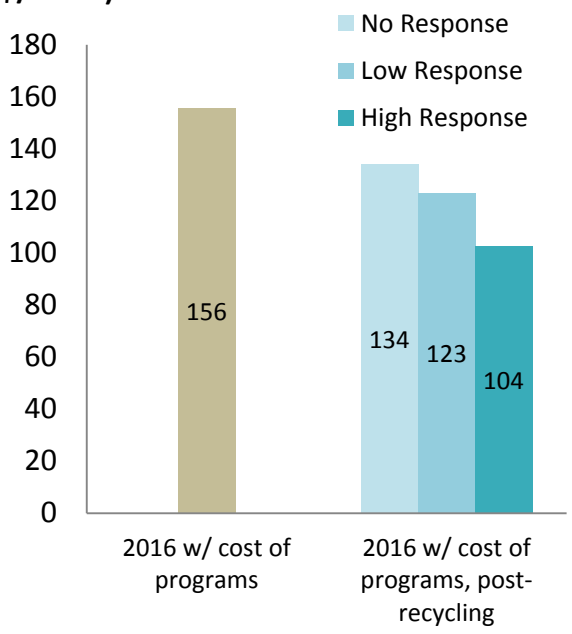
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class (cont'd)

**Typical Class B (Commercial) Price ($/MWh)**



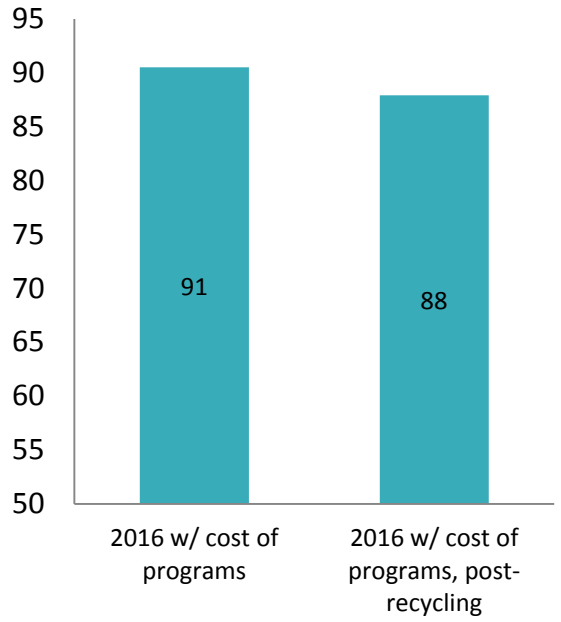

**Class B:** The benefit is a 2% reduction.

**Typical New Class A Price ($/MWh)**




**New Class A:** The benefit is a reduction of 14% to 34%.

**Typical Class A (Industrial) Price ($/MWh)**




**Existing Class A:** The benefit of the rate mitigation initiatives is a 3% reduction.

**Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

# 1) Regulated Price Plan Eligible Consumers and Rural or Remote Rate Protection Update

# 8% Rebate to Regulated Price Plan Eligible Consumers

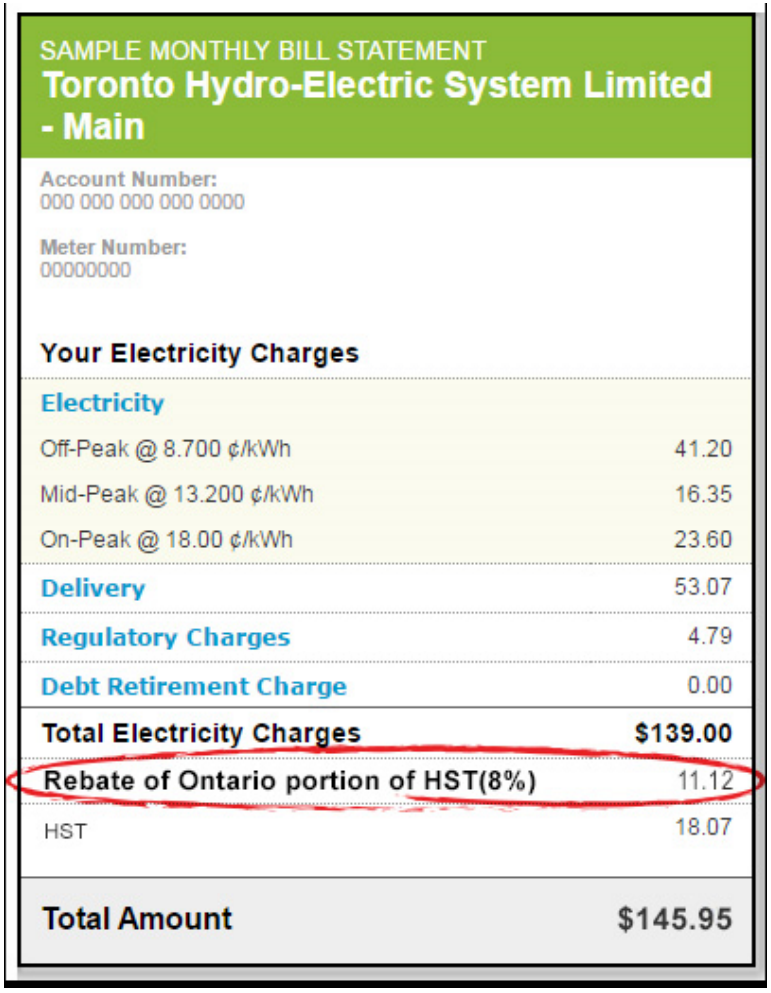
- Legislation/regulation will be introduced to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit.
  - This would be equivalent to the provincial portion of the HST*.

| **Eligible for the 8% rebate**<br>(< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate**<br>(> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>  − Coffee / snack retailer<br>  − Convenience store<br>  − Apparel store<br>  − Hair salon<br>  − Small insurance office | • Class A consumers<br>  − Manufacturer<br>  − Large grocery store<br>  − Mines<br>  − Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>  − Commercial offices (low rise)<br>  − Hotel<br>  − General warehousing |

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).

***Note:** An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

# Illustrative Electricity Bill Mock-Up



SAMPLE MONTHLY BILL STATEMENT

**Toronto Hydro-Electric System Limited - Main**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| **Rebate of Ontario portion of HST(8%)** | 11.12 |
| HST | 18.07 |
| **Total Amount** | **$145.95** |

**Note:** Final bill presentment pending submission to LRC.

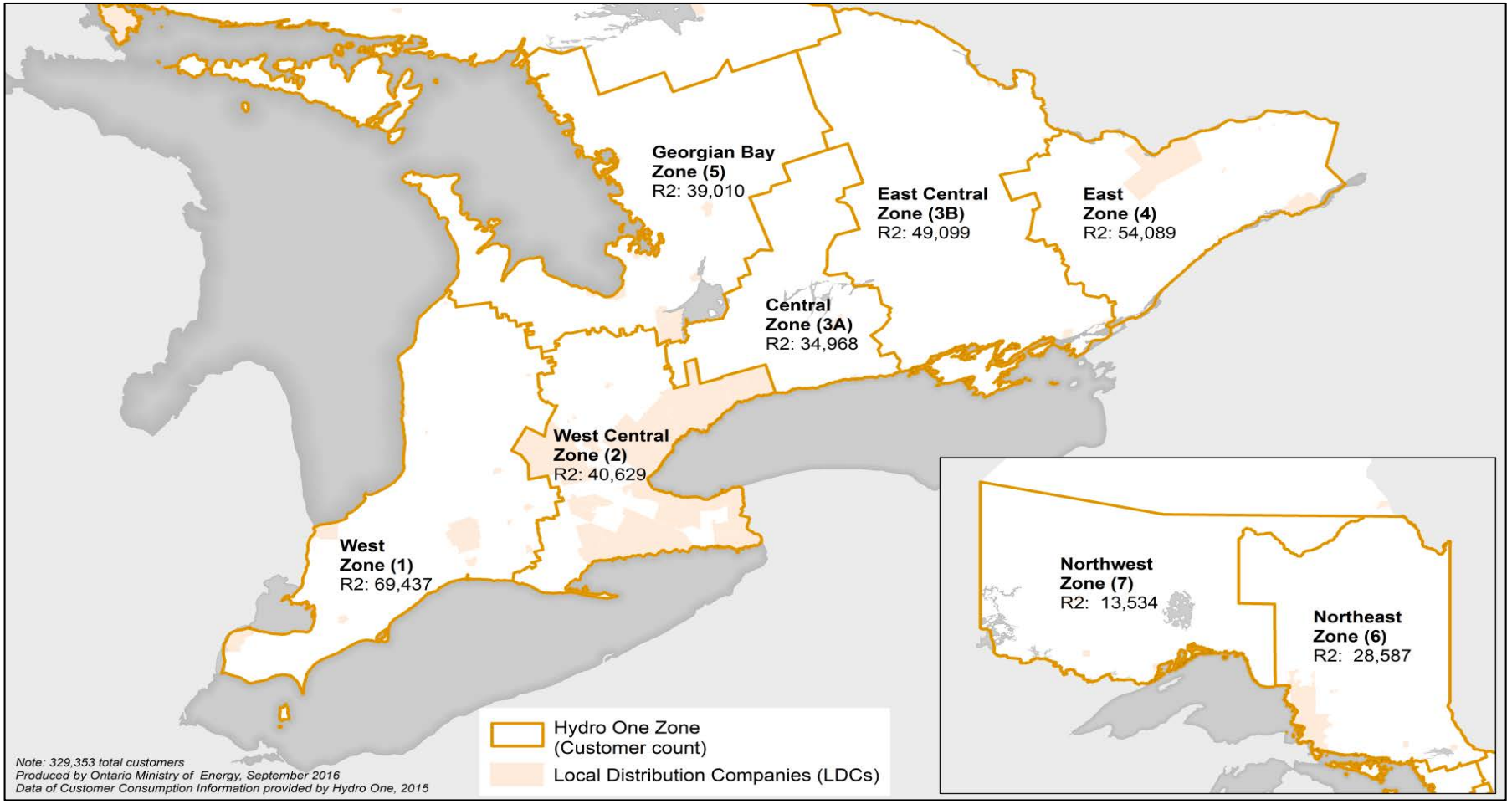
# Rural or Remote Rate Protection (RRRP) Update

- ENERGY is proposing to amend O.Reg 442/01 to provide an additional $110 million in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

- RRRP is a rate-based funded program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.
  - Today, RRRP is a $175-million program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
  - The majority of the program funding ($125.5 million) is provided to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a rebate of $31.50. The proposed update to the program would increase the benefit to $60/month.
  - RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

- An additional $110 million in program funding would see an increased benefit of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.
  - This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
  - The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the benefit remains constant.

# Rural or Remote Rate Protection (RRRP) Update – R2 Customers by Region



## 2) Expand Industrial Conservation Initiative and Redirect Cap and Trade Proceeds

# Industrial Conservation Initiative (ICI) Expansion

- ENERGY is proposing to amend O. Reg. 429/04 to expand ICI eligibility. The base setting period for the expanded program would begin in 2017, with the benefit seen by consumers starting in 2018.

- Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers).
  - Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

- ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:
  - Reduce electricity peak demand and electricity system costs by incenting more consumers to lower their electricity demand during peak periods;
  - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
  - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

# ICI Expansion – Projected Impact

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

- The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility
  - Short-term refers to the expected impact once ICI billing begins for new Class A consumers (one year after expanded eligibility takes place).
  - Long-term is the expected impact once new Class A consumers have had time to significantly change their behaviour and investment decisions in response to the ICI.

- The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating.

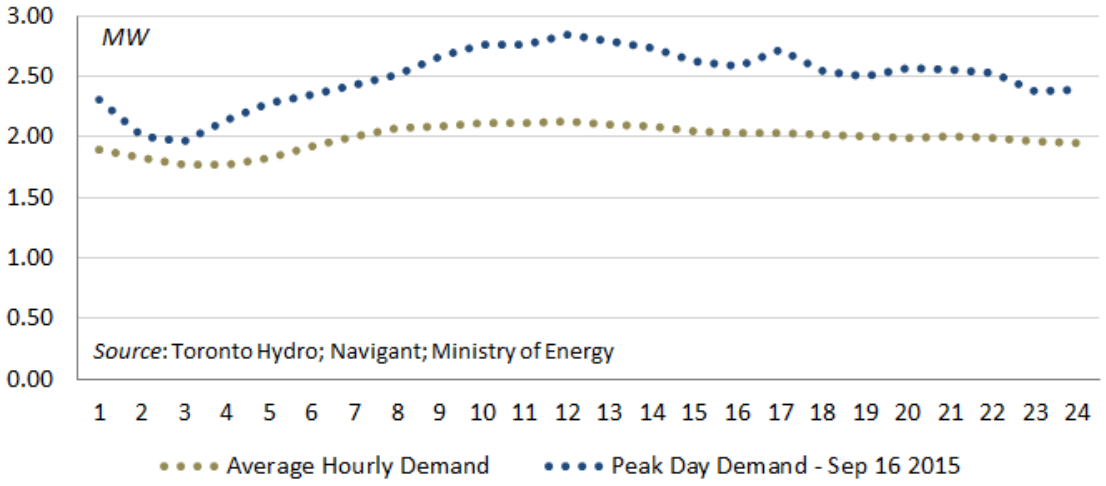
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.

# ICI Expansion – Illustrative Example of Newly Eligible Consumer

- Plastics manufacturers, such as Poly Five Plastics in Toronto, are among the consumers that would become eligible if the threshold was lowered.
- Such manufacturers fall under NAICS* code 32 and have relatively flat load profiles, reflecting around the clock production. This means they would be beneficiaries of ICI even with no change in consumption behaviour.
- Companies like Poly Five Plastics could expect to see greater savings if they are willing and able to respond to the higher prices during high demand hours.

**Typical Demand Profile, 2-3 MW Consumer**

*Manufacturer, NAICS Code 32 - Nov 2014 to Oct 2015*




**Illustrative Bill Savings, 2-3 MW Consumer**

| | *Status Quo* | *No Price Response* | *Short Term Response* | *Long Term Response* |
|---|---|---|---|---|
| | **Class B** | **Class A** | **Class A** | **Class A** |
| GA | 75.26 | 58.06 | 43.55 | 32.03 |
| Total bill | **126.28** | **109.09** | **94.58** | **83.06** |
| *Savings* | | *-14%* | *-25%* | *-34%* |

Source: Navigant; Ministry of Energy

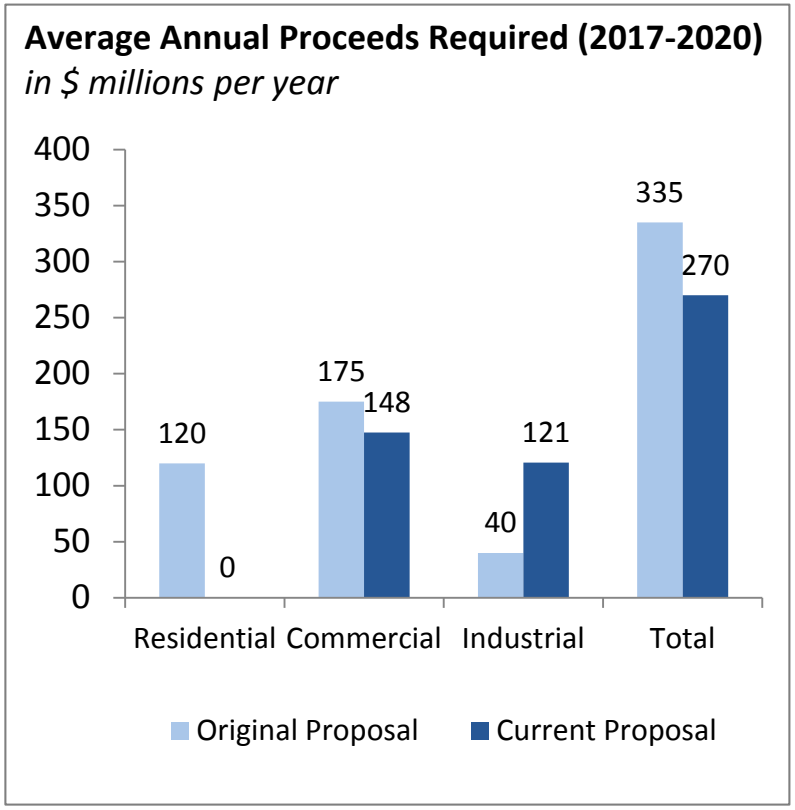
*** Note:** North American Industry Classification System (NAICS) is the standard used by statistical agencies in classifying business establishments.

# Redirect Cap and Trade Proceeds Recycling

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.
  - To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).

- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

- The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $0.24 billion over the first compliance period).




**Note:** The original proposal was to offset the impact of cap and trade via GA to the average industrial, and would provide a benefit to commercial and residential consumers. Current proposal would recycle proceeds volumetrically to industrial and commercial consumers.

# Redirect Cap and Trade Proceeds Recycling

- Redirecting cap and trade auction proceeds to lower the cost of electricity would offset consumers' contributions to non-emitting generation.

- Redirecting helps pay for committed investments/initiatives which reduce GHGs (e.g., non-emitting generation and conservation programs).
  - Due to the long-term nature (typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period. These costs will continue well beyond the timelines described in the CCAP.

- Redirecting cap and trade auction proceeds volumetrically to Class B (commercial) and Class A (industrial) consumers maintains the incentive to shift consumption from on-peak to off-peak hours.

- Using cap and trade auction proceeds to lower the cost of electricity would make it more competitive with traditionally cheaper fossil fuels.

- By using the proceeds to lower the cost of electricity, there is potential to incent fuel-switching away from fossil fuels toward much cleaner grid-connected electricity and support CCAP goals of electrification.

# Considerations

# Implementation

- On September 15, 2016, ENERGY is proposing to introduce the *Ontario Rebate for Electricity Consumers Act, 2016*.
  - If passed, the legislation would require a general regulation.
  - Amendments would also be required to various regulations to expand ICI and RRRP.

- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. ENERGY (possibly through Ontario Energy Board) will consult with LDCs to accurately assess these impacts once the program has been announced.
  - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - Timing concerns may be alleviated by allowing LDCs to provide retroactive rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.

- Detailed messaging on bills (for "low-volume" consumer bills ) could be implemented by amending O. Reg. 275/04 (made under the Ontario Energy Board Act, 1998).
  - The rebate would not be directly linked to HST.
  - With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.

- While the impact of cap and trade would be added to electricity bills as of January 2017, the offsetting effect of proceeds recycling may not occur immediately depending on implementation and potential alignment with the first auction expected in March 2017.
  - Should there be low demand for carbon allowances, auction proceeds would be less than the amount projected in the CCAP. This could mean a short-fall for proceeds recycling as proposed. However, natural gas utilities are expected to purchase allowances quarterly equal to their emissions.

- ENERGY will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

# Fiscal

- The Climate Change Action Plan (CCAP) committed about $1.3 billion over four years for electricity mitigation for industrial, commercial and residential consumers from GGRA proceeds.
  - The current rate mitigation proposal requires approximately 20% less in proceeds, saving approximately $0.24 billion relative to the CCAP commitment over the first compliance period (2017-2020).

- The 8% rebate is expected to cost about $1 billion per year (i.e., $4 billion from 2017-2020), representing an additional pressure on the fiscal plan.
  - Consideration could be given to allocating the $0.24 billion in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset.
  - If cap and trade auctions are under-subscribed, the $0.24 billion may not be available for reallocation to the fiscal plan.

- In the absence of any offset strategies, the full cost of the rate mitigation approach would add to the pressures and risks that need to be managed in order for the government to balance the budget in 2017-18 and stay balanced in 2018-19 and beyond.

# Legal

- In order to avoid characterization as an unconstitutional tax, a non-tax levy must have a sufficient nexus between those who pay and the regulatory scheme in the sense that those who pay have caused the need for or benefit from the regulatory scheme. Although the case law is not developed on the extent to which some regulated actors can be required to subsidize others, risk is reduced to the extent that any cross-subsidization serves true regulatory goals rather than revenue re-distribution goals.

- ~~HST~~ 8% Rebate of the pre-tax electricity costs (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):
  - Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

- ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):
  - Shifting costs to some consumers to lower rates for others without more carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

- RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):
  - Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

- Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):
  - To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

# Communications

- Public high-profile communications would coincide with introduction of legislation (September 2016).
  - Stakeholder outreach/technical briefings with LDCs, Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.
  - Echo public announcements in southwest and north; proactive provincial/local media.

- **Positioning:**
  - A fiscally prudent plan to benefit all ratepayers in a lasting, meaningful way.
  - Rural customers will receive the largest single rate relief ever.
  - Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.

- **Issues Considerations:**
  - Significant benefit for rural and remote residential customers; net gain for all residential customers.
  - More complex to communicate, but can be presented as a full plan that includes reforms and improvements to the system.
  - Consistent with cap-and-trade commitment that no business sector will be left worse off, though small businesses outside ICI will benefit the least.

Pending Update

Ontario

# Key Messages

- We are taking unprecedented action to help people in their everyday lives.
- Residential ratepayers and other RPP eligible ratepayers will receive an eight per cent rebate on their electricity bill, equivalent to the provincial portion of the HST.
- Modernizing the RRRP will benefit 330,000 families in rural Ontario with significant reductions to their electricity bills – $28 a month, in addition to the eight per cent rebate.
- Over a thousand more Ontario businesses will be eligible to benefit from the ICI program, helping them stay competitive and grow.
- These actions will assist over five million families, farms and small businesses across Ontario.
- These actions today join our many existing initiatives too help keep electricity in Ontario clean, reliable and affordable.

# Proposed Cabinet Minute

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

   i. Provide a rebate of 8% ~~on~~ of the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

   ii. Increase the total amount of rate protection available to R2 low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2004.

   iii. Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

   iv. Expand eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

# Proposed Cabinet Minute (cont'd)

2. ENERGY seek necessary TB/MBC approvals. **[TBD]**

3. ENERGY seek approvals for the proposed *Ontario Rebate for Electricity Consumers Act, 2016* which would, subject to the Legislature's approval of the Act, include the following elements:
   i. The rebate would be available starting January 1, 2017;
   ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
   iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers' electricity bills;
   iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way in which electricity vendors providing the rebate are to be reimbursed;
   v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;
   vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments; and
   vii. The legislation would include consequential amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*; and
   viii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date

# Proposed Cabinet Minute (cont'd)

4. ENERGY to report back to LRC and Cabinet for approval of any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments.

5. ENERGY notes the following amendments:

   i. Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the *Electricity Act, 1998* to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

   ii. Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density electricity customers and provide for a periodic adjustment mechanism.

6. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

7. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan

# Proposed Cabinet Minute (cont'd)

Cabinet approved version of the proposed *Ontario Rebate for Electricity Consumers Act, 2016* for introduction, subject to the following:

1. The Office of Legislative Counsel is authorized to prepare a French version and to make minor adjustments to the English version, for the purpose of ensuring consistency between the two versions and making other improvements or correcting mistakes discovered in the translation process.

# Appendix

# Illustrative Bill Impacts

| | Current Bill (after cost of new programs, before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (after cost of new programs, before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $140 /month | N/A | 8% ~~pre-tax~~ rebate: - $11 | $129 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $231 /month | RRRP: –$32 | 8% ~~pre-tax~~ rebate + Updated RRRP: - $45 | $186 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $102 /month | OESP: -$38 | 8% ~~pre-ta~~x rebate: - $8 | $94 /month |
| Small Business (Toronto – 403,200 kWh/month) | $150 /MWh | N/A | 8% ~~pre-tax~~ rebate: - $12/MWh | $138 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $204 /MWh | N/A | 8% ~~pre-ta~~x rebate: - $16/MWh | $188 /MWh |

***Note:** Some residential consumers ~~can~~ may also receive relief for sales tax on home energy of up to $224 for 2016 through the ~~tax credits based on income, age and geography (Northern Ontario Energy Credit and~~ Ontario Energy and Property Tax Credit~~)~~. People who live in the North may receive additional relief for home energy costs of up to $224 for 2016 through the Northern Ontario Energy Credit. These credits are delivered through the Ontario Trillium Benefit ~~Tax Credit and can be as high as $1,332 per year for a family~~.
** income of less than $28,000, family of 4.

Totals may not add due to rounding.

# Illustrative Bill Impacts (cont'd)

| | Current Rate | Current Rate mitigation initiatives* | Cost of new initiatives (RRRP and ICI) | New Rate Mitigation initiatives | Net Impact, | New Rate, |
|---|---|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | -$0.90 /MWh (-1%) | $107 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI + NIERP: -$69/MWh | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $68 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling + ICI: -$53.90/MWh | -$52 /MWh (-34%) | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh (-1%) | $151 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | $1.74 /MWh | Proceeds Recycling: -$2.60/MWh | -$0.90 /MWh | $153 /MWh |

**Notes:**

1) There is the potential for a consumer eligible for the Regulated Price Plan to opt-out of the Regulated Price Plan to opt-in to Class A and receive all three benefits (i.e., Regulated Price Plan, ICI and proceeds recycling).

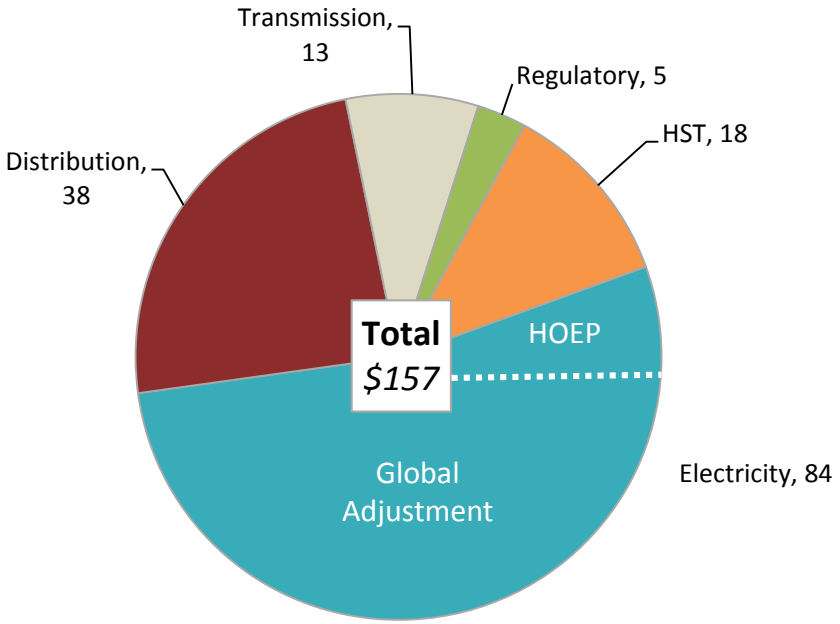
2) The impact of cap and trade would not be added to electricity bills until 2017 and varies per year over the course of the first compliance period. For illustrative purposes, the estimated average benefit of proceeds recycling is shown above.

# Residential Electricity Prices

- There are approximately 5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of May 1, 2016 (750 kWh/month)*




*Source*: OEB, Toronto Hydro

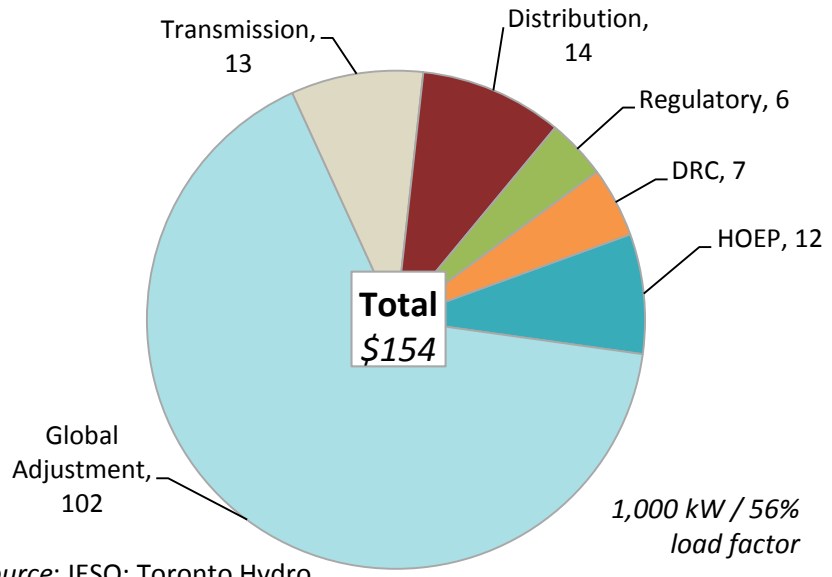
# Commercial Electricity Prices

- There are approximately 400,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.

- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




*Source*: IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.

- Targeted pricing programs are currently not available for Class B consumers.

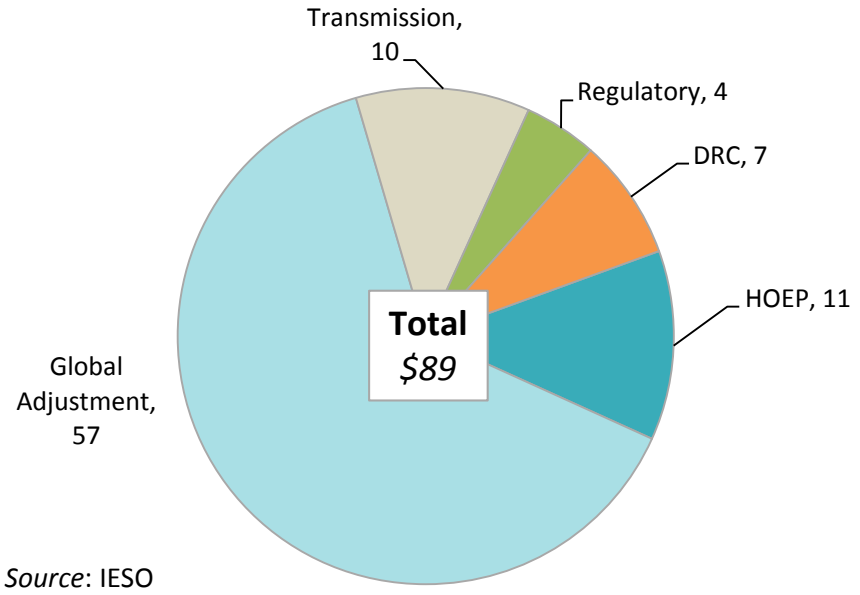
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*




*Source*: IESO

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $64/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Sales Tax Treatment in Other Jurisdictions

| Jurisdiction | Tax | Tax Paid by Business Consumers | Tax Paid by Residential Consumers | Comment |
|---|---|---|---|---|
| **British Columbia** | PST | Yes – 7% | No | • PST does not apply to residential energy, including electricity, acquired solely for residential use in a residential dwelling<br>• BC's carbon tax does not apply to electricity bills. |
| **Alberta** | None | N/A | N/A | • Alberta does not have a provincial sales tax. |
| **Saskatchewan** | PST | Yes – 5%<br>Except for electricity purchased to heat a building. | No | • PST does not apply to electricity purchased for use in a residential dwelling.<br>• PST does not apply to electricity purchased for use in heating a building that is heated solely by the electricity. |
| **Manitoba** | PST | Yes – 8%<br>Reduced rate of 1.6% applies to electricity used by a qualifying business to operate machinery | Yes – 8%<br>Electricity purchased for mixed use, 80% of which is home heating, has a reduced rate of 1.4%. Electricity solely to heat the purchaser's home is exempt. | • Winnipeg also applies a tax of 2.5% on residential and 5% on commercial. |
| **Ontario** | HST | Yes (less ITC (input tax credits)) | Yes – 8% | |
| **Quebec** | QST | Yes (less ITCs) | Yes – 9.975% | |
| **Nova Scotia** | HST | Yes (less ITCs) | Yes – 10% less provincially administered rebate. | • Rebate is equal to the provincial portion of the HST, and is administered similar to OCEB, but applies to many energy sources. |
| **New Brunswick** | HST | Yes (less ITCs) | Yes – 10% | |
| **Prince Edward Island** | HST | Yes (less ITCs) | Yes – 9% (10% beginning Oct 1, 2016) | |
| **Newfoundland and Labrador** | HST | Yes (less ITCs) | Yes – 10% | • Had a provincially administered Home Heating Rebate program until July 2015. |
| **Federal** | GST | Yes (less ITCs) | Yes – 5% | |

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Gavin He |
| **Subject:** | FW: MoE - OFA MOU for OREC |
| **Date:** | Wednesday, December 07, 2016 11:19:52 AM |
| **Attachments:** | MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal).docx<br>ATT00001.htm |

---

Do you mind taking a look? I want to move this to Ron this afternoon….

Thanks,

John.

---

**From:** Salman Qadir
**Sent:** Wednesday, December 07, 2016 8:20 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Fwd: MoE - OFA MOU for OREC

Hi John,

See Kens comment in the attached. He has a good point in the sense as to what sort of "are in agreement" looks like, especially since we seen that Energys PRRT didn't really mention the OFA as playing a role in the forecasting.

Salman

Begin forwarded message:

> **From:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
> **Date:** December 6, 2016 at 3:28:07 PM EST
> **To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
> **Cc:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>
> **Subject: RE: MoE - OFA MOU for OREC**
>
> Salman
>
> My comments on your notes to the draft MOU are attached. I am not in a position to comment on the description of the program structure in the draft MOU.
>
> Ken
>
> ---
>
> **From:** Salman Qadir
> **Sent:** Monday, December 05, 2016 10:46 AM
> **To:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>; Kenneth Russell <Kenneth.Russell@ofina.on.ca>
> **Cc:** John Kim <John.Kim@ofina.on.ca>

**Subject:** MoE - OFA MOU for OREC

Hi Caroline/Ken,

We have received a marked up version of the MOU between the OFA and MoE related to the OREC regulation. I did a quick blackline and there were actually other changes that were not highlighted and was advisable to check with you whether you see any issues/comments. The changes seem to revolve around the definitions of the program etc.

V3_clean = what we had last sent over
DAP Nov 25 = the latest markup we received
Track changes to v3_clean - quick blackline to show additional changes not shown in the markup received.

Hoping you can take a quick look.

Thank you,
Salman

**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the [*Ontario Rebate for Electricity Consumers Act, 2016*] – NTD, pending the legislature considering the Bill], including and the regulations thereunder (the "Act"), certain consumers will be entitled to receive a credit, known as the financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers (" or "OREC"), against", in respect of the cost of electricity consumed by them during the period commencing January 1, 2017;

2. Funds in respect of the Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to mostspecified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act, its regulations and the Market Rules;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the ORECReimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f)of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

1. **Payment Authorization**

   (i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

   (ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

   (iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

      i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

      ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

2. **Payment Process**

   ~~a) The Ministry is registered with the IESO as an IESO Program Participant.~~

   a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

   ~~c)~~b) The Ministry will take all necessary steps to provide the OFA with access to the ~~Ministry's~~ IESO ~~account and will arrange for~~Portal so that the OFA ~~to~~will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

   ~~d)~~c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

   ~~e)~~d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

   ~~f)~~e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

3. **Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ensure that the Ministry has full access to such records.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

e)

**Commented [SQ22]:** What would this access look like? Are they expecting us to set up up an external site with all of our files/modeling as well?

Just need to clarify expectations.

**Commented [KR3]:** I would not expect this ti be anything other than physical access. You may wish to clarify this point.

## 4. OREC Cost Forecasting

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to ~~complete and accurate~~ data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process .

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.

e) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement ~~of~~on the forecasts.

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**Commented [SQ24]:** The only change outlined in the latest version.

**Commented [KR5]:** Does the OFA agree that there should be a provision contemplating agreement on the forecasts? Would it be sufficient to simply reqire tht senior management be briefed?

## 5. Limited Role of the OFA

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

## 6. Review and Termination

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

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c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

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d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:
email:

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c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy
880 Bay Street, 5th Floor
Attention:
email:

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**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

**From:** John Kim
**To:** Shajee Kathirgamanathan
**Subject:** FW: OCEB Data
**Date:** Monday, December 05, 2016 10:04:29 PM
**Attachments:** OCEB Data.xlsx

I can't seem to find the files we used to do sensitivities on OREC.....would you know where the files are? Not this necessarily but remember doing a lot of the sensitivities for OREC

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, August 25, 2016 10:25 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** OCEB Data

Hi John,

Per Ron's request:

| OCEB Periods | Number of Months | Average Monthly Consumption (GWh) | Total Consumption in the Period (GWh) |
|---|---|---|---|
| OCEB Pre Cap (Jan 2011 - Aug 2012, inclusive)* | 20 | 5,412 | **108,243** |
| OCEB Post Cap (Sept 2012 - Dec 2015, inclusive) | 40 | 5,689 | **227,543** |

*Note: OCEB data not provided for the entire pre-cap period. Extrapolated 12 month OCEB data to the entire 20 month pre-cap period.

File attached, also found here:
S:\Users\CEF\Hydro 2016\OEFC\RbP\Mitigation\Calculations\OCEB Data.xlsx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Senior Advisor
Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

## Calculating Actual OCEB Consumption Data/Values

*Note: Utilized direct consumption values from the LDC Portal Data. Some adjustn*
*Source: LDC Portal Data from file: S:\Users\CEF\Hydro 2016\Electricity Prices\OC*

| Fiscal Year | Month | Portal (Cus |
|---|---|---|
| | Jan | |
| 2010/11 | Feb | |
| | Mar | |
| | Apr | |
| | May | |
| | Jun | |
| | Jul | |
| | Aug | |
| 2011/12 | Sep | 5,632 |
| | Oct | 4,870 |
| | Nov | 4,872 |
| | Dec | 4,555 |
| | Jan | 5,672 |
| | Feb | 6,386 |
| | Mar | 6,038 |
| | Apr | 4,865 |
| | May | 5,233 |
| | Jun | 4,684 |
| | Jul | 5,526 |
| | Aug | 6,613 |
| 2012/13 | Sep | 5,512 |
| | Oct | 5,516 |
| | Nov | 5,105 |
| | Dec | 4,909 |
| | Jan | 6,573 |
| | Feb | 5,975 |
| | Mar | 6,272 |
| | Apr | 5,847 |
| | May | 6,170 |
| | Jun | 4,995 |
| | Jul | 5,759 |
| | Aug | 6,165 |
| 2013/14 | Sep | 5,396 |
| | Oct | 5,457 |
| | Nov | 5,010 |
| | Dec | 5,244 |
| | Jan | 7,178 |
| | Feb | 6,308 |
| | Mar | 6,765 |
| | Apr | 5,918 |

| | | |
|---|---|---|
| 2014/15 | May | 5,475 |
| | June | 5,266 |
| | July | 5,478 |
| | Aug | 5,408 |
| | Sep | 5,612 |
| | Oct | 5,329 |
| | Nov | 4,922 |
| | Dec | 5,778 |
| | Jan | 6,607 |
| | Feb | 6,425 |
| | Mar | 7,081 |
| | Apr | 5,771 |
| 2015/16 | May | 4,859 |
| | June | 5,092 |
| | July | 5,374 |
| | Aug | 5,591 |
| | Sep | 5,883 |
| | Oct | 5,295 |
| | Nov | 4,963 |
| | Dec | 5,261 |

*nents were made to fix data quality issues. Lags and accrual vs actual consumptio*
*EB\Portal\OCEB Portal Database (up to 2016-04 April v1).xlsx*

| OCEB Portal Data | Consumption (GWh) |
|---|---|
| OCEB Pre-Cap, Sept 2011 - Aug 2012: | 64,946 |
| OCEB Cap Began, Sept 2012 - Dec 2015: | 227,543 |

| OCEB Periods | Number of Months |
|---|---|
| OCEB Pre Cap (Jan 2011 - Aug 2012, inclusive)* | 20 |
| OCEB Post Cap (Sept 2012 - Dec 2015, inclusive) | 40 |

*Note: OCEB data not provided for the entire pre-cap period. Extrapolated 12 mo

*n adjustments may remain.*

| Number of Months | Average Monthly Consumption (GWh) |
|---|---|
| 12 | 5,412 |
| 40 | 5,689 |

| Average Monthly Consumption (GWh) | Total Consumption in the Period (GWh) |
|---|---|
| 5,412 | **108,243** |
| 5,689 | **227,543** |

onth OCEB data to the entire 20 month pre-cap period.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Gavin He; Salman Qadir; Shajee Kathirgamanathan |
| **Subject:** | FW: OESP |
| **Date:** | Sunday, November 06, 2016 6:14:14 PM |
| **Attachments:** | OESP Placemat 2016-10-27.pptx<br>ATT00001.htm |

---

Fyi.

---

**From:** Ronald Kwan
**Sent:** Sunday, November 06, 2016 6:10 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** Fwd: OESP

Hi,

See attached.

Ron

Begin forwarded message:

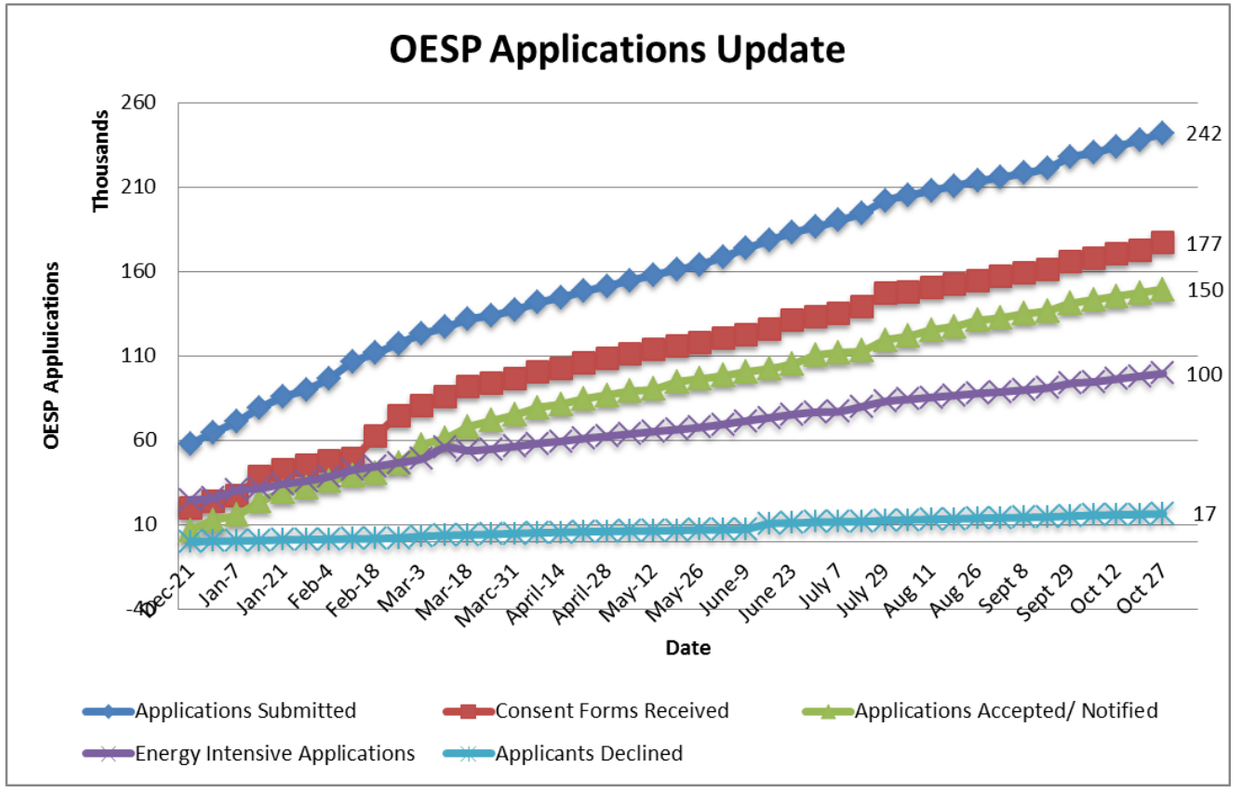
> **From:** "McLean, David (MOF)" <David.McLean@ontario.ca>
> **Date:** November 6, 2016 at 5:36:44 PM EST
> **To:** "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>
> **Subject: OESP**
>
> Hi Ron- here's the answer
>
> Sent from my BlackBerry 10 smartphone on the Rogers network.
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Sunday, November 6, 2016 5:34 PM
> To: McLean, David (MOF)
> Subject: OESP
>
> Hi David,
> The number to use is 150,000. The Hansard was incorrect and we also have updated numbers per attached.
> Keley

# Ontario Electricity Support Program – Updates and Trends

## OESP Applications Update

All program participation data figures increased this week, with Contact Centre calls now at 356K.
May 1st TOU price increase, and implementation of Wave II Communications, beginning in May, support continued increases in participation.

First Nations Applications: 8,249
Metis Applications: 2,614
First Nations and Metis Applications: 229




## Weekly Update / Outstanding Issues

- OEB Wave II Communications Strategy includes radio, Tim Horton's TV, transit, community newspapers, direct mail, digital (searches, web banners), and utility bill inserts to begin week of October 3.

**Meetings**

This Week (week of October 24)

- No meetings

**Outstanding Issues**

**The following proposed changes were approved by the OEB Chair, although have not yet been shared publicly, pending system changes, and a communications plan:**

**Medical Devices**

- For eligible OESP applicants that rely on an Oxygen Concentrator or Mechanical Ventilators (invasive and non-invasive), the customer qualifies for the higher level of assistance ($45 to $75).
- Based on research to date, the OEB Chair has approved the addition of in-home dialysis machines to qualify for this higher level of assistance .

**Inclusion of Inuit for enhanced sliding scale**

- First Nations and Métis customers currently qualify for the higher level of assistance ($45 to $75).
- Inuit eligibility for higher assistance was approved by the OEB Chair, as Aboriginal identity as defined by Stats Can includes Inuit.
- An additional 1,800 low-income households would be eligible for the OESP with this change.

# Ontario Electricity Support Program – Background

## OESP Program Details

The OESP provides an ongoing rate reduction directly on the bills of low-income electricity consumers starting January 1, 2016. The OESP credit amount for qualified customers is based on household income and household size. Application intake for the OESP opened on October 29, 2015. It is estimated that about 570,000 households could be eligible for the OESP.

Monthly credits range from $30 to $50. Customers with unique electricity needs, such as customers using electric heating, customers relying on certain electricity intensive medical devices, and First Nations or Métis customers, are eligible for a higher level of assistance, with credits that range from $45 to $75.

The OESP charge that is applied to all customer electricity bills, effective Jan. 1, 2016 is $0.0011/kWh. For a typical residential customer the OESP is estimated to cost $0.93/ month before tax.

The OESP is an application-based program. As a result, low-income electricity consumers have to apply to the program to determine if they are eligible. Ontarians whose electricity is included in their rent are not eligible for the program. For OESP recipients, credits are not applied retroactively to January 1, 2016; however all eligible customers will receive on-bill credits for the entire two year or five year (for recipients 65+ or receiving a disability benefit) eligibility period. Once an electricity customer applies for the OESP, it takes approximately 6-8 weeks to process the application.

## Roles and Responsibilities

**Ontario Energy Board (OEB) –** The OEB is responsible for overseeing the implementation of the OESP. It also oversees the CSP. The OEB also sets the OESP charge used to collect the money to fund the OESP, and will set any changes to the sliding scale credit amounts. As the regulator of the electricity sector in Ontario, the OEB oversees LDCs and USMPs, including overseeing their role in the OESP.

**Central Service Provider (CSP) –** ICF, the CSP, is responsible for primary intake for the OESP, by operating the OESP application website. ICF is also responsible for the design and management of the OESP system, operating the OESP contact centre, and providing the settlement function for intake agencies and ONWAA.

**LDCs and USMPs –** Utilities have a direct interface with the CSP, where it is responsible for verifying the account information of program applicants. It is also the responsibility of utilities to put the credit amount on the bills of eligible customers, promoting the program, and collecting the charge from the bills of all customers.

**Intake Agencies –** There are agencies across the province who are responsible for application intake for households who have not filed taxes in the last two years, whose situation has recently changed, or who generally need more assistance filling out their application.

**Ministry of Finance –** The Canada Revenue Agency, through the Ministry of Finance (MoF) is responsible for verifying the income of all household members who have filed a tax return in the past two years. MoF then combines the income of all household members to determine the total household income, and also the credit amount that eligible households receive. MoF has a direct interface with the CSP to confirm or is eligible or not for the OESP.

**Independent Electricity System Operator (IESO) –** The IESO is responsible for collecting the OESP charge from market participants, and providing the settlement function for those delivering and administering the OESP (e.g. MoF, LDCs and USMPs, ICF, etc.)

## How to apply for the OESP

### 1. Self-Serve Application

- An easy online application for the OESP is available at OntarioElectricitySupport.ca
- Paper applications are available for those who do not wish to submit an online application. These are available on the OESP website, or can be requested by calling the contact centre
- Applicants who have applied online or using a paper application must sign and mail a consent form to the central service provider, who will coordinate income verification with the Canada Revenue Agency

### 2. Assisted Application

- There are intake agencies across the province that applicants can visit if they need assistance filling out the application.
- Intake agencies can manually verify the applicants' household income
- To find an intake agency, applicants can either access a list on the OESP application website, or call the contact centre

### 3. First Nation Application

- There is a separate delivery stream of the OESP for First Nation applicants
- While First Nation applicants can apply using the online or paper application, the Ontario Native Welfare Administrators Association agreed to do application intake for First Nations
- Six Nations provided intake for its community for the first three months as well

## OESP Credit Amounts

**Table 1: Sliding Scale Fixed Credits**

| Sliding Scale #1 | | Household Size | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 1 Person | 2 Persons | 3 Persons | 4 Persons | 5 Persons | 6 Persons | 7 or More Persons |
| Income Bracket | < $28,000 | $30 | $30 | $34 | $38 | $42 | $50 | $50 |
| | $28,001 - $39,000 | - | - | $30 | $34 | $38 | $42 | $50 |
| | $39,001 - $48,000 | - | - | - | - | $30 | $34 | $38 |
| | $48,000 - $52,000 | - | - | - | - | - | - | $30 |

**Table 2: Second Sliding Scale Fixed Credits**

| Sliding Scale #2 | | Household Size | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 1 Person | 2 Persons | 3 Persons | 4 Persons | 5 Persons | 6 Persons | 7 or More Persons |
| Income Bracket | < $28,000 | $45 | $45 | $50 | $55 | $60 | $75 | $75 |
| | $28,001 - $39,000 | - | - | $45 | $50 | $55 | $60 | $75 |
| | $39,001 - $48,000 | - | - | - | - | $45 | $50 | $55 |
| | $48,000 - $52,000 | - | - | - | - | - | - | $45 |

**From:** Darren Scanlan
**To:** Shajee Kathirgamanathan; Emily Kerr
**Cc:** John Kim
**Subject:** FW: OESP
**Date:** Tuesday, January 03, 2017 9:07:14 AM

---

Hi Shajee (in John's absence) and Emily,

Please see below. I believe that both of your branches have been involved in the OESP in some capacity and in the recent discussions on potential rate mitigation initiatives. Would one of you be in a position to get back to Michael Beare (in Brett's absence)? Happy to reply on the proper point of contact if you'd prefer.

Thanks,
Darren

---

**From:** Smith, Brett (ENERGY) [mailto:Brett.Smith@ontario.ca]
**Sent:** Thursday, December 29, 2016 4:11 PM
**To:** Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Michael Beare (ENERGY) <Michael.Beare@ontario.ca>; Zade, Ryan (ENERGY) <Ryan.Zade@ontario.ca>
**Subject:** OESP

Darren,

Your name was provided by a colleague at the Ministry of Finance as a potential point of contact regarding some potential changes to an electricity rebate program.

You may know that the PO is looking at ways to shift costs out of the electricity rate base. I would like to touch base with the OFA on one option in particular – the Ontario Electricity Support Program.

We have begun a discussion with MCSS to better understand if there are opportunities to align with existing low-income support programs. However, it's important to also consider other tax-based methods to deliver this program (e.g. Ontario Trillium Benefit).

I will be away next week, but hope there's a chance to connect early in the week of January 9th. Michael Beare is the file lead and will be available to answer questions prior to meeting.

Regards,
Brett

**Brett Smith**
Manager, Distribution and Grid Modernization

Strategic, Network and Agency Policy Division
Ministry of Energy

77 Grenville Street, 6th Floor
Toronto, ON  M7A 2C1
Work: 416-327-7178
Cell: 647-629-2681
brett.smith@ontario.ca
LinkedIn Profile[ca.linkedin.com]

**From:** Petsche, Nadine (TBS)
**To:** John Kim
**Subject:** FW: OPA Accounting Treatment for Regulatory Based Assets and Liabilities
**Date:** Monday, January 23, 2017 8:38:10 AM
**Attachments:** OPA Accounting Treatment for Regulatory Based Assets and Liabilities.docx

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**Memorandum**

**To: File**
**Date:** March 22, 2012
**Re**: Accounting Treatment for OPA Charges, Other Financial Assets and Other Financial Liabilities

---

1. **Charges – Overview**

"Charges" are amounts incurred by the OPA to recover amounts paid or payable by the OPA to another person with respect to electricity.

The OPA has a legislated responsibility to record the transactions flowing through the global adjustment mechanism. The global adjustment and settlement accounts have been created for this purpose. The global adjustment and settlement accounts record charges that flow between the OPA and the IESO. The account flows include the amounts paid and received for: Demand Response 2 (DR2), Demand Response 3 (DR3), non-utility generation (NUG), regulated nuclear generation balancing amount (nuclear) and regulated hydro electric generation balancing amount (hydro). These accounts are settled simultaneously by the IESO. The account also records the amounts paid and received for OPA contracts (standard offer, generation and conservation/demand management, Feed-In Tariff and hydroelectric contract initiatives) which the OPA settles on a monthly basis with the IESO.

The DR3, NUG, nuclear, hydro, and OPA contract balances are offset in the global adjustment account eliminating the need for a flow of funds between the IESO and the OPA. The OPA records the effect of the transactions to meet its legislated responsibility. The OPA's generation contracts are estimated each month and settled on the actual amount owing in the following month. This gives rise to timing differences. The settlement dates can cross calendar months, creating a monthly balance in the account. Differences created from timing or settlement dates are reclassified into accounts receivable at month end.

The OPA is entitled under legislation to recover eligible charge amounts, as per section 25.2 (3) of the Electricity Act:
*(3) For greater certainty, the OPA may, subject to the regulations, establish and impose charges to recover from consumers its costs and payments under procurement contracts.*

### 1.1 Accounting Treatment for OPA Contract and Conservation Charges

Charges are currently recorded as accounts receivable from the IESO in the OPA's financial statements, as they represent current assets that are recoverable within 1 year. Specifically, charges represent financial assets, as per **PS.S.1000.40** below and are only recorded as receivable once they have been incurred by the OPA. Under legislation, the OPA has a contractual right to receive cash from another party (in this case the IESO via the Global

Adjustment Mechanism) with respect to amounts incurred for eligible charge amounts. This concept is consistent with criteria (c) of the definition below:

*.**40*** *A financial asset is any asset that is:*

*(a) cash;*
*(b) a realizable asset that is convertible to cash;*
*(c) a contractual right to receive cash or another financial asset from another party;*
*(d) a contractual right to exchange financial instruments with another party under conditions that are potentially favourable to the government;*
*(e) an equity instrument of another entity;*
*(f) an investment in a government business enterprise or government business partnership;*
*(g) a financial claim on an outside organization or individual; or*
*(h) an inventory or item for sale that meets the criteria in FINANCIAL STATEMENT PRESENTATION, paragraph* **Error! Hyperlink reference not valid.***. [Former paragraph* **Error! Hyperlink reference not valid.** *retained in Archived Pronouncements]*

**Amounts Payable**

Amounts payable arise for OPA contract charges when the value of HOEP exceeds the value of the suppliers' contract price. In this case, the charges would become an OPA liability to the market in the form of charges payable to the IESO (which, in turn, must be returned to the market via the Global Adjustment). Such charges payable to the market meet the criteria for recognition as a liability, as outlined below:

**PS.3200.03**

*Liabilities should be recognized in the financial statements when:*

*(a) there is an appropriate basis of measurement; and*

*(b) a reasonable estimate can be made of the amount involved.* [SEPT. 2004]

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## 2. Other financial assets and liabilities

Other financial assets and liabilities are made up of retailer settlement amounts, government procurements and regulated price plan variance amounts.

### 2.1 Other Financial Assets - Retailer Settlements and Government Procurements - Overview

Legislative provisions ensure that electricity retailers are made whole by the OPA for contracts with low-volume and designated consumers that were entered into before prices were frozen by legislation effective November 11, 2002. The OPA and retailers settling any differences between the HOEP and the contract price for each contract meet these provisions. When HOEP is greater than the contract price, the OPA receives payments from the retailers and records a financial liability. When HOEP is less than the contract price, the OPA pays the retailer and records a financial asset. The OPA tracks these variances in the retailer contract settlement deferral accounts. The retailer contract discount settlement account captures the funds related to the retailer incentives existing at the creation of the RPP. The retailer incentives captured are

held in a separate deferral account for settlement concurrent with the retailer settlement deferral accounts.

The OPA began amortizing these costs over the period of 2009-2011 to reflect the recovery of these amounts through its annual usage rate approved by the OEB. As at December 31, 2011, the balances of the retailer settlements are nil and have been recovered in full.

The OPA reimburses the government for costs incurred for electricity procurement and records the costs as a financial asset. Any subsequent balances are included in future revenue requirement submissions. The OPA began amortizing the government procurement costs in 2009 on a straight-line basis, and as at December 31, 2011, the balance to recover for these costs is nil.

### 2.2 Accounting Treatment – Retailer Settlements and Government Procurements

Under PSAS, retailer settlements and government procurements are treated as other financial assets in the OPA's financial statements. As they are normally not recovered within one year, they are categorized as non-current assets. As per **PS.S.1000**, retailer settlement and government procurement balances qualify as financial assets as per criteria (c) below:

> *.**40** A financial asset is any asset that is:*
>
> *(i) cash;*
> *(j) a realizable asset that is convertible to cash;*
> *(k) a contractual right to receive cash or another financial asset from another party;*
> *(l) a contractual right to exchange financial instruments with another party under conditions that are potentially favourable to the government;*
> *(m) an equity instrument of another entity;*
> *(n) an investment in a government business enterprise or government business partnership;*
> *(o) a financial claim on an outside organization or individual; or*
> *(p) an inventory or item for sale that meets the criteria in FINANCIAL STATEMENT PRESENTATION, paragraph* **Error! Hyperlink reference not valid.***. [Former paragraph* **Error! Hyperlink reference not valid.** *retained in Archived Pronouncements]*

The OPA is required to carry the balance related to retailer settlement variances between the HOEP and contract price, as per legislation. The OPA is also entitled to recover these balances through legislative provisions, which represent a contractual right to receive cash or another financial asset from another party, as per criteria (c) above. Where retailer settlements fall into a liability balance, they would be categorized as other financial liabilities, as they would meet the criteria for recognition of a liability, as outlined in section 3.1 below.

## 3. Other Financial Liabilities – Regulated Price Plan (RPP) Variance - Overview

While prices for RPP consumers are set every six months by the OEB based upon a forecast of the cost of power over the next year, it is likely that there will be a difference between the actual and forecast cost of supplying electricity to all RPP consumers. When the hourly Ontario

energy price (HOEP) is greater than the RPP, the OPA pays the excess amount and records a financial asset as the electricity market funds paid are receivable from the market. When the HOEP is less than the RPP, the OPA receives the difference and records a financial liability as the funds received will be returned to the market. The OPA tracks this variance in the RPP variance account.

### 3.1 Accounting Treatment – RPP

RPP variance amounts are recorded by the OPA as other financial liabilities in the financial statements, as they meet the liability criteria outlined below:

**PS. S.1000**

***.45*** *Liabilities have three essential characteristics:*

*(a) they embody a duty or responsibility to others, leaving a government little or no discretion to avoid settlement of the obligation;*

*(b) the duty or responsibility to others entails settlement by future transfer or use of assets, provision of goods or services, or other form of economic settlement at a specified or determinable date, on occurrence of a specified event, or on demand; and*

*(c) the transactions or events obligating the government have already occurred.*

Under legislation, the OPA is required to fund RPP variances where the HOEP is less than the RPP, which implies a duty or responsibility that the OPA has little to no discretion to avoid, as per criteria (a). For instances where the HOEP exceeds the RPP rate, the OPA would record a financial asset, as this circumstance would meet the criterion of **PS.S.1000.40** (financial asset), outlined in section 2.2 above.

**External Auditor Approval of Accounting Treatment**

The accounting treatment of OPA charges, retailer settlement, government procurement and RPP balances has been consistent since the OPA's inception and is approved by the OPA's external auditors on an annual basis. Based on governing legislation, the external auditors agree that these balances represent true assets and liabilities to the OPA. The signed auditors' report, along with the OPA's audited annual financial statements, can be found on the OPA website in the MD&A section of the OPA annual report.

**From:** Gavin He
**To:** John Kim; Francisco Chinchon; Emily Kerr
**Subject:** FW: Potential Rate Mitigation
**Date:** Wednesday, December 07, 2016 7:14:11 PM
**Attachments:** Price Mitigation Proposals_Dec7-16_v13 Clean.pptx

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Hi all,

FYI - There will a MPC meeting tomorrow to discuss the Price Mitigation and the material is attached.

Regards,
Gavin He

-----Original Message-----
From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
Sent: Wednesday, December 07, 2016 7:10 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Elizabeth Mendes (MOF) <Elizabeth.Mendes@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
Subject: Fw: Potential Rate Mitigation

FYI - tomorrow's deck.

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: McLean, David (MOF) <David.McLean@ontario.ca>
Sent: Wednesday, December 7, 2016 6:56 PM
To: Pearce, Christopher (MOF); Young, Gwendolynne (MOF); Ize-Dukuze, Marilyn (MOF); Clarke-Darshanand, Jamille (MOF)
Subject: Fw: Potential Rate Mitigation

For MPC tomorrow

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
Sent: Wednesday, December 7, 2016 6:55 PM
To: Kwamena, Boafoa (CAB); McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB)
Subject: FW: Potential Rate Mitigation

FYI

From: Imbrogno, Serge (ENERGY)
Sent: December-07-16 6:51 PM
To: Orsini, Steve (CAB); Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: RE: Potential Rate Mitigation

HI,
Here’s the latest version of the deck. We tried to incorporate comments from MOF / TBS. This version is with my MO for review but it will likely be the version we will use at Major Projects tomorrow. Keley can share with your EAs.
Serge

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate before tax, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms. The rebate will result in a savings of about $11/month for a typical residential consumer;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program. In combination with the 8% rebate, the updated RRRP program will result in a savings of about $45/month for a typical rural customer;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit. ICI provides participating consumers with an electricity bill savings of up to one-third;
  - Suspending the second round of the Large Renewable Procurement (LRP II) and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in costs; and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.

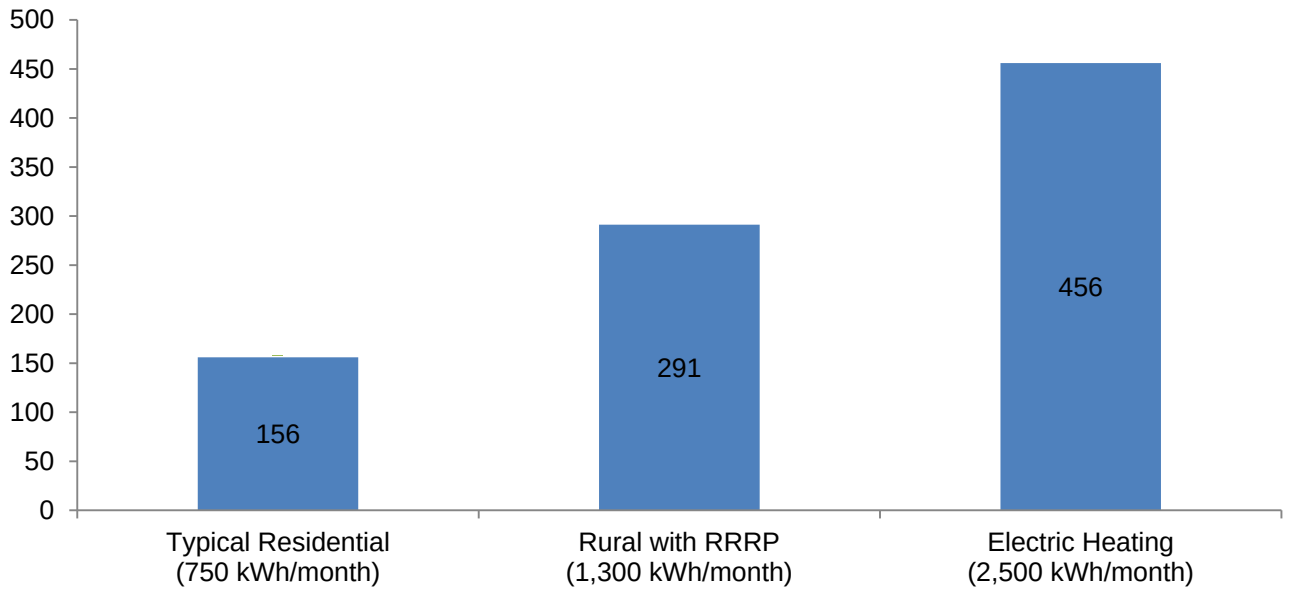
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecasts ($159 / 750kWh)

**Residential Electricity Bills, After Tax**
*in $/month*

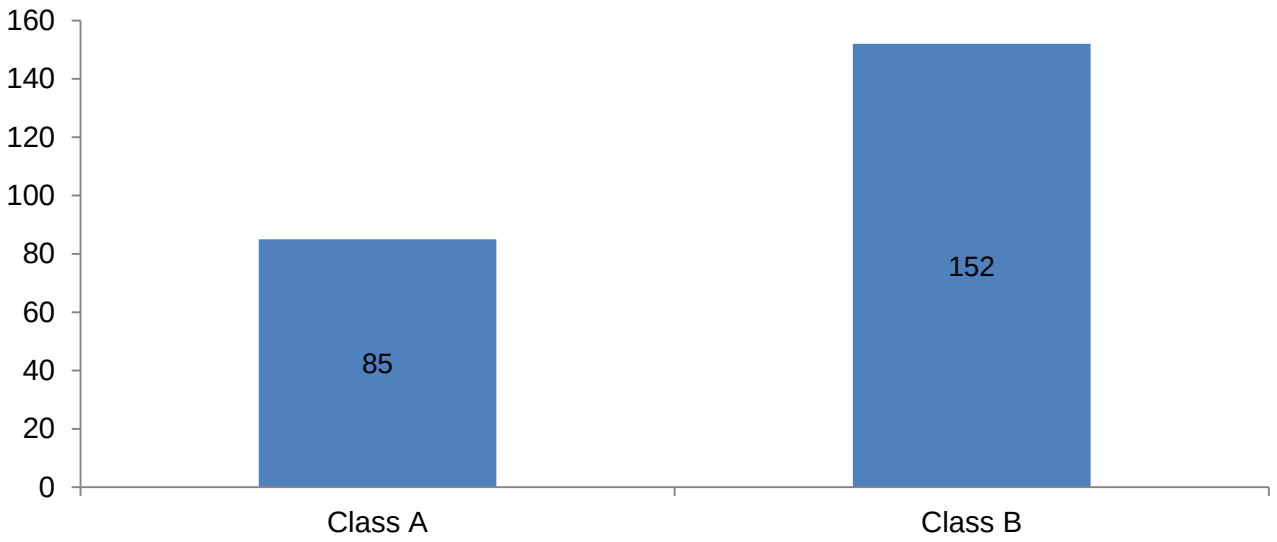



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how electricity sector programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | - | 1.00 | 1.03 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies*** | TBD | TBD | TBD | TBD | TBD | TBD | Medium-to-Long-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs). ***Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | - | 1.34 | 1.38 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Medium-to-Long-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- A number of the social assistance programs such as the OESP, RRRP and First Nations rates can be funded through the tax-base. **Note:** Table on slide 13 shows some preliminary costs based on some assumptions which could mean up to $416 million in costs to taxpayers in 2017 and up to $465 million in costs in 2020

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of about $450 million annually on the Province until April 2018 (i.e., The current planned date for removing DRC from all electricity bills) and zero thereafter.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $30 million annual fiscal pressure in 2017 to the province based on new borrowing and increasing to about $70 million by 2021.

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.

# Proposed Taxpayer Funded Electricity Price Mitigation

- As shown in the Ministry of Finance table, if various measures proposed in this deck were to be accepted, taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **OCEB** | - | - | - | - | - |
| **OREC** | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| **Ending DRC[2]** | 330 | 330 | -- | -- | -- |
| **NIERP** | 120 | 120 | 120 | 120 | 120 |
| **NOEC** | 25 | 25 | 25 | 25 | 25 |
| **OEPTC[3]** | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| **1. OESP** | | 106 | 119 | 127 | 132 |
| **2. RRRP** | | 292 | 300 | 306 | 315 |
| **3. First Nations Delivery Rate** | | 18 | 18 | 18 | 18 |
| **4. Fund ICI through Tax Base** | | 900+100 | 900+100 | 900+ | 900+ |
| **5. Departure Tax** | | TBD | TBD | TBD | TBD |
| **6. Conservation Amortisation** | TBD | TBD | TBD | TBD | TBD |
| **7. DRC Ended for Class B** | 110 | 450 | -- | -- | -- |
| **8. Other** | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,305** | **3,901** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be about $150 million. The bulk of the costs (i.e., capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESB) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- By 2020, funding the OESP, RRRP and the First Nation rate reduction through a regulatory charge is estimated to cost approximately $2.45 for a typical residential customer using 750 kWh per month. Transitioning that funding to the tax-base would reduce a typical residential customer bill by that same amount. As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base. To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits).

- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.

- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.

- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. The estimated fiscal impacts of funding the RRRP through the tax base do not include these costs, and future consideration of how these costs could be supported by the tax base will have to be undertaken.

- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs) and remains steady at this participation level in 2021 and 2022, with no increase in credit amounts.

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

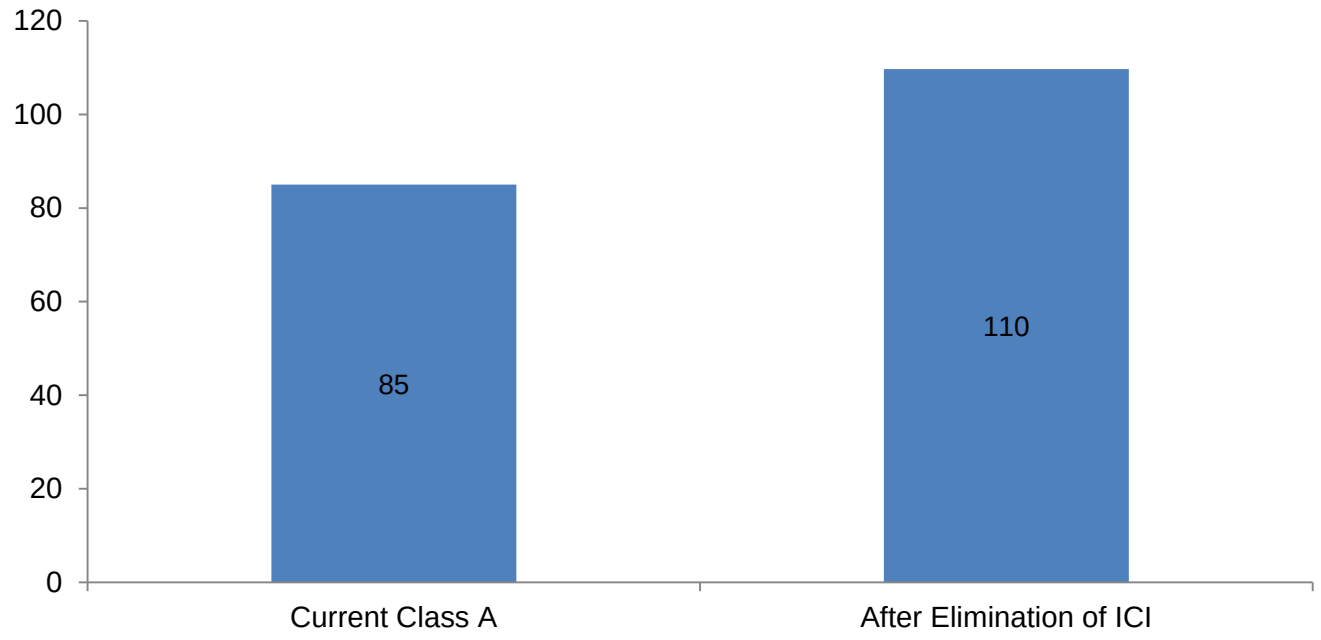
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

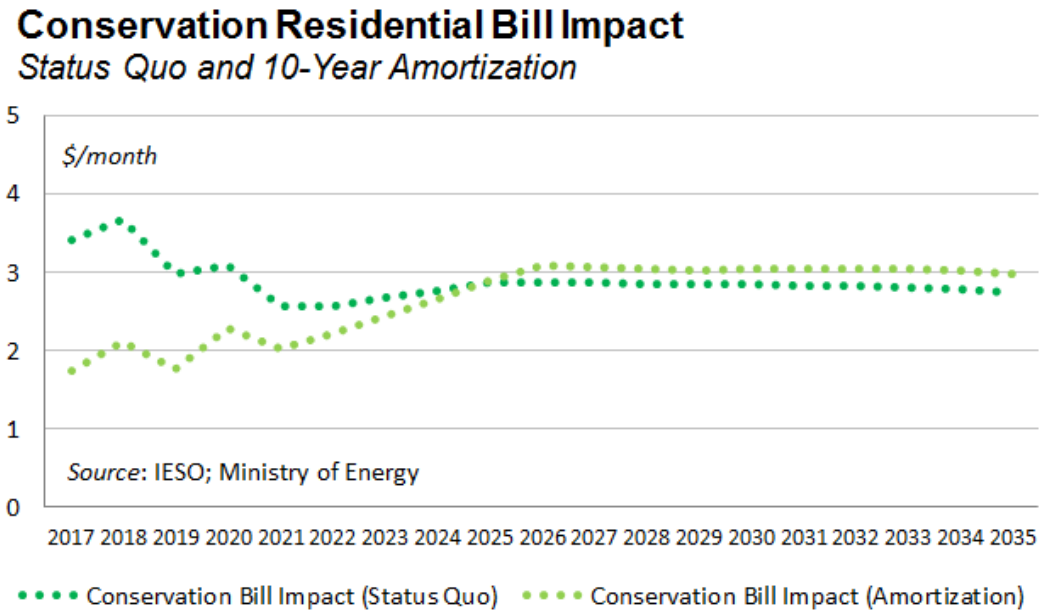
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro- November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $30 million annual fiscal pressure in 2017 to the province based on new borrowing and increasing to about $70 million by 2021, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.
- If the Province were to transfer $2.6 billion in economic benefits to the rate base over 10 years suggest the following impacts (assuming 140TWh per year):
  - Residential Ratepayer Impact (if spread over 10 years): up to $1.39 per month on a typical bill; and
  - Industrial Ratepayer Impact (if spread over 10 years): up to $1.86 / MWh

**Considerations**

- Cost savings to ratepayers and associated fiscal impacts would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- The departure tax was effectively a true-up for lower PILs payments from Hydro One in previous years – it was not a one-time windfall for the Province. In other words, it ensures that Hydro One paid all its tax obligations under the PILs regime before moving into the normal corporate tax regime.
- The related ~$2.4 billion fiscal benefit to the Province (from the deferred tax benefit) has already been credited to the Trillium Trust to be used to build infrastructure under Moving Ontario Forward.
- Repurposing funds paid to OEFC may have an impact on the defeasance of electricity stranded debt.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

*[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]*

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

# Electricity Consumer Classes

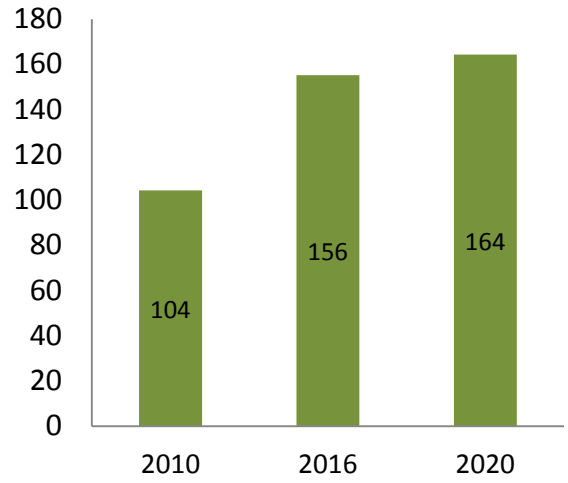
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

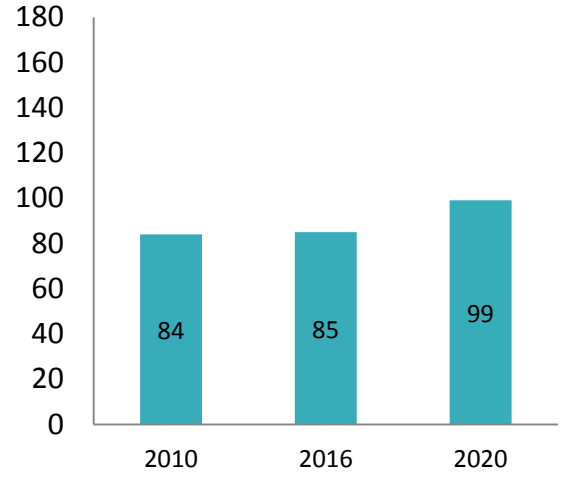
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# 2015 Indicative Industrial Electricity Prices – Jurisdictional Comparison

| 2015 Indicative Industrial Electricity Prices (Canadian ¢/kWh) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jurisdiction | Cost | | Jurisdiction | Cost | | Jurisdiction | Cost | | Jurisdiction | Cost |
| 1 | Manitoba | 4.67 | 17 | Arkansas | 7.49 | 33 | Newfoundland | 8.65 | 49 | Nova Scotia | 10.02 |
| 2 | Quebec | 5.17 | 18 | Tennessee | 7.53 | **34** | **U.S. Average** | **8.71** | 50 | North Dakota | 10.75 |
| 3 | Washington | 5.64 | 19 | Alabama | 7.58 | 35 | New York | 8.72 | 51 | Florida | 10.79 |
| 4 | Alberta | 5.87 | 20 | South Carolina | 7.68 | 36 | Indiana | 8.74 | 52 | Delaware | 10.96 |
| 5 | Ontario - North | 6.35 | 21 | Utah | 7.70 | 37 | Ohio | 8.75 | 53 | Maryland | 11.86 |
| 6 | Oklahoma | 6.64 | 22 | Oregon | 7.72 | 38 | Wyoming | 8.87 | 54 | Maine | 12.64 |
| 7 | Montana | 6.68 | 23 | West Virginia | 7.80 | 39 | Minnesota | 8.89 | 55 | Vermont | 13.14 |
| 8 | Kentucky | 6.80 | 24 | Saskatchewan | 7.81 | 40 | Prince Edward Island | 8.90 | 56 | California | 13.85 |
| 9 | British Columbia | 7.04 | 25 | Nevada | 7.83 | 41 | Colorado | 9.05 | 57 | New Jersey | 14.44 |
| 10 | Iowa | 7.06 | 26 | Arizona | 8.00 | 42 | Michigan | 9.13 | 58 | New Hampshire | 17.17 |
| 11 | Louisiana | 7.06 | 27 | Idaho | 8.05 | 43 | Virginia | 9.23 | 59 | Massachusetts | 17.56 |
| **12** | **Canadian Average** | **7.31** | 28 | North Carolina | 8.09 | 44 | South Dakota | 9.31 | 60 | Connecticut | 17.58 |
| 13 | Missouri | 7.32 | 29 | New Mexico | 8.09 | 45 | Kansas | 9.54 | 61 | Alaska | 18.85 |
| 14 | Georgia | 7.35 | 30 | Illinois | 8.24 | 46 | Nebraska | 9.56 | 62 | Rhode Island | 19.97 |
| 15 | Texas | 7.37 | 31 | Ontario - South | 8.35 | 47 | Pennsylvania | 9.59 | 63 | Hawaii | 31.10 |
| 16 | New Brunswick | 7.48 | 32 | Mississippi | 8.41 | 48 | Wisconsin | 9.87 | | | |

Note: Estimates may differ from actual costs to a consumer based on location, connection, and operational characteristics. Prices exclude taxes and, in other jurisdictions, participation in any applicable jurisdictional benefit programs.

The Ontario industrial price is based on the average all-in price for year-to-date May 2015, and includes the Hourly Ontario Energy Price (arithmetic average), Class A Global Adjustment, delivery, wholesale market service charges and the Debt Retirement Charge. The 2 cent per kilowatt hour difference between northern Ontario and southern Ontario reflects the Northern Industrial Electricity Rate Program rebate.

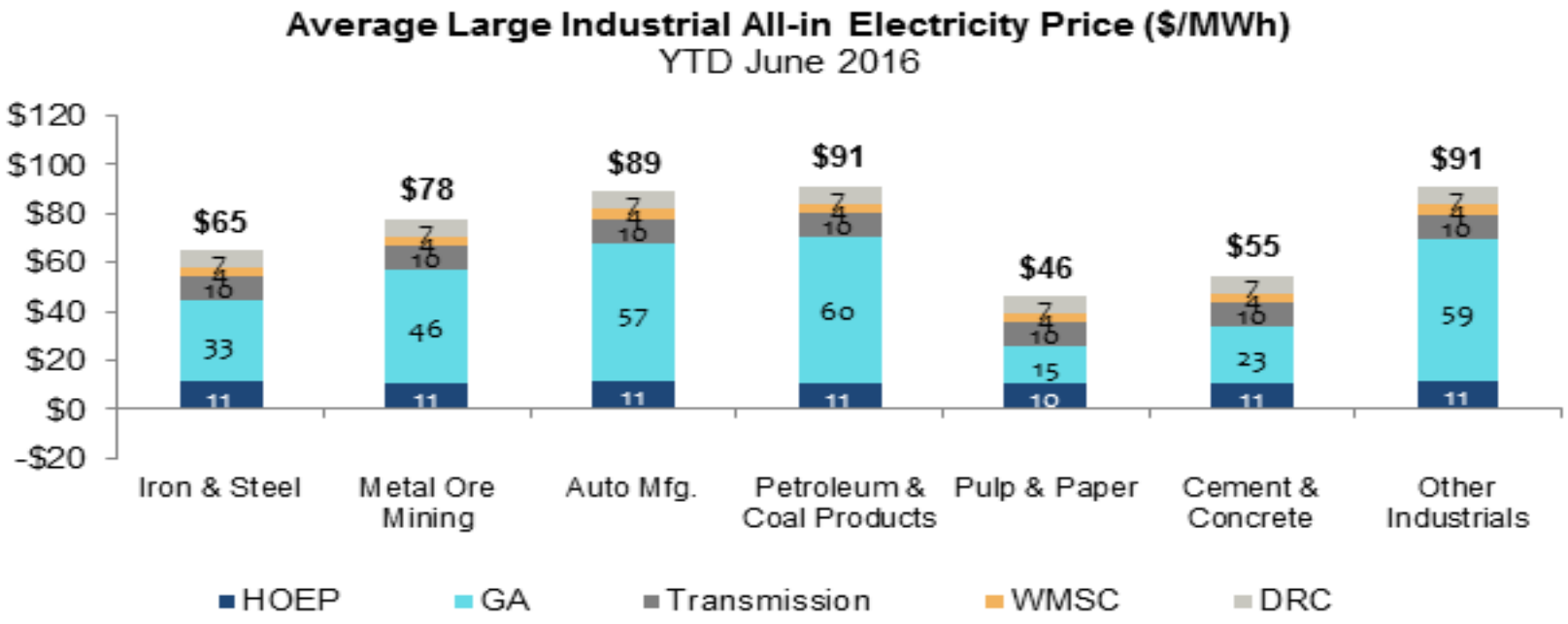
All other Canadian prices (except Ontario) are from the Hydro Quebec Rate Comparison for rates effective April 1, 2015 for select local distribution companies servicing specific cities. Where Hydro Quebec reports prices for two cities in a province (e.g., Calgary and Edmonton), an average of the two is used; in provinces where only one city is reported (e.g., Vancouver in BC, Montreal in QC), that one price is used to represent the province for indicative comparison purposes. In the Hydro Quebec Rate Comparison, a large consumer reflects 5 MW with monthly consumption of 3,060 MWh.

American jurisdictions reflect year-to-date May 2015 data from the US Energy Information Administration's survey of approximately 500 of the largest electric utilities. The price reflects the average revenue reported by the electric utility from electricity sold to the industrial sector. The value represents an estimated average retail price, but does not necessarily reflect the price charged to an individual consumer. Prices are converted at an exchange rate of 1 USD = 1.30 CAD, an approximation of the average for 2015 (1 USD = 1.2787 CAD).

# Indicative Electricity Prices Across Industrial Sectors

- The chart below shows estimated average all-in electricity prices by sector.

- Prices vary across sectors mainly due to differences in the level of Global Adjustment (GA) paid, which in turn reflects both the ability and willingness of companies to lower usage in the highest demand hours.



# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Current Status on Taxpayer Funded Electricity Price Mitigation

- The Ministry of Finance table shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.5 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion and before considering any additional funding from the tax base.

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| **OCEB** | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| **OREC** | - | - | - | - | - | 300 | 1,100* |
| **Ending DRC[2]** | - | - | - | - | 85 | 330 | 330 |
| **NIERP** | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| **NOEC** | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| **OEPTC[3]** | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

*Source: ENERGY PRRT Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

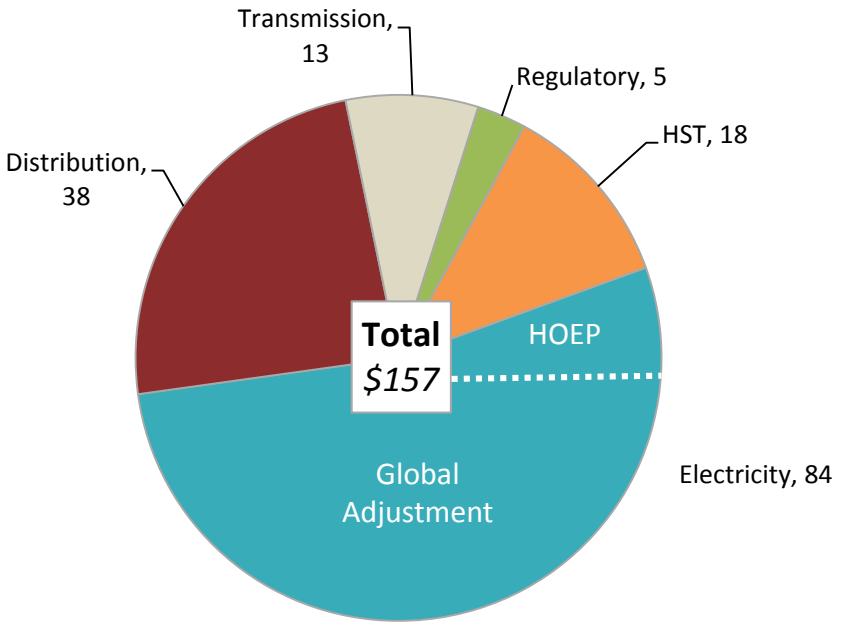
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



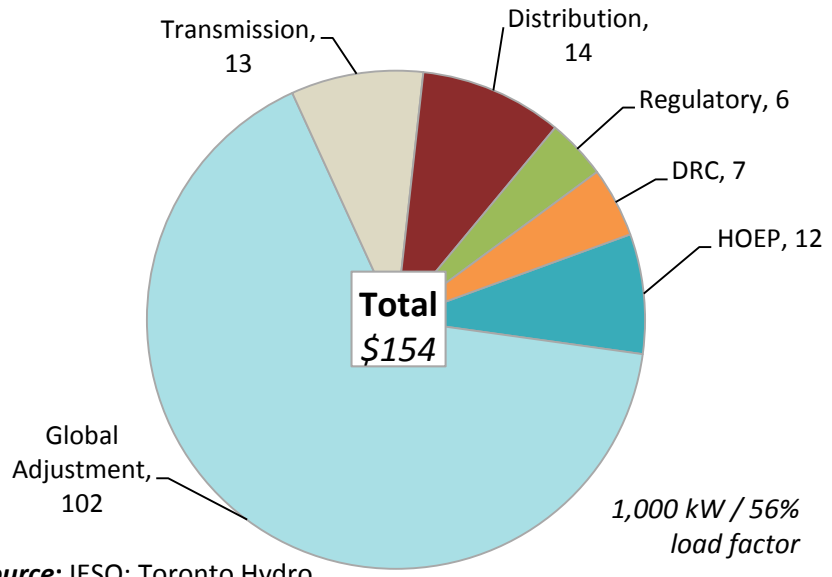

***Source*:** OEB, Toronto Hydro

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

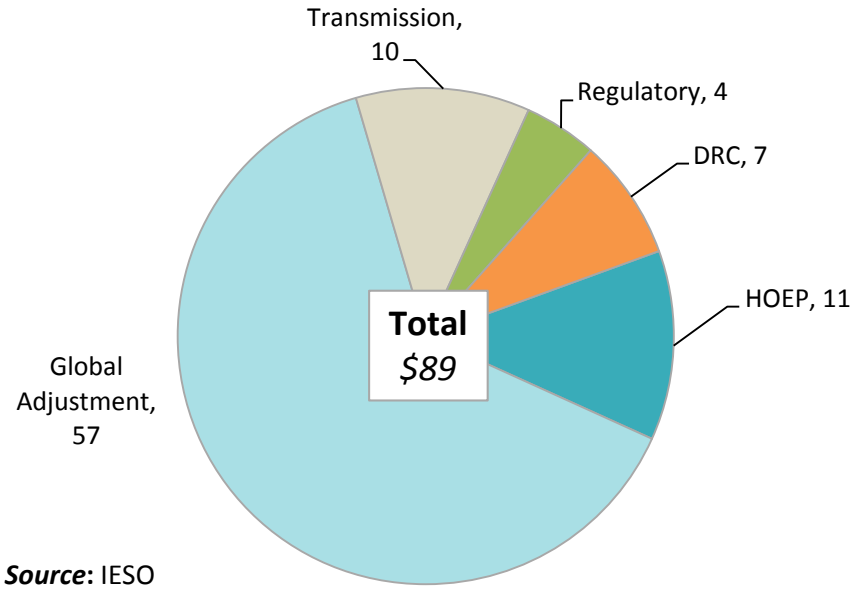
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



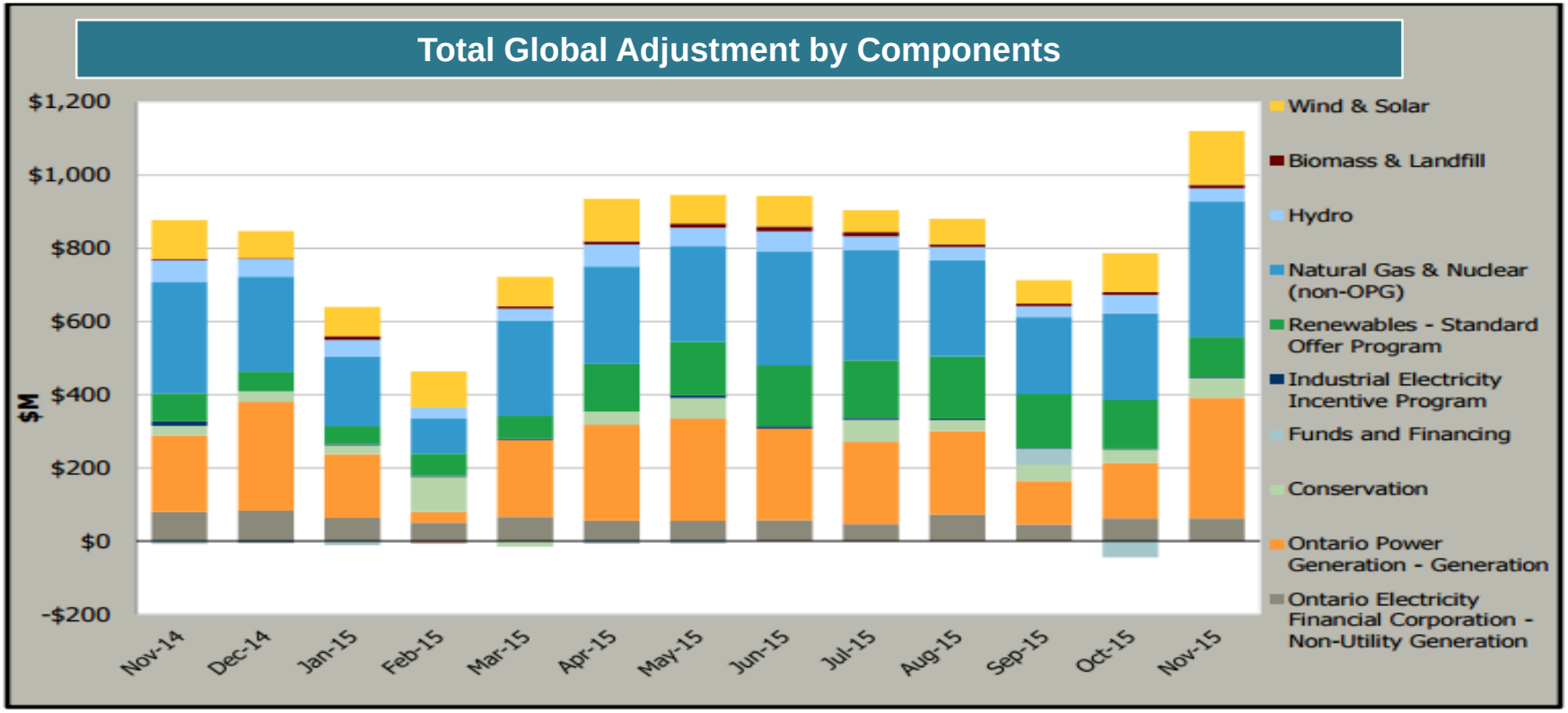

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

**From:** Gavin He
**To:** John Kim; Francisco Chinchon; Darren Scanlan; Emily Kerr
**Subject:** FW: Potential Rate Mitigation
**Date:** Tuesday, December 06, 2016 7:26:53 PM
**Attachments:** Price Mitigation Proposals_Dec5-16_v11_CEFD_commented v6a.pptx

---

Hi all,

FYI - the version that was shared with DMO.

Regards,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Tuesday, December 06, 2016 7:25 PM
To: Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>
Cc: Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; David McLean (MOF) <David.McLean@ontario.ca>
Subject: RE: Potential Rate Mitigation

Hi Chris,

Here`s a markup of Energy`s deck, with staff comments.

TBS staff also asked for our comments. We can send them this for their information (and our other deck too, if that is helpful).

Ron

-----Original Message-----
From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
Sent: December-05-16 20:03
To: Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>
Cc: Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; David McLean (MOF) <David.McLean@ontario.ca>
Subject: Fw: Potential Rate Mitigation

Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.

From: Katona, Keley (ENERGY)
Sent: December 5, 2016 7:44 PM
To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)
Subject: FW: Potential Rate Mitigation

Hi,

See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?

If there are questions, I’m happy to discuss.

Thanks,
Keley

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement ~~GEIA~~ renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

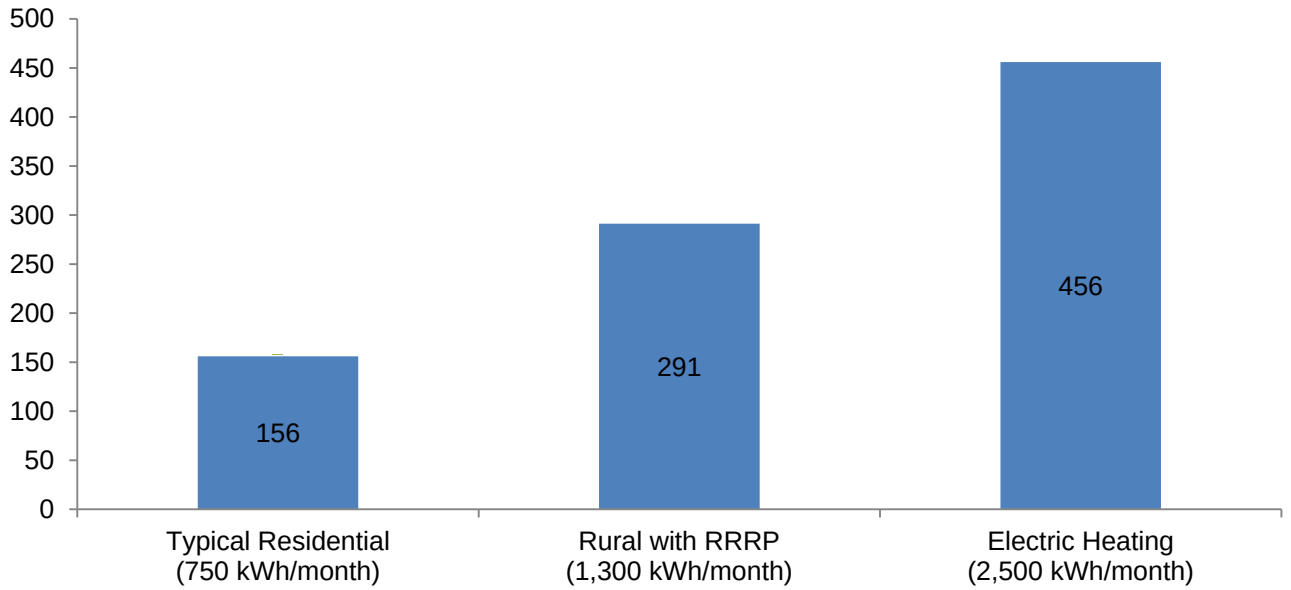
- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate before tax, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II) and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in costs; and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

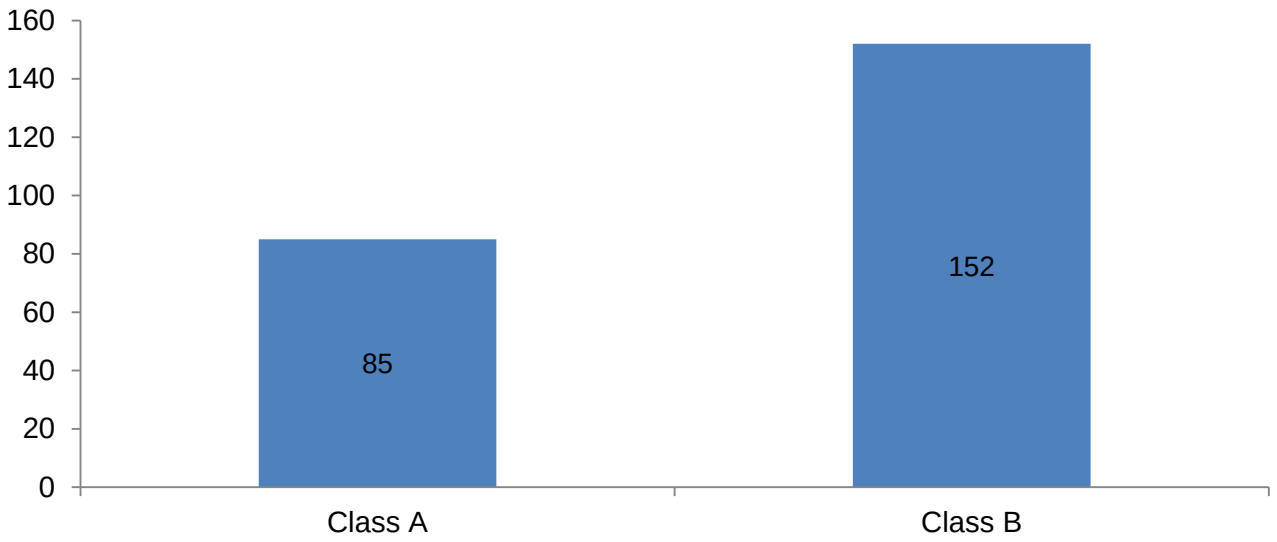



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Current Status on Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
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| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT Submission

OCEB – Ontario Clean Energy Benefit
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DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
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OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.5 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion and before considering any additional funding from the tax base.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how ~~government~~ electricity sector programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);¸(**NTD: If it provides system benefits, why not paid through the rate base)**
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total decrease on typical monthly bill** | **8.38** | **8.23** | **7.75** | **9.26** | **8.52** | **8.17** | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total increase on industrial bill** | **19.96** | **18.97** | **18.34** | **17.14** | **14.45** | **13.7** | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of about $450 million ~~[placeholder for OFA]~~ on the Province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan (before the planned ICI expansion).

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $30 ~~20 to $35~~ million annual fiscal pressure in 2017 to the province ~~[TBC by OPG / OFA]~~ based on new borrowing and increasing to about $70M by 2021.

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.
- A summary of the annual fiscal impacts of the proposed initiatives is presented in the next slide.

# Proposed Taxpayer Funded Electricity Price Mitigation

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+100 | 900+100 | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | TBD | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | -- | -- | -- |
| 8. Other | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,305** | **3,901** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above if various measures proposed in this deck were to be accepted, taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESBP) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.

- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.

- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.

- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

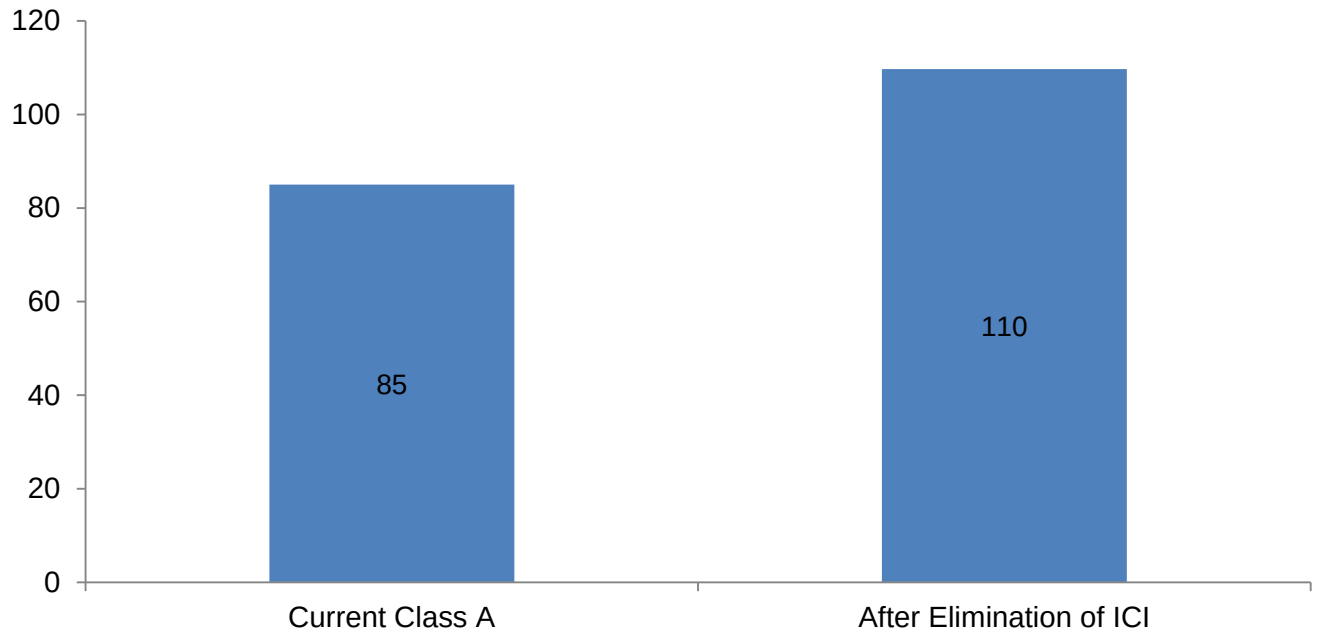
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

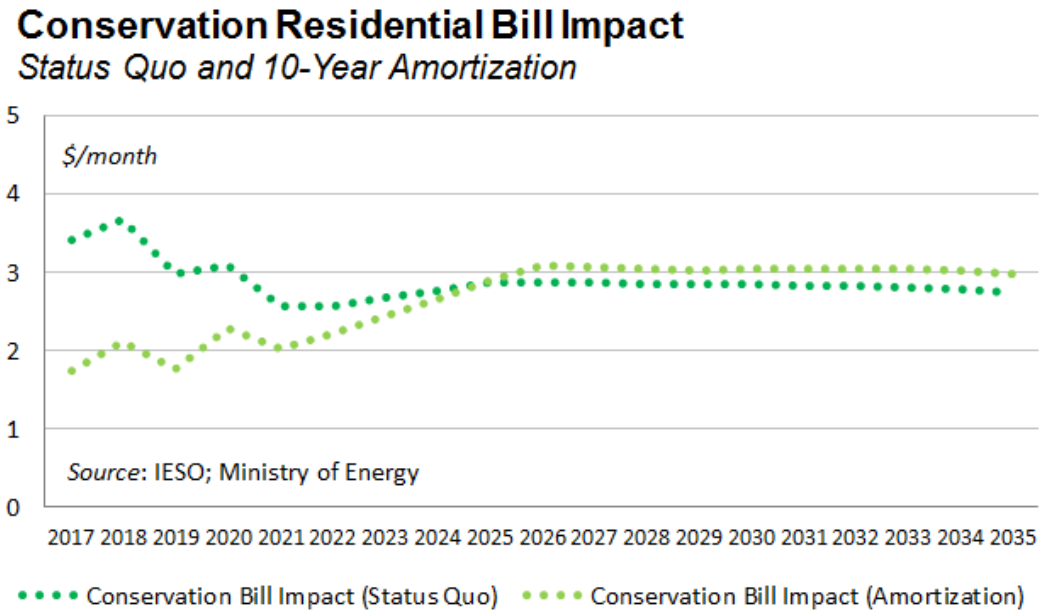
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.007/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), ~~to be~~ dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the pay down / defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

- As shown before the positive impact to residential ratepayers is very limited from the proposals with ratepayer impacts estimated by Energy (between $8 and $9 per month) while the impact to the Province's fiscal position would be material (about $1.2 to $1.5 billion a year). If additional proposals are also fiscally-funded, the fiscal cost could be substantially higher from, e.g., accounting treatment of conservation amortisation or a class B DRC exemption.

# Appendix

# Electricity Consumer Classes

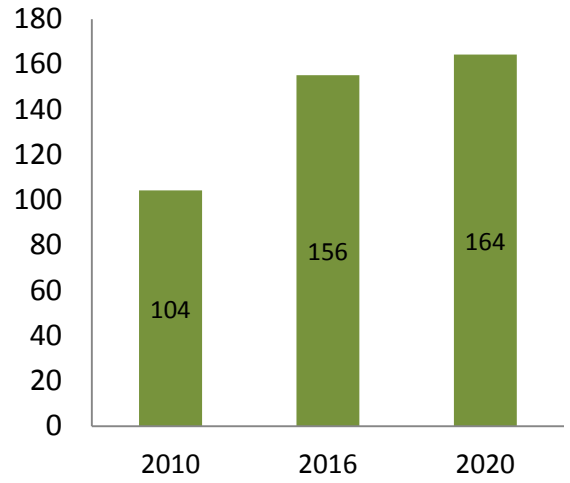
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

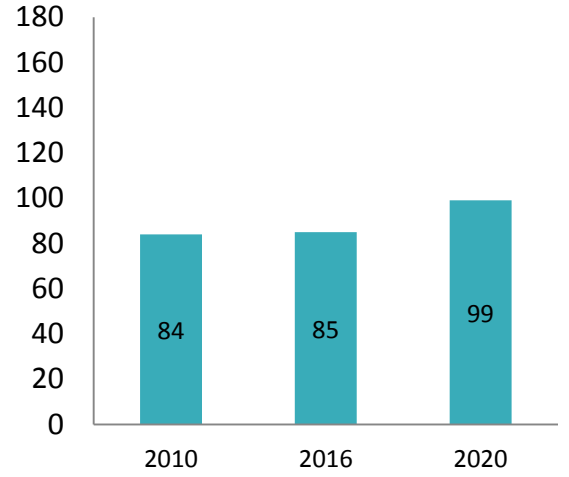
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

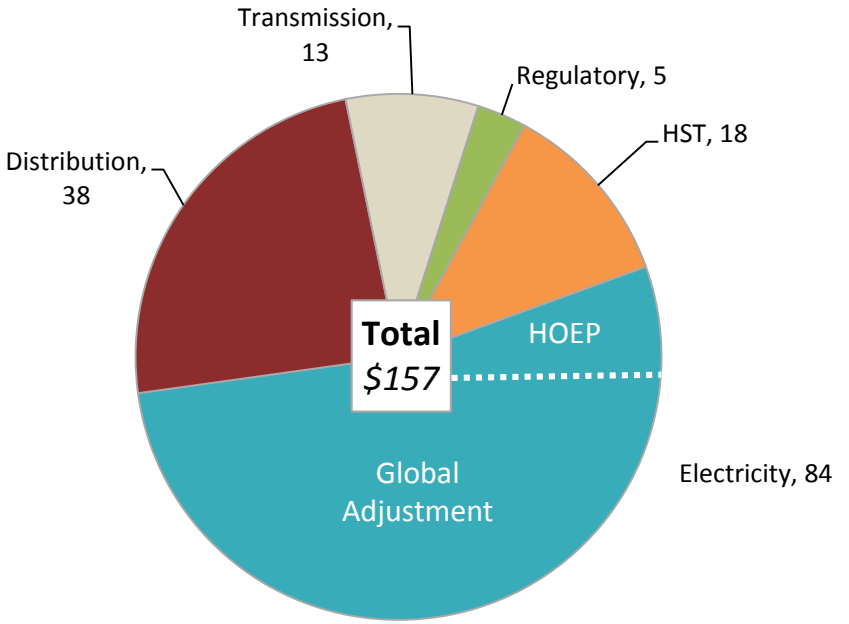
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



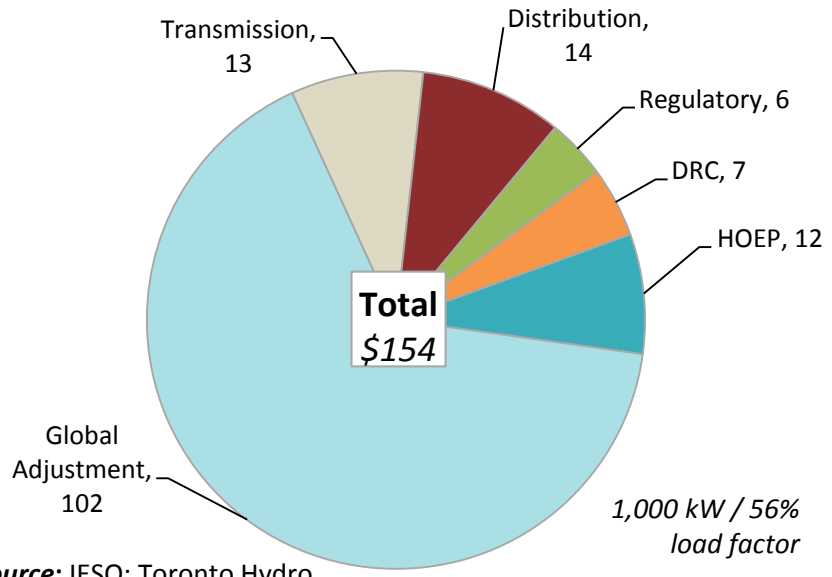

***Source*: OEB, Toronto Hydro**

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

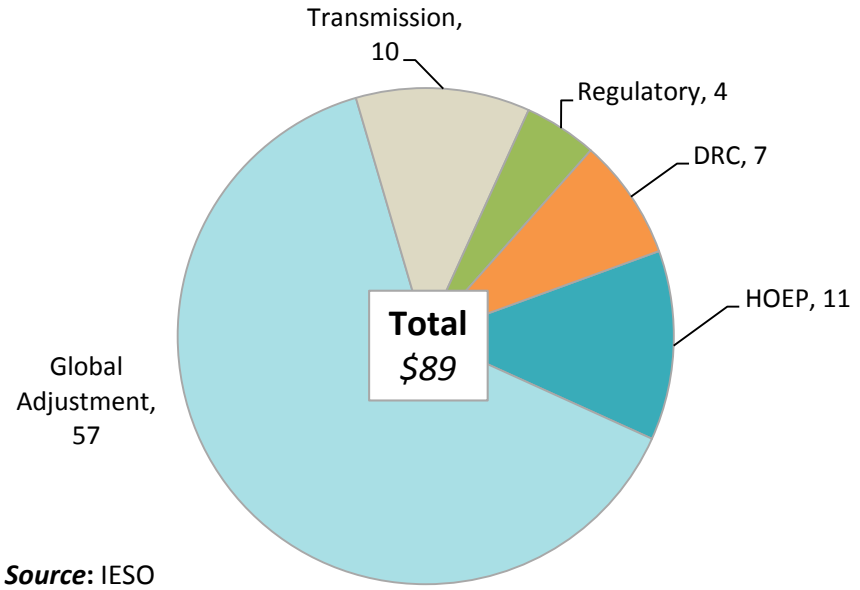
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



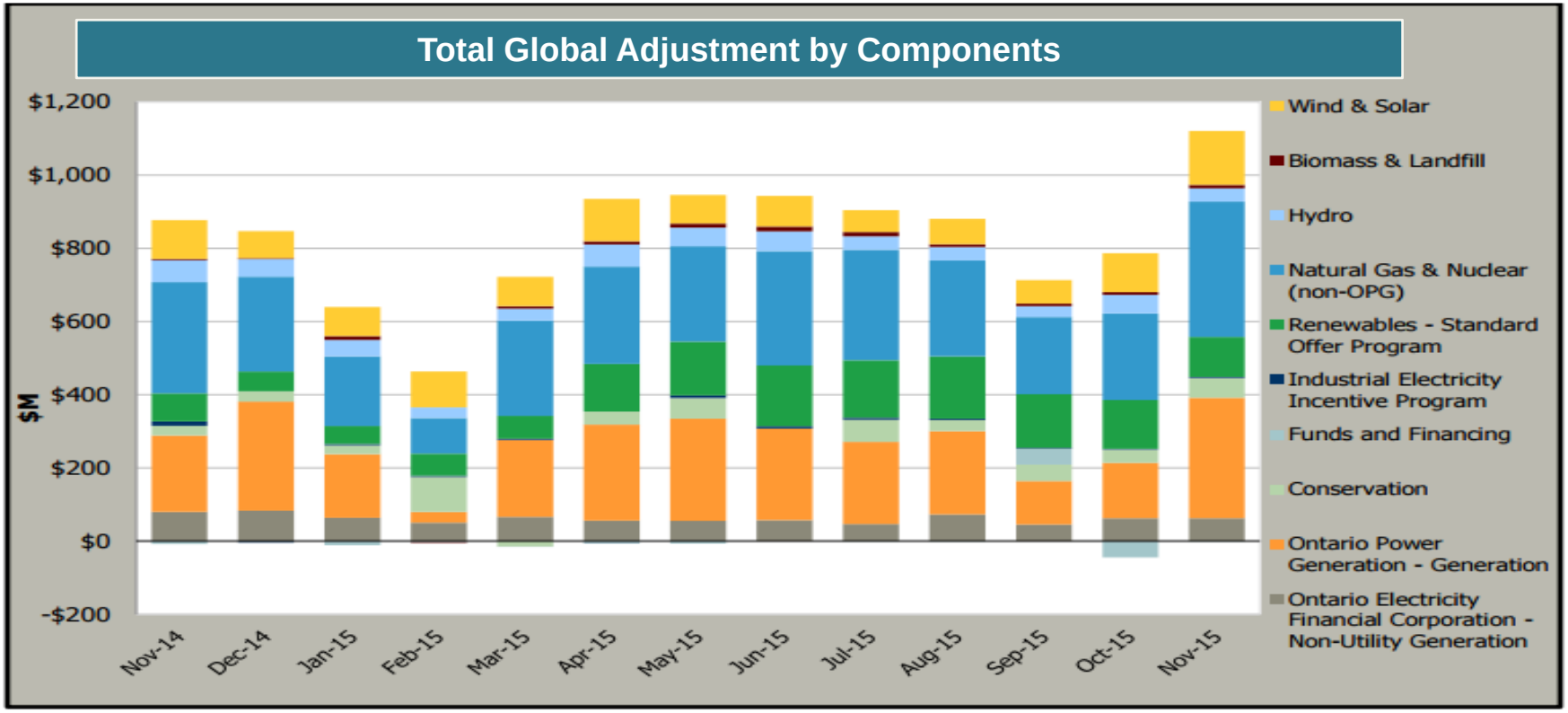

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

| | |
|---|---|
| **From:** | Gavin He |
| **To:** | Shajee Kathirgamanathan; Salman Qadir; Adam Prokop |
| **Cc:** | John Kim |
| **Subject:** | FW: Potential Rate Mitigation |
| **Date:** | Tuesday, December 06, 2016 3:35:59 PM |
| **Attachments:** | Price-Mitigation - CEFD Slides-Dec6-2016_v3.pptx |

Hi Team,

Please see attached the latest version.

Regards,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Tuesday, December 06, 2016 3:35 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi,

It keeps evolving.

Ron

---

**From:** Ronald Kwan
**Sent:** December-06-16 14:52
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi,

Attached is the latest draft.

Ron

---

**From:** Ronald Kwan
**Sent:** December-06-16 13:40
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>

**Subject:** RE: Potential Rate Mitigation

Hi,

As discussed, a work-in-progress. Input welcome.

Ron

---

**From:** Ronald Kwan
**Sent:** December-05-16 20:14
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** Fwd: Potential Rate Mitigation

Hi,

Lets meet in the morning to discuss.

We'll need a product for EOD. Could be an annotated slide deck, as well as a markup. Suggestion on any other formats?

Ron

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Date:** December 5, 2016 at 8:02:36 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
> **Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>
> **Subject: Fw: Potential Rate Mitigation**
>
> Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.
>
> From: Katona, Keley (ENERGY)
> Sent: December 5, 2016 7:44 PM
> To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)
> Subject: FW: Potential Rate Mitigation
>
> Hi,

See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?

If there are questions, I'm happy to discuss.

Thanks,
Keley

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

DRAFT

# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost.
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 bn in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time).
  - These existing mitigation costs are not presented in Energy's deck.
  - Also not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

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# Context: Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* * Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

# Energy's Proposals

Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded. They could be upwards of $2 bn/year, (plus the departure tax), which is not included in the fiscal plan, which would challenge the path to balance.

- OESP & RRRP (Total of about $0.4 Bn/yr): This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI -- About $900+ M/yr): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes the about 30% price increase (from $85/MWH to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
  - As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $xxx million).

- Departure Tax: As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.
  - This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
  - Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

- Other fiscal cost risks (Total of about $0.8+ Bn):
  - Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
  - Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
  - Lowering of the debt interest paid by OPG (about $xx – yy million/yr),

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# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
  - These targeted, low-income measures were introduced after the HST was introduced.
  - The OESP provides a larger, targeted and on-bill relief to qualifying consumers.

- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
  - As with the prior OCEB cap, provides a rough incentive for conservation and correlation to larger homes. A higher cap in winter may help with space-heating issue.
  - May be challenging to implement.

- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | The government removed the DRC from residential electricity users' bills as of January 1, 2016. This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline: Taxpayer-funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

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*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

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*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

DRAFT

# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
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  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
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  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

DRAFT

# Proposed Taxpayer Funded Electricity Price Mitigation
(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | | | | |
| 7. DRC Ended for Class B | | | | | |
| 8. Other | | | | | |
| **TOTAL** | **1195** | **3,421** | **3,152** | **3,177** | **3,191** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.2 billion, or more, by 2020-21. That is about a 60% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan; Salman Qadir; Gavin He; Adam Prokop |
| **Subject:** | FW: Potential Rate Mitigation |
| **Date:** | Tuesday, December 06, 2016 2:52:19 PM |
| **Attachments:** | Price-Mitigation - CEFD Slides-Dec6-2016_v2.pptx |

Latest.

---

**From:** Ronald Kwan
**Sent:** Tuesday, December 06, 2016 2:52 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi,

Attached is the latest draft.

Ron

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**From:** Ronald Kwan
**Sent:** December-06-16 13:40
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

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As discussed, a work-in-progress. Input welcome.

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**From:** Ronald Kwan
**Sent:** December-05-16 20:14
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** Fwd: Potential Rate Mitigation

Hi,

Lets meet in the morning to discuss.

We'll need a product for EOD. Could be an annotated slide deck, as well as a markup. Suggestion on any other formats?

Ron

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Date:** December 5, 2016 at 8:02:36 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
> **Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>
> **Subject: Fw: Potential Rate Mitigation**
>
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>
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> Sent: December 5, 2016 7:44 PM
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> If there are questions, I'm happy to discuss.
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> Sent: December-05-16 7:41 PM
> To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
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appreciated.  Keley can coordinate with your EAs.  I understand that Andrew T. plans to share with PO/your MOs.

Serge

DRAFT

# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost.
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 bn in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time).
  - These existing mitigation costs are not presented in Energy's deck.
  - Also not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

DRAFT

# General Comments on Energy's Deck (cont.)

- Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded, with an estimated impact of about $0.4 billion initially, and rising over time.
  - This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base.
  - Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes the about 30% price increase (from $85/MWH to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently (at a cost shift of about $900 million per year in 2016).
  - As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $xxx million).

- Departure Tax: As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.
  - This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
  - Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

- Other fiscal cost risks:
  - Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
  - Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
  - Lowering of the debt interest paid by OPG (about $xx – yy million/yr),

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

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# Context: Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* * Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

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# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
  - These targeted, low-income measures were introduced after the HST was introduced.
  - The OESP provides a larger, targeted and on-bill relief to qualifying consumers.

- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
  - As with the prior OCEB cap, provides a rough incentive for conservation and correlation to larger homes. A higher cap in winter may help with space-heating issue.
  - May be challenging to implement.

- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | The government removed the DRC from residential electricity users' bills as of January 1, 2016. This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline: Taxpayer-funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

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DRAFT

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**From:** Salman Qadir
**To:** Francisco Chinchon
**Cc:** John Kim; Shajee Kathirgamanathan
**Subject:** FW: Potential Rate Mitigation
**Date:** Tuesday, December 06, 2016 2:36:43 PM
**Attachments:** Price-Mitigation - CEFD Slides-Dec6-2016 - EFBv1.pptx

---

Hi Francisco,

See slide 11 of the attached that Shajee has prepared. We will look to use include this in the Price Mitigation Proposals slide deck instead of the Slide #7 that you may have seen.

Let us know if you have any comments. John is consolidating his and your comments at the moment.

Salman

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, December 06, 2016 2:24 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

I added the slide representing the new fiscal impacts. Really rough, but wanted to get this out asap.

Please see last slide in the deck:
\\ofina.on.ca\ofadfs\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016\Price-Mitigation - CEFD Slides-Dec6-2016 - EFBv1.pptx

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Tuesday, December 06, 2016 1:40 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
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Fyi.

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DRAFT

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Corporate and Electricity Finance Division
December 7, 2016

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- Departure Tax:
- Other fiscal cost risks include amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr), and a lowering of the debt interest paid by OPG.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
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  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

DRAFT

# Context: Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* * Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
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| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
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1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline: Taxpayer-funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

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# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

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# Effect of Additional Proposed Taxpayer Funded Electricity Price Mitigation

| Proposal | Fiscal Costs ($M) | *Residential* Ratepayer Savings |
|---|---|---|
| **EXISTING MEASURES** | | |
| OREC | 1,100 | $11/month |
| NIERP | 120 | n/a* |
| NOEC | 25 | n/a* |
| OEPTC[3] | 460 | n/a* |
| **TOTAL Costs from Existing Measures** | **1,705** | **11** |
| | | |
| **PROPOSED MEASURES** | | |
| **Proposal 2:** Fund Electricity Support Programs Through the Tax-Base (OESP, RRRP, First Nations Delivery Rate) | 421 (yr 2017-18)** | $2.45/month |
| **Proposal 3:** Eliminate the Industrial Conservation Initiative funding from ratebase, and shift to tax base | 900 | $4/month |
| **Proposal 7:** Reduced cost of OPG Borrowing | 30-35 | $0.18/month |
| **Proposal 8:** End DRC Early for Commercial/Small Industrial Class B Electricity Consumers, or DRC reduced to $3.5/MWh | 189-378 (yr 2017-18)*** | n/a* |
| **TOTAL Costs/Savings from Proposed Measures** | 1,584 – 1,778 | $6.63/month |
| **TOTAL Costs/Savings from All Taxpayer funded Measures** | **3,289 – 3,483** | **$17.63/month** |

* Costs were not borne by the ratebase.
** Assumes 75%/25% split between 2017 and 2018 costs
*** DRC is removed from all electricity bill by April 1, 2018

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan |
| **Cc:** | Salman Qadir; Adam Prokop; Gavin He |
| **Subject:** | FW: Potential Rate Mitigation |
| **Date:** | Tuesday, December 06, 2016 1:40:24 PM |
| **Attachments:** | Price-Mitigation - CEFD Slides-Dec6-2016.pptx |

Fyi.

**From:** Ronald Kwan
**Sent:** Tuesday, December 06, 2016 1:40 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi,

As discussed, a work-in-progress. Input welcome.

Ron

**From:** Ronald Kwan
**Sent:** December-05-16 20:14
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** Fwd: Potential Rate Mitigation

Hi,

Lets meet in the morning to discuss.

We'll need a product for EOD. Could be an annotated slide deck, as well as a markup. Suggestion on any other formats?

Ron

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Date:** December 5, 2016 at 8:02:36 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
> **Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>

**Subject: Fw: Potential Rate Mitigation**

Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.

From: Katona, Keley (ENERGY)
Sent: December 5, 2016 7:44 PM
To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)
Subject: FW: Potential Rate Mitigation

Hi,

See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?

If there are questions, I'm happy to discuss.

Thanks,
Keley

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

DRAFT

# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

# General Comments on Energy's Deck

- The Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill.
  - The proposals would have a significant fiscal cost.
- There is already significant amounts of existing electricity price mitigation that has a fiscal impact (averaging over $1.5 billion per year over the past five years, and estimated to increase to about $2 bn in 17-18 (see following slide for estimated costs over time, and likely increasing over time).
  - That is not presented in Energy's deck.
  - Also not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.
- Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded, with an estimated impact of about $0.4 billion initially, and rising over time.
  - This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base.
  - Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

# General Comments on Energy's Deck (cont.)

- Industrial Conservation Initiative (ICI): Energy also presents as a residential mitigation measure the cancellation of the ICI.
  - Energy is not initially proposing it continue as taxpayer funded, but notes the about 30% price increase for the large Class A customers benefiting from ICI currently (at a cost shift of about $900 million per year).
  - This cost is for 2016, prior to the planned expansion of the ICI, which could further increase the fiscal exposure.
- Departure Tax:
- Other fiscal cost risks include amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr), and a lowering of the debt interest paid by OPG.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

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# Context: Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
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- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
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# Appendix

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# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
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| | |
|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan |
| **Subject:** | FW: Potential Rate Mitigation |
| **Date:** | Tuesday, December 06, 2016 9:19:42 AM |
| **Attachments:** | OEB data GA 2016.xlsx<br>DATA-2-Demand-Outlook-20160901.xlsx |

Take a look.....let me know if you have differences in numbers.

---

**From:** Emily Kerr
**Sent:** Monday, December 05, 2016 10:15 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi,

From the first attached spreadsheet, Class B consumption in 2015 was 114 TWh. From the second attached spreadsheet, residential consumption in 2015 was 52 TWh.

So, Class B less residential was 62 TWh. This amount would include small business and farm customers in the RPP.

---

**From:** John Kim
**Sent:** Monday, December 05, 2016 9:47 PM
**To:** Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Thanks.....wondering about the DRC impact. :P

---

**From:** Emily Kerr
**Sent:** Monday, December 05, 2016 9:46 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Potential Rate Mitigation

I don't have the information directly, but I will look and see if I can figure it out from other info.

On Dec 5, 2016, at 9:38 PM, John Kim <John.Kim@ofina.on.ca> wrote:

> Sorry, I meant excluding residential....
>
> ---
>
> **From:** John Kim
> **Sent:** Monday, December 05, 2016 9:35 PM
> **To:** Gavin He <Gavin.He@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>

**Subject:** RE: Potential Rate Mitigation

Hi Emily,

Would you know the composition of Class B consumption from the total? Just wondering if you have that readily available….

Thanks,

John.

---

**From:** Gavin He
**Sent:** Monday, December 05, 2016 9:21 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** Fwd: Potential Rate Mitigation

Hi John/Emily,

Just forwarding the following up communications on this with you.

Regards,
Gavin He

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** December 5, 2016 at 21:18:37 EST
> **To:** Gadi Mayman <Gadi.Mayman@ofina.on.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, "Tim Schuurman (MOF)" <Tim.Schuurman@ontario.ca>, "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, Christina Zhang <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "David McLean (MOF)" <David.McLean@ontario.ca>
> **Subject: Re: Potential Rate Mitigation**
>
> Hi Gadi,
>
> If you recall, we did that table a couple weeks ago on existing fiscally funded mitigation programs. We can suggest adding that in. And, as for the GGRA, I think one of the challenges is it was supposed to be for incremental measures to reduce GHGs (not replacing funding for existing measures. But, that said, that was notion I noodled on too, but it would require at least a change in positioning, convincing the Minister of MOECC, as the arbiter of such and/or change the legislation.

Ron

> On Dec 5, 2016, at 9:08 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:
>
> Big numbers, and I didn't in my scan through see much credit given to the fiscal sacrifices already made. Maybe those amounts could be added in the context section?
>
> Would any of the fiscal plan hits be eligible as offsets for our Cap and Trade revenues? I suppose because so little of our electricity production is carbon producing, probably not, but if ICI moves consumption off-peak does it reduce the need for gas plants to operate?
>
> And at least the idea of offsetting the federal portion of the HST is gone
>
> > On Dec 5, 2016, at 8:03 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
> >
> > Hi Chris,
> >
> > Will do.
> >
> > Ron
> >
> > > On Dec 5, 2016, at 8:02 PM, Pearce, Christopher (MOF) <Christopher.Pearce@ontario.ca> wrote:
> > >
> > > Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.
> > >
> > > From: Katona, Keley (ENERGY)

Sent: December 5, 2016 7:44 PM

To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Potential Rate Mitigation

Hi,

See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?

If there are questions, I'm happy to discuss.

Thanks,

Keley

From: Imbrogno, Serge (ENERGY)

Sent: December-05-16 7:41 PM

To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)

Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate

mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

<Price Mitigation Proposals_Dec5-16_v11.pptx>

| Month | Total AQEW | Class A AQEW | CLASS B AQEW | Embedded GEN | Excluded Consumption | TOTAL CLASS B Load for Allocation |
|---|---|---|---|---|---|---|
| Jan | 12,104,121 | 2,325,765 | 9,778,356 | 473,005 | 12,357 | 10,239,004 |
| Feb | 11,249,947 | 2,234,225 | 9,015,722 | 478,447 | 16,513 | 9,477,657 |
| Mar | 11,098,465 | 2,336,834 | 8,761,631 | 529,570 | 14,734 | 9,276,467 |
| Apr | 10,271,558 | 2,316,791 | 7,954,766 | 660,273 | 12,790 | 8,602,249 |
| May | 10,312,358 | 2,311,716 | 8,000,642 | 664,109 | 10,868 | 8,653,883 |
| June | 10,906,462 | 2,308,144 | 8,598,318 | 612,019 | 9,386 | 9,200,951 |
| July | 12,247,167 | 2,283,798 | 9,963,369 | 545,844 | 14,093 | 10,495,121 |
| Aug | 12,826,850 | 2,375,381 | 10,451,469 | 524,559 | 13,723 | 10,962,305 |
| Sept | | | | | | |
| Oct | | | | | | |
| Nov | | | | | | |
| Dec | | | | | | |
| Total | 91,016,928 | 18,492,656 | 72,524,273 | 4,487,827 | 104,463 | 76,907,636 |

| | | | |
|---|---|---|---|
| **Total Global Adjustment $** | **Class A GA$** | **Clas B GA$** | **Peak Demand Factor** |
| $1,070,643,210 | $130,771,124 | $939,872,086 | 0.12214258 |
| $1,063,698,605 | $129,922,892 | $933,775,713 | 0.12214258 |
| $1,120,138,944 | $136,816,661 | $983,322,284 | 0.12214258 |
| $1,090,660,721 | $133,216,114 | $957,444,606 | 0.12214258 |
| $1,060,759,407 | $129,563,891 | $931,195,516 | 0.12214258 |
| $995,308,314 | $121,569,525 | $873,738,789 | 0.12214258 |
| $981,770,430 | $111,884,227 | $869,886,203 | 0.11396170 |
| $878,644,674 | $100,131,841 | $778,512,833 | 0.11396170 |
| | | | |
| | | | |
| | | | |
| | | | |
| $8,261,624,305 | $993,876,275 | $7,267,748,030 | |

August 2016 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 12,826,850 |
| |
| 2,375,381 |
| |
| 10,451,469 |
| |
| 524,559 |
| |
| 13,723 |
| |
| 10,962,305 |

| | |
|---|---|
| $ | 878,644,674 |
| | |
| $ | 100,131,841 |
| $ | 778,512,833 |
| | |
| | 0.11396170 |

July 2016 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 12,247,167 |
| |
| 2,283,798 |
| |
| 9,963,369 |
| |
| 545,844 |
| |
| 14,093 |
| |
| 10,495,121 |

| | |
|---|---|
| $ | 981,770,430 |
| | |
| $ | 111,884,227 |
| $ | 869,886,203 |
| | |
| | 0.11396170 |

June 2016 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,906,462 |
| |
| 2,308,144 |
| |
| 8,598,318 |
| |
| 612,019 |
| |
| 9,386 |
| |
| 9,200,951 |

| | |
|---|---|
| $ | 995,308,314 |
| | |
| $ | 121,569,525 |
| $ | 873,738,789 |
| | |
| | 0.12214258 |

May 2016 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,312,358 |
| |
| 2,311,716 |
| |
| 8,000,642 |
| |
| 664,109 |
| |
| 10,868 |
| |
| 8,653,883 |

| | |
|---|---|
| $ | 1,060,759,407 |
| | |
| $ | 129,563,891 |
| $ | 931,195,516 |
| | |
| | 0.12214258 |

April 2016 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,271,558 |
| |
| 2,316,791 |
| |
| 7,954,766 |
| |
| 660,273 |
| |
| 12,790 |
| |
| 8,602,249 |

| | |
|---|---|
| $ | 1,090,660,721 |
| | |
| $ | 133,216,114 |
| $ | 957,444,606 |
| | |
| | 0.12214258 |

March 2016 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,098,465 |
| |
| 2,336,834 |
| |
| 8,761,631 |
| |
| 529,570 |
| |
| 14,734 |
| |
| 9,276,467 |

| | |
|---|---|
| $ | 1,120,138,944 |
| | |
| $ | 136,816,661 |
| $ | 983,322,284 |
| | |
| | 0.12214258 |

February 2016 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,249,947 |
| |
| 2,234,225 |
| |
| 9,015,722 |
| |
| 478,447 |
| |
| 16,513 |
| |
| 9,477,657 |

| | |
|---|---|
| $ | 1,063,698,605 |
| | |
| $ | 129,922,892 |
| $ | 933,775,713 |
| | |
| | 0.12214258 |

January 2016 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 12,104,121 |
| |
| 2,325,765 |
| |
| 9,778,356 |
| |
| 473,005 |
| |
| 12,357 |
| |
| 10,239,004 |

| | |
|---|---|
| $ | 1,070,643,210 |
| | |
| $ | 130,771,124 |
| $ | 939,872,086 |
| | |
| | 0.12214258 |

| Month | Total AQEW | Class A AQEW | CLASS B AQEW | Embedded GEN | Excluded Consumption | TOTAL CLASS B Load for Allocation |
|---|---|---|---|---|---|---|
| Jan | 12,847,678 | 2,084,465 | 10,763,212 | 462,633 | 20,890 | 11,204,955 |
| Feb | 12,077,789 | 1,986,521 | 10,091,268 | 399,678 | 19,776 | 10,471,170 |
| Mar | 11,827,930 | 2,143,191 | 9,684,739 | 494,881 | 20,878 | 10,158,742 |
| Apr | 10,236,952 | 2,087,296 | 8,149,655 | 652,276 | 16,901 | 8,785,030 |
| May | 10,386,270 | 2,114,955 | 8,271,315 | 529,316 | 17,418 | 8,783,214 |
| June | 10,442,855 | 2,060,759 | 8,382,096 | 577,160 | 15,921 | 8,943,335 |
| July | 11,878,019 | 2,306,719 | 9,571,299 | 520,648 | 21,274 | 10,070,673 |
| Aug | 11,552,110 | 2,357,204 | 9,194,906 | 471,688 | 20,227 | 9,646,368 |
| Sept | 11,179,067 | 2,309,596 | 8,869,471 | 503,415 | 27,108 | 9,345,778 |
| Oct | 10,538,710 | 2,365,575 | 8,173,135 | 497,440 | 30,247 | 8,640,328 |
| Nov | 10,494,634 | 2,273,070 | 8,221,564 | 477,484 | 15,870 | 8,683,178 |
| Dec | 11,107,827 | 2,246,123 | 8,861,704 | 436,467 | 14,324 | 9,283,847 |
| Total | 134,569,840 | 26,335,475 | 108,234,365 | 6,023,088 | 240,834 | 114,016,619 |

| | | | |
|---|---|---|---|
| **Total Global Adjustment $** | **Class A GA$** | **Clas B GA$** | **Peak Demand Factor** |
| $628,116,244 | $60,215,476 | $567,900,769 | 0.09586677 |
| $458,754,390 | $43,979,302 | $414,775,088 | 0.09586677 |
| $706,816,671 | $67,760,231 | $639,056,440 | 0.09586677 |
| $928,654,671 | $89,027,124 | $839,627,548 | 0.09586677 |
| $939,140,737 | $90,032,389 | $849,108,348 | 0.09586677 |
| $943,069,508 | $90,409,028 | $852,660,481 | 0.09586677 |
| $904,090,409 | $110,267,613 | $793,822,797 | 0.12196525 |
| $879,181,661 | $107,385,516 | $771,796,144 | 0.12214258 |
| $713,396,336 | $87,136,069 | $626,260,267 | 0.12214258 |
| $742,600,148 | $90,703,098 | $651,897,050 | 0.12214258 |
| $1,119,279,840 | $136,711,727 | $982,568,113 | 0.12214258 |
| $999,585,710 | $122,091,978 | $877,493,732 | 0.12214258 |
| $9,962,686,326 | $1,095,719,550 | $8,866,966,776 | |

December 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,107,827 |
| |
| 2,246,123 |
| |
| 8,861,704 |
| |
| 436,467 |
| |
| 14,324 |
| |
| 9,283,847 |

| | |
|---|---|
| $ | 999,585,710 |
| | |
| $ | 122,091,978 |
| $ | 877,493,732 |
| | |
| | 0.12214258 |

November 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,494,634 |
| |
| 2,273,070 |
| |
| 8,221,564 |
| |
| 477,484 |
| |
| 15,870 |
| |
| 8,683,178 |

| | |
|---|---|
| $ | 1,119,279,840 |
| | |
| $ | 136,711,727 |
| $ | 982,568,113 |
| | |
| | 0.12214258 |

October 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,538,710 |
| |
| 2,365,575 |
| |
| 8,173,135 |
| |
| 497,440 |
| |
| 30,247 |
| |
| 8,640,328 |

| | |
|---|---|
| $ | 742,600,148 |
| | |
| $ | 90,703,098 |
| $ | 651,897,050 |
| | |
| | 0.12214258 |

September 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,179,067 |
| |
| 2,309,596 |
| |
| 8,869,471 |
| |
| 503,415 |
| |
| 27,108 |
| |
| 9,345,778 |

| | |
|---|---|
| $ | 713,396,336 |
| | |
| $ | 87,136,069 |
| $ | 626,260,267 |
| | |
| | 0.12214258 |

August 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,552,110 |
| |
| 2,357,204 |
| |
| 9,194,906 |
| |
| 471,688 |
| |
| 20,227 |
| |
| 9,646,368 |

| | |
|---|---|
| $ | 879,181,661 |
| | |
| $ | 107,385,516 |
| $ | 771,796,144 |
| | |
| | 0.12214258 |

July 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,878,019 |
| |
| 2,306,719 |
| |
| 9,571,299 |
| |
| 520,648 |
| |
| 21,274 |
| |
| 10,070,673 |

| | |
|---|---|
| $ | 904,090,409 |
| | |
| $ | 110,267,613 |
| $ | 793,822,797 |
| | |
| | 0.12196525 |

June 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,442,855 |
| |
| 2,060,759 |
| |
| 8,382,096 |
| |
| 577,160 |
| |
| 15,921 |
| |
| 8,943,335 |

| | |
|---|---|
| $ | 943,069,508 |
| | |
| $ | 90,409,028 |
| $ | 852,660,481 |
| | |
| | 0.09586677 |

May 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,386,270 |
| |
| 2,114,955 |
| |
| 8,271,315 |
| |
| 529,316 |
| |
| 17,418 |
| |
| 8,783,214 |

| | |
|---|---|
| $ | 939,140,737 |
| | |
| $ | 90,032,389 |
| $ | 849,108,348 |
| | |
| | 0.09586677 |

April 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,236,952 |
| |
| 2,087,296 |
| |
| 8,149,655 |
| |
| 652,276 |
| |
| 16,901 |
| |
| 8,785,030 |

| | |
|---|---|
| $ | 928,654,671 |
| | |
| $ | 89,027,124 |
| $ | 839,627,548 |
| | |
| | 0.09586677 |

March 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,827,930 |
| |
| 2,143,191 |
| |
| 9,684,739 |
| |
| 494,881 |
| |
| 20,878 |
| |
| 10,158,742 |

| | |
|---|---|
| $ | 706,816,671 |
| | |
| $ | 67,760,231 |
| $ | 639,056,440 |
| | |
| | 0.09586677 |

February 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 12,077,789 |
| |
| 1,986,521 |
| |
| 10,091,268 |
| |
| 399,678 |
| |
| 19,776 |
| |
| 10,471,170 |

| | |
|---|---|
| $ | 458,754,390 |
| | |
| $ | 43,979,302 |
| $ | 414,775,088 |
| | |
| | 0.09586677 |

January 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 12,847,678 |
| |
| 2,084,465 |
| |
| 10,763,212 |
| |
| 462,633 |
| |
| 20,890 |
| |
| 11,204,955 |

| | |
|---|---|
| $ | 628,116,244 |
| | |
| $ | 60,215,476 |
| $ | 567,900,769 |
| | |
| | 0.09586677 |

| Month | Total AQEW | Class A AQEW | CLASS B AQEW | Embedded GEN | Excluded Consumption | TOTAL CLASS B Load for Allocation |
|---|---|---|---|---|---|---|
| Jan | 13,328,023 | 2,161,556 | 11,166,467 | 400,322 | 23,618 | 11,543,171 |
| Feb | 11,825,671 | 2,067,747 | 9,757,924 | 336,417 | 19,541 | 10,074,800 |
| Mar | 12,412,016 | 2,236,220 | 10,175,796 | 435,674 | 22,060 | 10,589,409 |
| Apr | 10,631,857 | 2,141,240 | 8,490,616 | 476,811 | 23,003 | 8,944,424 |
| May | 10,428,530 | 2,139,306 | 8,289,223 | 484,002 | 15,594 | 8,757,631 |
| June | 11,033,703 | 2,153,703 | 8,880,000 | 466,648 | 15,958 | 9,330,691 |
| July | 11,490,278 | 2,203,226 | 9,287,052 | 447,087 | 21,185 | 9,712,954 |
| Aug | 11,468,769 | 2,231,394 | 9,237,375 | 385,056 | 27,990 | 9,594,441 |
| Sept | 10,656,919 | 2,150,083 | 8,506,837 | 422,636 | 22,176 | 8,907,297 |
| Oct | 10,639,787 | 2,143,941 | 8,495,846 | 437,843 | 17,544 | 8,916,146 |
| Nov | 11,287,752 | 2,123,604 | 9,164,148 | 406,264 | 12,969 | 9,557,443 |
| Dec | 11,939,009 | 2,107,296 | 9,831,714 | 425,614 | 12,458 | 10,244,869 |
| Total | 137,142,314 | 25,859,315 | 111,282,999 | 5,124,375 | 234,095 | 116,173,279 |

| | | | |
|---|---|---|---|
| **Total Global Adjustment $** | **Class A GA$** | **Clas B GA$** | **Peak Demand Factor** |
| $160,703,230 | $16,722,314 | $143,980,916 | 0.10405711 |
| $149,534,148 | $15,560,091 | $133,974,056 | 0.10405711 |
| -$1,108,196 | -$115,316 | -$992,880 | 0.10405711 |
| $520,643,567 | $54,176,665 | $466,466,902 | 0.10405711 |
| $703,392,944 | $73,088,611 | $630,304,333 | 0.10390865 |
| $626,884,065 | $65,138,677 | $561,745,388 | 0.10390865 |
| $672,311,617 | $64,826,760 | $607,484,857 | 0.09642368 |
| $717,608,852 | $68,794,843 | $648,814,010 | 0.09586677 |
| $784,468,017 | $75,204,415 | $709,263,602 | 0.09586677 |
| $987,539,342 | $94,672,207 | $892,867,135 | 0.09586677 |
| $870,196,641 | $83,422,941 | $786,773,700 | 0.09586677 |
| $843,465,079 | $80,860,273 | $762,604,807 | 0.09586677 |
| $7,035,639,307 | $692,352,481 | $6,343,286,826 | |

December 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,939,009 |
| |
| 2,107,296 |
| |
| 9,831,714 |
| |
| 425,614 |
| |
| 12,458 |
| |
| 10,244,869 |

| | |
|---|---|
| $ | 843,465,079 |
| | |
| $ | 80,860,273 |
| $ | 762,604,807 |
| | |
| | 0.09586677 |

November 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,287,752 |
| |
| 2,123,604 |
| |
| 9,164,148 |
| |
| 406,264 |
| |
| 12,969 |
| |
| 9,557,443 |

| | |
|---|---|
| $ | 870,196,641 |
| | |
| $ | 83,422,941 |
| $ | 786,773,700 |
| | |
| | 0.09586677 |

October 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,639,787 |
| |
| 2,143,941 |
| |
| 8,495,846 |
| |
| 437,843 |
| |
| 17,544 |
| |
| 8,916,146 |

| | |
|---|---|
| $ | 987,539,342 |
| | |
| $ | 94,672,207 |
| $ | 892,867,135 |
| | |
| | 0.09586677 |

September 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,656,919 |
| |
| 2,150,083 |
| |
| 8,506,837 |
| |
| 422,636 |
| |
| 22,176 |
| |
| 8,907,297 |

| | |
|---|---|
| $ | 784,468,017 |
| | |
| $ | 75,204,415 |
| $ | 709,263,602 |
| | |
| | 0.09586677 |

August 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,468,769 |
| |
| 2,231,394 |
| |
| 9,237,375 |
| |
| 385,056 |
| |
| 27,990 |
| |
| 9,594,441 |

| | |
|---|---|
| $ | 717,608,852 |
| | |
| $ | 68,794,843 |
| $ | 648,814,010 |
| | |
| | 0.09586677 |

July 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,490,278 |
| |
| 2,203,226 |
| |
| 9,287,052 |
| |
| 447,087 |
| |
| 21,185 |
| |
| 9,712,954 |

| | |
|---|---|
| $ | 672,311,617 |
| | |
| $ | 64,826,760 |
| $ | 607,484,857 |
| | |
| | 0.09642368 |

June 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,033,703 |
| |
| 2,153,703 |
| |
| 8,880,000 |
| |
| 466,648 |
| |
| 15,958 |
| |
| 9,330,691 |

| | |
|---|---|
| $ | 626,884,065 |
| | |
| $ | 65,138,677 |
| $ | 561,745,388 |
| | |
| | 0.10390865 |

May 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,428,530 |
| |
| 2,139,306 |
| |
| 8,289,223 |
| |
| 484,002 |
| |
| 15,594 |
| |
| 8,757,631 |

| | |
|---|---|
| $ | 703,392,944 |
| | |
| $ | 73,088,611 |
| $ | 630,304,333 |
| | |
| | 0.10390865 |

April 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,631,857 |
| |
| 2,141,240 |
| |
| 8,490,616 |
| |
| 476,811 |
| |
| 23,003 |
| |
| 8,944,424 |

| | |
|---|---|
| $ | 520,643,567 |
| | |
| $ | 54,176,665 |
| $ | 466,466,902 |
| | |
| | 0.10405711 |

March 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 12,412,016 |
| |
| 2,236,220 |
| |
| 10,175,796 |
| |
| 435,674 |
| |
| 22,060 |
| |
| 10,589,409 |

| | |
|---|---|
| -$ | 1,108,196 |
| | |
| -$ | 115,316 |
| -$ | 992,880 |
| | |
| | 0.10405711 |

February 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,825,671 |
| |
| 2,067,747 |
| |
| 9,757,924 |
| |
| 336,417 |
| |
| 19,541 |
| |
| 10,074,800 |

| | |
|---|---|
| $ | 149,534,148 |
| | |
| $ | 15,560,091 |
| $ | 133,974,056 |
| | |
| | 0.10405711 |

January 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 13,328,023 |
| |
| 2,161,556 |
| |
| 11,166,467 |
| |
| 400,322 |
| |
| 23,618 |
| |
| 11,543,171 |

| | |
|---|---|
| $ | 160,703,230 |
| | |
| $ | 16,722,314 |
| $ | 143,980,916 |
| | |
| | 0.10405711 |

| Month | Total AQEW | Class A AQEW | CLASS B AQEW | Embedded GEN | Excluded Consumption | TOTAL CLASS B Load for Allocation |
|---|---|---|---|---|---|---|
| Jan | 12,647,423 | 2,046,868 | 10,600,555 | 301,107 | 33,733 | 10,867,929 |
| Feb | 11,515,240 | 1,914,114 | 9,601,126 | 289,137 | 13,886 | 9,876,376 |
| Mar | 11,757,578 | 1,995,390 | 9,762,188 | 352,918 | 17,842 | 10,097,264 |
| Apr | 10,740,825 | 1,789,920 | 8,950,906 | 488,168 | 29,918 | 9,409,156 |
| May | 10,574,639 | 1,956,120 | 8,618,520 | 362,079 | 27,139 | 8,953,460 |
| June | 10,882,868 | 1,916,493 | 8,966,375 | 289,556 | 26,290 | 9,229,642 |
| July | 12,426,194 | 2,016,882 | 10,409,312 | 356,788 | 34,262 | 10,731,844 |
| Aug | 11,822,472 | 2,144,675 | 9,677,797 | 398,069 | 35,431 | 10,040,435 |
| Sept | 10,626,902 | 2,080,759 | 8,546,143 | 335,452 | 33,055 | 8,848,541 |
| Oct | 10,877,471 | 2,195,503 | 8,681,968 | 351,730 | 32,070 | 9,001,628 |
| Nov | 11,399,627 | 2,144,667 | 9,254,961 | 422,093 | 18,768 | 9,658,286 |
| Dec | 12,547,918 | 2,098,682 | 10,449,237 | 329,114 | 18,982 | 10,759,369 |
| Total | 137,819,158 | 24,300,073 | 113,519,087 | 4,276,212 | 321,376 | 117,473,928 |

| | | | |
|---|---|---|---|
| **Total Global Adjustment $** | **Class A GA$** | **Clas B GA$** | **Peak Demand Factor** |
| $605,956,346 | $62,567,562 | $543,388,784 | 0.10325424 |
| $527,700,886 | $54,547,807 | $473,153,079 | 0.10336880 |
| $554,807,967 | $57,349,834 | $497,458,133 | 0.10336880 |
| $614,806,752 | $63,551,836 | $551,254,916 | 0.10336880 |
| $657,201,974 | $67,934,179 | $589,267,794 | 0.10336880 |
| $724,596,076 | $74,900,627 | $649,695,450 | 0.10336880 |
| $609,580,628 | $63,449,364 | $546,131,264 | 0.10408691 |
| $699,840,395 | $72,844,224 | $626,996,171 | 0.10408691 |
| $657,359,157 | $68,405,977 | $588,953,180 | 0.10406180 |
| $634,176,606 | $65,993,559 | $568,183,047 | 0.10406180 |
| $846,999,195 | $88,140,261 | $758,858,935 | 0.10406180 |
| $591,657,265 | $61,566,145 | $530,091,120 | 0.10405711 |
| $7,724,683,248 | $801,251,375 | $6,923,431,873 | |

December 2013 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 12,547,918 |
| |
| 2,098,682 |
| |
| 10,449,237 |
| |
| 329,114 |
| |
| 18,982 |
| |
| 10,759,369 |

| | |
|---|---|
| $ | 591,657,265 |
| | |
| $ | 61,566,145 |
| $ | 530,091,120 |
| | |
| | 0.10405711 |

November 2013 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,399,627 |
| |
| 2,144,667 |
| |
| 9,254,961 |
| |
| 422,093 |
| |
| 18,768 |
| |
| 9,658,286 |

| | |
|---|---|
| $ | 846,999,195 |
| | |
| $ | 88,140,261 |
| $ | 758,858,935 |
| | |
| | 0.1040618 |

October 2013 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,877,471 |
| |
| 2,195,503 |
| |
| 8,681,968 |
| |
| 351,730 |
| |
| 32,070 |
| |
| 9,001,628 |

| | |
|---|---|
| $ | 634,176,606 |
| | |
| $ | 65,993,559 |
| $ | 568,183,047 |
| | |
| | 0.1040618 |

September 2013 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,626,902 |
| |
| 2,080,759 |
| |
| 8,546,143 |
| |
| 335,452 |
| |
| 33,055 |
| |
| 8,848,541 |

| | |
|---|---|
| $ | 657,359,157 |
| | |
| $ | 68,405,977 |
| $ | 588,953,180 |
| | |
| | 0.1040618 |

August 2013 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,822,472 |
| |
| 2,144,675 |
| |
| 9,677,797 |
| |
| 398,069 |
| |
| 35,431 |
| |
| 10,040,435 |

| | |
|---|---|
| $ | 699,840,395 |
| | |
| $ | 72,844,224 |
| $ | 626,996,171 |
| | |
| | 0.10408691 |

July 2013 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 12,426,194 |
| |
| 2,016,882 |
| |
| 10,409,312 |
| |
| 356,788 |
| |
| 34,262 |
| |
| 10,731,844 |

| | |
|---|---|
| $ | 609,580,628 |
| | |
| $ | 63,449,364 |
| $ | 546,131,264 |
| | |
| | 0.10408691 |

June 2013 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,882,868 |
| |
| 1,916,493 |
| |
| 8,966,375 |
| |
| 289,556 |
| |
| 26,290 |
| |
| 9,229,642 |

| | |
|---|---|
| $ | 724,596,076 |
| | |
| $ | 74,900,627 |
| $ | 649,695,450 |
| | |
| | 0.1033688 |

May 2013 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,574,639 |
| |
| 1,956,120 |
| |
| 8,618,520 |
| |
| 362,079 |
| |
| 27,139 |
| |
| 8,953,460 |

| | |
|---|---|
| $ | 657,201,974 |
| | |
| $ | 67,934,179 |
| $ | 589,267,794 |
| | |
| | 0.1033688 |

April 2013 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,740,825 |
| - | |
| Class A AQEW | 1,789,920 |
| | |
| CLASS B AQEW | 8,950,906 |
| + | |
| Embedded GEN | 488,168 |
| - | |
| Excluded Consumption | 29,918 |
| | |
| TOTAL CLASS B Load for Allocation | 9,409,156 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 614,806,752 |
| | | |
| Class A GA$ | $ | 63,551,836 |
| Clas B GA$ | $ | 551,254,916 |
| | | |
| Peak Demand Factor | | 0.1033688 |

March 2013 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,757,578 |
| - | |
| Class A AQEW | 1,995,390 |
| | |
| CLASS B AQEW | 9,762,188 |
| + | |
| Embedded GEN | 352,918 |
| - | |
| Excluded Consumption | 17,842 |
| | |
| TOTAL CLASS B Load for Allocation | 10,097,264 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 554,807,967 |
| | | |
| Class A GA$ | $ | 57,349,834 |
| Clas B GA$ | $ | 497,458,133 |
| | | |
| Peak Demand Factor | | 0.1033688 |

February 2013 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,515,240 |
| - | |
| Class A AQEW | 1,914,114 |
| | |
| CLASS B AQEW | 9,601,126 |
| + | |
| Embedded GEN | 289,137 |
| - | |
| Excluded Consumption | 13,886 |
| | |
| TOTAL CLASS B Load for Allocation | 9,876,376 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 527,700,886 |
| | | |
| Class A GA$ | $ | 54,547,807 |
| Clas B GA$ | $ | 473,153,079 |
| | | |
| Peak Demand Factor | | 0.1033688 |

January 2013 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 12,647,423 |
| - | |
| Class A AQEW | 2,046,868 |
| | |
| CLASS B AQEW | 10,600,555 |
| + | |
| Embedded GEN | 301,107 |
| - | |
| Excluded Consumption | 33,733 |
| | |
| TOTAL CLASS B Load for Allocation | 10,867,929 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 605,956,346 |
| | | |
| Class A GA$ | $ | 62,567,562 |
| Clas B GA$ | $ | 543,388,784 |
| | | |
| Peak Demand Factor | | 0.10325424 |

November 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,905,547 |
| - | |
| Class A AQEW | 1,940,831 |
| | |
| CLASS B AQEW | 9,964,716 |
| + | |
| Embedded GEN | 285,071 |
| - | |
| Excluded Consumption | 30,836 |
| | |
| TOTAL CLASS B Load for Allocation | 10,218,952 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 462,985,650 |
| | | |
| Class A GA$ | $ | 47,774,336 |
| Clas B GA$ | $ | 415,211,314 |
| | | |
| Peak Demand Factor | | 0.10318751 |

November 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,278,642 |
| - | |
| Class A AQEW | 2,012,722 |
| | |
| CLASS B AQEW | 9,265,920 |
| + | |
| Embedded GEN | 271,131 |
| - | |
| Excluded Consumption | 27,179 |
| | |
| TOTAL CLASS B Load for Allocation | 9,509,872 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 575,208,392 |
| | | |
| Class A GA$ | $ | 59,167,626 |
| Clas B GA$ | $ | 516,040,766 |
| | | |
| Peak Demand Factor | | 0.10286294 |

October 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,900,883 |
| - | |
| Class A AQEW | 2,029,476 |
| | |
| CLASS B AQEW | 8,871,408 |
| + | |
| Embedded GEN | 278,004 |
| - | |
| Excluded Consumption | 34,642 |
| | |
| TOTAL CLASS B Load for Allocation | 9,114,770 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 545,591,889 |
| | | |
| Class A GA$ | $ | 55,289,382 |
| Clas B GA$ | $ | 490,302,507 |
| | | |
| Peak Demand Factor | | 0.10133835 |

September 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,812,042 |
| - | |
| Class A AQEW | 1,947,235 |
| | |
| CLASS B AQEW | 8,864,807 |
| + | |
| Embedded GEN | 215,553 |
| - | |
| Excluded Consumption | 38,170 |
| | |
| TOTAL CLASS B Load for Allocation | 9,042,191 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 478,914,594 |
| | | |
| Class A GA$ | $ | 48,409,401 |
| Clas B GA$ | $ | 430,505,193 |
| | | |
| Peak Demand Factor | | 0.10108149 |

August 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 12,372,266 |
| - | |
| Class A AQEW | 2,087,680 |
| | |
| CLASS B AQEW | 10,284,586 |
| + | |
| Embedded GEN | 218,206 |
| - | |
| Excluded Consumption | 39,277 |
| | |
| TOTAL CLASS B Load for Allocation | 10,463,515 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 484,832,901 |
| | | |
| Class A GA$ | $ | 48,972,128 |
| Clas B GA$ | $ | 489,817,759 |
| | | |
| Peak Demand Factor | | 0.10222683 |

July 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 13,167,379 |
| - | |
| Class A AQEW | 2,056,251 |
| | |
| CLASS B AQEW | 11,111,129 |
| + | |
| Embedded GEN | 224,480 |
| - | |
| Excluded Consumption | 41,032 |
| | |
| TOTAL CLASS B Load for Allocation | 11,294,576 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 421,657,603 |
| | | |
| Class A GA$ | $ | 42,438,290 |
| Clas B GA$ | $ | 379,219,313 |
| | | |
| Peak Demand Factor | | 0.10064633 |

June 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,557,688 |
| - | |
| Class A AQEW | 1,807,368 |
| | |
| CLASS B AQEW | 9,750,319 |
| + | |
| Embedded GEN | 280,043 |
| - | |
| Excluded Consumption | 35,265 |
| | |
| TOTAL CLASS B Load for Allocation | 9,995,097 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 584,836,353 |
| | | |
| Class A GA$ | $ | 58,215,306 |
| Clas B GA$ | $ | 526,621,046 |
| | | |
| Peak Demand Factor | | 0.09954119 |

May 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,921,686 |
| - | |
| Class A AQEW | 1,949,039 |
| | |
| CLASS B AQEW | 8,972,647 |
| + | |
| Embedded GEN | 273,589 |
| - | |
| Excluded Consumption | 30,595 |
| | |
| TOTAL CLASS B Load for Allocation | 9,215,640 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 578,188,856 |
| | | |
| Class A GA$ | $ | 57,553,607 |
| Clas B GA$ | $ | 520,624,504 |
| | | |
| Peak Demand Factor | | 0.09954119 |

April 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,430,493 |
| - | |
| Class A AQEW | 1,869,978 |
| | |
| CLASS B AQEW | 8,560,515 |
| + | |
| Embedded GEN | 287,085 |
| - | |
| Excluded Consumption | 28,508 |
| | |
| TOTAL CLASS B Load for Allocation | 8,819,093 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 594,728,963 |
| | | |
| Class A GA$ | $ | 59,220,184 |
| Clas B GA$ | $ | 535,508,779 |
| | | |
| Peak Demand Factor | | 0.09957508 |

March 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,262,788 |
| - | |
| Class A AQEW | 1,915,552 |
| | |
| CLASS B AQEW | 9,347,235 |
| + | |
| Embedded GEN | 304,304 |
| - | |
| Excluded Consumption | 24,729 |
| | |
| TOTAL CLASS B Load for Allocation | 9,626,811 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 666,515,554 |
| | | |
| Class A GA$ | $ | 66,368,340 |
| Clas B GA$ | $ | 600,147,215 |
| | | |
| Peak Demand Factor | | 0.09957508 |

February 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,369,137 |
| - | |
| Class A AQEW | 1,819,388 |
| | |
| CLASS B AQEW | 9,549,749 |
| + | |
| Embedded GEN | 259,661 |
| - | |
| Excluded Consumption | 26,640 |
| | |
| TOTAL CLASS B Load for Allocation | 9,782,770 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 549,975,675 |
| | | |
| Class A GA$ | $ | 54,763,872 |
| Clas B GA$ | $ | 495,211,803 |
| | | |
| Peak Demand Factor | | 0.09957508 |

January 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 12,497,503 |
| - | |
| Class A AQEW | 1,891,865 |
| | |
| CLASS B AQEW | 10,605,638 |
| + | |
| Embedded GEN | 290,100 |
| - | |
| Excluded Consumption | 29,895 |
| | |
| TOTAL CLASS B Load for Allocation | 10,865,843 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 512,347,625 |
| | | |
| Class A GA$ | $ | 51,017,056 |
| Clas B GA$ | $ | 461,330,570 |
| | | |
| Peak Demand Factor | | 0.09957508 |

December 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,893,787 |
| - | |
| Class A AQEW | 1,807,864 |
| | |
| CLASS B AQEW | 10,085,923 |
| + | |
| Embedded GEN | 278,802 |
| - | |
| Excluded Consumption | 28,995 |
| | |
| TOTAL CLASS B Load for Allocation | 10,335,731 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 540,458,223 |
| | | |
| Class A GA$ | $ | 53,816,171 |
| Clas B GA$ | $ | 486,642,053 |
| | | |
| Peak Demand Factor | | 0.09957508 |

November 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,883,510 |
| - | |
| Class A AQEW | 1,818,078 |
| | |
| CLASS B AQEW | 9,065,432 |
| + | |
| Embedded GEN | 267,297 |
| - | |
| Excluded Consumption | 14,037 |
| | |
| TOTAL CLASS B Load for Allocation | 9,318,692 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 451,020,116 |
| | | |
| Class A GA$ | $ | 44,910,364 |
| Clas B GA$ | $ | 406,109,752 |
| | | |
| Peak Demand Factor | | 0.09957508 |

October 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,804,905 |
| - | |
| Class A AQEW | 1,913,542 |
| | |
| CLASS B AQEW | 8,891,363 |
| + | |
| Embedded GEN | 211,046 |
| - | |
| Excluded Consumption | 31,170 |
| | |
| TOTAL CLASS B Load for Allocation | 9,071,240 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 456,870,112 |
| | | |
| Class A GA$ | $ | 45,492,878 |
| Clas B GA$ | $ | 411,377,234 |
| | | |
| Peak Demand Factor | | 0.09957508 |

September 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,918,652 |
| - | |
| Class A AQEW | 1,893,483 |
| | |
| CLASS B AQEW | 9,025,170 |
| + | |
| Embedded GEN | 168,994 |
| - | |
| Excluded Consumption | 48,302 |
| | |
| TOTAL CLASS B Load for Allocation | 9,145,861 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 391,468,827 |
| | | |
| Class A GA$ | $ | 38,980,540 |
| Clas B GA$ | $ | 352,488,288 |
| | | |
| Peak Demand Factor | | 0.09957508 |

August 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 12,281,682 |
| - | |
| Class A AQEW | 1,944,232 |
| | |
| CLASS B AQEW | 10,337,450 |
| + | |
| Embedded GEN | 189,009 |
| - | |
| Excluded Consumption | 36,087 |
| | |
| TOTAL CLASS B Load for Allocation | 10,490,372 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 426,153,523 |
| | | |
| Class A GA$ | $ | 42,434,271 |
| Clas B GA$ | $ | 383,719,252 |
| | | |
| Peak Demand Factor | | 0.09957508 |

July 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 12969441 |
| - | |
| Class A AQEW | 1,863,383 |
| | |
| CLASS B AQEW | 11,106,058 |
| + | |
| Embedded GEN | 200,436 |
| - | |
| Excluded Consumption | 33,473 |
| | |
| TOTAL CLASS B Load for Allocation | 11,273,021 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 391,700,994 |
| | | |
| Class A GA$ | $ | 39,003,658 |
| Clas B GA$ | $ | 352,697,336 |
| | | |
| Peak Demand Factor | | 0.09957508 |

Year to Date 2011 - GA Allocation data (September)

| | MWH |
|---|---|
| Total AQEW | 138,630,409 |
| - | |
| Class A AQEW | 22,728,668 |
| | |
| CLASS B AQEW | 115,901,741 |
| + | |
| Embedded GEN | 2,831,157 |
| - | |
| Excluded Consumption | 350,168 |
| | |
| TOTAL CLASS B Load for Allocation | 118,382,730 |

| | |
|---|---|
| Total Global Adjustment $ | 5,309,712,152 |
| | |
| Class A GA$ | 553,357,286 |
| Clas B GA$ | 4,756,354,865 |
| | |
| Peak Demand Factor (Jan-Jun) | 0.10887593 |
| Peak Demand Factor (Jul-Dec) | 0.09957508 |

June 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,964,964 |
| - | |
| Class A AQEW | 1,847,675 |
| | |
| CLASS B AQEW | 9,117,288 |
| + | |
| Embedded GEN | 218,894 |
| - | |
| Excluded Consumption | 18,487 |
| | |
| TOTAL CLASS B Load for Allocation | 9,317,695 |

| | | |
|---|---|---|
| Total Global Adjustment $ | | $423,140,323.26 |
| | | |
| Class A GA$ | $ | 46,045,841 |
| Clas B GA$ | $ | 377,094,482 |
| | | |
| Peak Demand Factor | | 0.10887593 |

May 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,568,314 |
| - | |
| Class A AQEW | 1,933,429 |
| | |
| CLASS B AQEW | 8,634,885 |
| + | |
| Embedded GEN | 261,085 |
| - | |
| Excluded Consumption | 23,560 |
| | |
| TOTAL CLASS B Load for Allocation | 8,872,410 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 498,229,322 |
| | | |
| Class A GA$ | $ | 54,245,181 |
| Clas B GA$ | $ | 443,984,141 |
| | | |
| Peak Demand Factor | | 0.10887593 |

April 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,888,933 |
| - | |
| Class A AQEW | 1,996,233 |
| | |
| CLASS B AQEW | 8,892,700 |
| + | |
| Embedded GEN | 266,583 |
| - | |
| Excluded Consumption | 27,120 |
| | |
| TOTAL CLASS B Load for Allocation | 9,132,162 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 440,436,684 |
| | | |
| Class A GA$ | $ | 47,952,954 |
| Clas B GA$ | $ | 392,483,731 |
| | | |
| Peak Demand Factor | | 0.10887593 |

March 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 12,097,068 |
| - | |
| Class A AQEW | 1,987,339 |
| | |
| CLASS B AQEW | 10,109,729 |
| + | |
| Embedded GEN | 266,580 |
| - | |
| Excluded Consumption | 27,120 |
| | |
| TOTAL CLASS B Load for Allocation | 10,349,190 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 427,712,982 |
| | | |
| Class A GA$ | $ | 46,567,649 |
| Clas B GA$ | $ | 381,145,333 |
| | | |
| Peak Demand Factor | | 0.10887593 |

February 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,586,544 |
| - | |
| Class A AQEW | 1,821,355 |
| | |
| CLASS B AQEW | 9,765,189 |
| + | |
| Embedded GEN | 233,940 |
| - | |
| Excluded Consumption | 30,643 |
| | |
| TOTAL CLASS B Load for Allocation | 9,968,486 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 393,446,399 |
| | | |
| Class A GA$ | $ | 42,836,843 |
| Clas B GA$ | $ | 350,609,556 |
| | | |
| Peak Demand Factor | | 0.10887593 |

January 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 13,056,516 |
| - | |
| Class A AQEW | 1,981,255 |
| | |
| CLASS B AQEW | 11,075,261 |
| + | |
| Embedded GEN | 252,084 |
| - | |
| Excluded Consumption | 33,446 |
| | |
| TOTAL CLASS B Load for Allocation | 11,293,899 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 469,074,645 |
| | | |
| Class A GA$ | $ | 51,070,938 |
| Clas B GA$ | $ | 418,003,707 |
| | | |
| Peak Demand Factor | | 0.10887593 |

10574639.29
1956119.51
8618519.783
362079.014
27139.07
8953459.727
657201973.7
67934179.38
605041975.5
0.1033688

- GA Allocation data

| | MWH |
|---|---|
| Total AQEW | |
| - | |
| Class A AQEW | |
| | |
| CLASS B AQEW | |
| + | |
| Embedded GEN | |
| - | |
| Excluded Consumption | |
| | |
| TOTAL CLASS B Load for Allocation | |

| | |
|---|---|
| Total Global Adjustment $ | |
| | |
| Class A GA$ | |
| Clas B GA$ | |
| | |
| Peak Demand Factor | |

Ontario Net Energy Demand across Demand Outlooks

| Energy (TWh) | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|
| Outlook A | 142.5 | 143.0 | 141.9 | 140.6 |
| Outlook B | 142.5 | 143.4 | 142.9 | 142.7 |
| Outlook C | 142.5 | 143.5 | 143.2 | 143.7 |
| Outlook D | 142.5 | 143.5 | 143.2 | 144.3 |

Ontario Net Summer Peak Demand across Demand Outlooks

| Summer Peak Demand (MW) | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|
| Outlook A | 23,965 | 23,971 | 23,900 | 23,705 |
| Outlook B | 23,965 | 24,046 | 24,083 | 24,041 |
| Outlook C | 23,965 | 24,048 | 24,088 | 24,108 |
| Outlook D | 23,965 | 24,048 | 24,088 | 24,166 |

Ontario Net Winter Peak Demand across Demand Outlooks

| Winter Peak Demand (MW) | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|
| Outlook A | 22,159 | 22,093 | 22,020 | 21,825 |
| Outlook B | 22,159 | 22,140 | 22,143 | 22,072 |
| Outlook C | 22,159 | 22,190 | 22,251 | 22,315 |
| Outlook D | 22,159 | 22,190 | 22,251 | 22,385 |

| Net Summer minus Net Winter Peak | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|
| Outlook A | 1,806 | 1,878 | 1,880 | 1,880 |
| Outlook B | 1,806 | 1,906 | 1,939 | 1,969 |
| Outlook C | 1,806 | 1,859 | 1,838 | 1,794 |
| Outlook D | 1,806 | 1,859 | 1,838 | 1,781 |

At Generator Level. Net of policy driven conservation including codes and standards

| 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|
| 138.9 | 137.7 | 136.1 | 135.0 | 134.1 | 133.5 | 132.5 | 131.7 |
| 142.2 | 142.2 | 141.7 | 141.6 | 141.5 | 141.7 | 141.5 | 141.2 |
| 144.2 | 145.1 | 145.6 | 146.6 | 147.7 | 149.3 | 150.4 | 151.7 |
| 145.3 | 146.9 | 148.1 | 149.9 | 151.9 | 154.4 | 156.5 | 158.8 |

| 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|
| 23,465 | 23,216 | 23,029 | 22,879 | 22,777 | 22,628 | 22,568 | 22,453 |
| 23,993 | 23,916 | 23,889 | 23,881 | 23,890 | 23,868 | 23,918 | 23,882 |
| 24,124 | 24,112 | 24,152 | 24,216 | 24,298 | 24,353 | 24,486 | 24,549 |
| 24,242 | 24,291 | 24,393 | 24,520 | 24,667 | 24,788 | 24,987 | 25,446 |

| 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|
| 21,574 | 21,338 | 21,143 | 20,976 | 20,864 | 20,694 | 20,602 | 20,483 |
| 21,985 | 21,898 | 21,841 | 21,799 | 21,778 | 21,718 | 21,718 | 21,659 |
| 22,395 | 22,501 | 22,661 | 22,863 | 23,105 | 23,326 | 23,626 | 23,911 |
| 22,560 | 22,783 | 23,083 | 23,442 | 23,862 | 24,273 | 24,779 | 24,742 |

| 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|
| 1,891 | 1,878 | 1,886 | 1,903 | 1,913 | 1,934 | 1,966 | 1,971 |
| 2,007 | 2,018 | 2,048 | 2,082 | 2,113 | 2,149 | 2,200 | 2,223 |
| 1,729 | 1,612 | 1,491 | 1,353 | 1,193 | 1,027 | 859 | 638 |
| 1,682 | 1,508 | 1,311 | 1,078 | 806 | 515 | 208 | 704 |

| 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
|---|---|---|---|---|---|---|---|
| 131.2 | 131.0 | 130.8 | 130.7 | 130.7 | 131.0 | 131.5 | 132.3 |
| 141.5 | 142.1 | 142.4 | 142.8 | 143.3 | 144.0 | 145.0 | 146.3 |
| 153.5 | 155.9 | 158.0 | 160.5 | 163.1 | 166.2 | 169.4 | 173.1 |
| 161.7 | 165.3 | 168.6 | 172.4 | 176.3 | 181.0 | 185.6 | 191.0 |

| 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
|---|---|---|---|---|---|---|---|
| 22,372 | 22,295 | 22,292 | 22,258 | 22,231 | 22,198 | 22,317 | 22,436 |
| 23,918 | 23,940 | 24,030 | 24,082 | 24,133 | 24,171 | 24,369 | 24,568 |
| 24,680 | 24,804 | 25,049 | 25,550 | 26,022 | 26,199 | 26,551 | 26,902 |
| 25,921 | 26,124 | 26,410 | 26,667 | 26,937 | 27,197 | 27,633 | 28,071 |

| 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
|---|---|---|---|---|---|---|---|
| 20,394 | 20,315 | 20,316 | 20,295 | 20,282 | 20,260 | 20,375 | 20,488 |
| 21,668 | 21,672 | 21,746 | 21,794 | 21,844 | 21,875 | 22,052 | 22,229 |
| 24,265 | 24,633 | 24,513 | 25,085 | 25,695 | 26,330 | 27,185 | 28,144 |
| 25,492 | 26,277 | 27,226 | 28,296 | 29,451 | 30,683 | 32,158 | 33,716 |

| 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
|---|---|---|---|---|---|---|---|
| 1,978 | 1,979 | 1,976 | 1,963 | 1,948 | 1,938 | 1,942 | 1,949 |
| 2,249 | 2,268 | 2,284 | 2,288 | 2,289 | 2,296 | 2,317 | 2,339 |
| 415 | 171 | 536 | 465 | 327 | (131) | (634) | (1,242) |
| 429 | (153) | (816) | (1,629) | (2,513) | (3,486) | (4,525) | (5,645) |

| 2035 |
|---|
| 133.4 |
| 147.8 |
| 177.1 |
| 196.7 |

| 2035 |
|---|
| 22,586 |
| 24,792 |
| 27,276 |
| 28,532 |

| 2035 |
|---|
| 20,622 |
| 22,422 |
| 29,167 |
| 35,379 |

| 2035 |
|---|
| 1,964 |
| 2,369 |
| (1,891) |
| (6,847) |

Table 1: Assumptions across Demand Outlooks

| Sector | Outlook A | Outlook B |
|---|---|---|
| Residential (52 TWh in 2015) | 48 TWh in 2035 | 51 TWh in 2035 |
| Commercial (51 TWh in 2015) | 49 TWh in 2035 | 54 TWh in 2035 |
| Industrial (35 TWh in 2015) | 29 TWh in 2035 | 35 TWh in 2035 |
| Electric Vehicles (<1 TWh in 2015) | 2 TWh in 2035 | 3 TWh in 2035 |
| Transit (<1 TWh in 2015) | 1 TWh in 2035 | 1 TWh in 2035 |
| Other* | 5 TWh | 5 TWh |
| Total** (143 TWh in 2015) | 133 TWh in 2035 | 148 TWh in 2035 |

* Others = Agriculture, Remote Communities, Generator Demand, IEI, and S

** At Generator Level. Total may not add up due to rounding

| Outlook C | Outlook D |
|---|---|
| Oil heating switches to heat pumps, electric space and water heating gain 25% of gas market share (58 TWh in 2035) | Oil heating switches to heat pumps, electric space and water heating gain 50% of gas market share (64TWh in 2035) |
| Oil heating switches to heat pumps, electric space and water heating gain 25% of gas market share (63 TWh in 2035) | Oil heating switches to heat pumps, electric space and water heating gain 50% of gas market share (69 TWh in 2035) |
| 5% of 2012 fossil energy switches to electric equivalent (43 TWh in 2035) | 10% of 2012 fossil energy switches to electric equivalent (51 TWh in 2035) |
| 2.4 million electric vehicles (EVs) by 2035 (8 TWh in 2035) | 2.4 million EVs by 2035 (8 TWh in 2035) |
| Planned projects, 2017-2035 (1 TWh in 2035) | Planned projects, 2017-2035 (1 TWh in 2035) |
| 5 TWh | 5 TWh |
| 177 TWh in 2035 | 197 TWh in 2035 |

Street Lighting

Ontario Net Electricity Demand by Sector, TWh

| Residential Net Energy (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 52.1 | 51.5 | 51.8 | 51.3 | 51.1 |
| Outlook B | 52.1 | 51.6 | 52.0 | 51.6 | 51.6 |
| Outlook C | 52.1 | 51.6 | 52.0 | 51.7 | 51.8 |
| Outlook D | 52.1 | 51.6 | 52.0 | 51.8 | 51.9 |

| Commercial Net Energy (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 51.3 | 51.2 | 51.5 | 51.0 | 50.6 |
| Outlook B | 51.3 | 51.5 | 52.1 | 51.8 | 51.7 |
| Outlook C | 51.3 | 51.6 | 52.4 | 52.3 | 52.4 |
| Outlook D | 51.3 | 51.6 | 52.4 | 52.4 | 52.5 |

| Industrial Net Energy (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 34.7 | 35.3 | 34.1 | 33.8 | 32.8 |
| Outlook B | 34.7 | 35.3 | 34.4 | 34.6 | 34.4 |
| Outlook C | 34.7 | 35.3 | 34.4 | 35.0 | 35.3 |
| Outlook D | 34.7 | 35.3 | 34.4 | 35.5 | 36.1 |

| Transportation (EVs and Transit) Net Energy (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 |
| Outlook B | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 |
| Outlook C | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 |
| Outlook D | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 |

| Other Net Energy (TWh)* | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 5.0 | 5.0 | 5.1 | 5.2 | 5.2 |
| Outlook B | 5.0 | 5.0 | 5.1 | 5.2 | 5.2 |
| Outlook C | 5.0 | 5.0 | 5.1 | 5.2 | 5.2 |
| Outlook D | 5.0 | 5.0 | 5.1 | 5.2 | 5.2 |

* Others = Agriculture, Remote Communities, Generator Demand, IEI, and Street Lighting

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50.6 | 49.9 | 49.4 | 49.0 | 48.5 | 48.1 | 47.9 | 47.8 | 47.7 | 47.7 | 47.7 | 47.8 |
| 51.3 | 50.8 | 50.3 | 50.1 | 49.7 | 49.5 | 49.4 | 49.3 | 49.3 | 49.4 | 49.5 | 49.7 |
| 51.7 | 51.4 | 51.2 | 51.3 | 51.2 | 51.4 | 51.7 | 52.1 | 52.6 | 53.2 | 53.8 | 54.5 |
| 51.9 | 51.7 | 51.7 | 52.0 | 52.2 | 52.7 | 53.3 | 54.1 | 54.9 | 55.9 | 57.0 | 58.2 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50.0 | 49.6 | 49.4 | 49.5 | 49.4 | 49.4 | 49.2 | 49.0 | 48.9 | 48.8 | 48.5 | 48.4 |
| 51.3 | 51.2 | 51.3 | 51.5 | 51.6 | 51.9 | 51.9 | 51.9 | 52.0 | 52.1 | 52.1 | 52.1 |
| 52.4 | 52.6 | 53.0 | 53.7 | 54.2 | 54.8 | 55.3 | 55.7 | 56.3 | 56.9 | 57.5 | 58.1 |
| 52.7 | 53.0 | 53.6 | 54.5 | 55.2 | 56.1 | 56.8 | 57.6 | 58.5 | 59.5 | 60.4 | 61.6 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 32.2 | 31.8 | 31.2 | 30.4 | 29.8 | 29.4 | 28.8 | 28.4 | 28.0 | 28.0 | 28.0 | 27.9 |
| 34.6 | 34.8 | 34.8 | 34.3 | 34.1 | 34.1 | 33.6 | 33.7 | 33.5 | 33.6 | 33.8 | 33.8 |
| 35.9 | 36.5 | 37.0 | 37.0 | 37.2 | 37.6 | 37.6 | 38.0 | 38.3 | 38.9 | 39.5 | 40.0 |
| 37.2 | 38.3 | 39.2 | 39.6 | 40.3 | 41.1 | 41.5 | 42.4 | 43.1 | 44.2 | 45.2 | 46.1 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.2 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.3 | 1.5 | 1.7 | 1.8 | 2.0 | 2.1 |
| 0.3 | 0.6 | 0.8 | 1.1 | 1.4 | 1.6 | 1.9 | 2.1 | 2.4 | 2.7 | 2.9 | 3.2 |
| 0.3 | 0.6 | 0.9 | 1.3 | 1.6 | 2.0 | 2.6 | 3.1 | 3.8 | 4.4 | 5.1 | 5.9 |
| 0.3 | 0.6 | 0.9 | 1.3 | 1.6 | 2.0 | 2.6 | 3.1 | 3.8 | 4.4 | 5.1 | 5.9 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |
| 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |
| 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |
| 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 47.7 | 48.0 | 48.2 | 48.5 |
| 49.7 | 50.1 | 50.4 | 50.8 |
| 55.1 | 56.1 | 57.1 | 58.1 |
| 59.2 | 60.8 | 62.3 | 63.8 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 48.2 | 48.5 | 48.7 | 49.1 |
| 52.2 | 52.7 | 53.2 | 53.7 |
| 58.9 | 60.1 | 61.4 | 62.8 |
| 62.9 | 64.7 | 66.6 | 68.7 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 28.0 | 28.1 | 28.4 | 28.8 |
| 33.9 | 34.1 | 34.5 | 34.9 |
| 40.5 | 41.1 | 41.9 | 42.8 |
| 47.0 | 48.2 | 49.4 | 50.7 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 2.3 | 2.4 | 2.5 | 2.6 |
| 3.4 | 3.6 | 3.8 | 3.9 |
| 6.6 | 7.4 | 8.1 | 8.7 |
| 6.6 | 7.4 | 8.1 | 8.7 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 5.4 | 5.5 | 5.5 | 5.5 |
| 5.4 | 5.5 | 5.5 | 5.5 |
| 5.4 | 5.5 | 5.5 | 5.5 |
| 5.4 | 5.5 | 5.5 | 5.5 |

Assumptions of economic drivers underlying electricity demand outlooks

| Driver | 2005-2015 | |
|---|---|---|
| | **Outlook A** | **Outlooks B,C,D** |
| Growth in number of residential households | 15% | 15% |
| Growth in commercial floor space | 20% | 20% |
| Ontario Industrial GDP (annual growth rate) | 2% | -2% |

| 2015-2025 | | 2025-2035 | |
|---|---|---|---|
| **Outlook A** | **Outlooks B,C,D** | **Outlook A** | **Outlooks B,C,D** |
| 11% | 14% | 7% | 9% |
| 10% | 15% | 8% | 11% |
| 0% | 1% | 1% | 1% |

Residential Net Energy Demand and Monthly Intensity 2015-2035: Outlooks A,B,C,D

| Residential Net Energy (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 52.1 | 51.5 | 51.8 | 51.3 | 51.1 |
| Outlook B | 52.1 | 51.6 | 52.0 | 51.6 | 51.6 |
| Outlook C | 52.1 | 51.6 | 52.0 | 51.7 | 51.8 |
| Outlook D | 52.1 | 51.6 | 52.0 | 51.8 | 51.9 |

| Residential Intensity (kWh/HH/month) | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 753 | 735 | 729 | 713 | 703 |
| Outlook B | 753 | 735 | 729 | 713 | 702 |
| Outlook C | 753 | 735 | 730 | 714 | 705 |
| Outlook D | 753 | 735 | 730 | 715 | 707 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|
| 50.6 | 49.9 | 49.4 | 49.0 | 48.5 | 48.1 | 47.9 | 47.8 | 47.7 | 47.7 | 47.7 |
| 51.3 | 50.8 | 50.3 | 50.1 | 49.7 | 49.5 | 49.4 | 49.3 | 49.3 | 49.4 | 49.5 |
| 51.7 | 51.4 | 51.2 | 51.3 | 51.2 | 51.4 | 51.7 | 52.1 | 52.6 | 53.2 | 53.8 |
| 51.9 | 51.7 | 51.7 | 52.0 | 52.2 | 52.7 | 53.3 | 54.1 | 54.9 | 55.9 | 57.0 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|
| 688 | 672 | 658 | 648 | 636 | 627 | 619 | 613 | 607 | 603 | 598 |
| 688 | 672 | 659 | 648 | 637 | 628 | 621 | 615 | 609 | 605 | 601 |
| 693 | 680 | 670 | 664 | 656 | 653 | 650 | 649 | 649 | 651 | 653 |
| 696 | 685 | 677 | 673 | 669 | 669 | 670 | 674 | 678 | 685 | 692 |

| 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|
| 47.8 | 47.7 | 48.0 | 48.2 | 48.5 |
| 49.7 | 49.7 | 50.1 | 50.4 | 50.8 |
| 54.5 | 55.1 | 56.1 | 57.1 | 58.1 |
| 58.2 | 59.2 | 60.8 | 62.3 | 63.8 |

| 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|
| 595 | 590 | 590 | 590 | 589 |
| 598 | 594 | 594 | 594 | 594 |
| 657 | 658 | 665 | 672 | 679 |
| 700 | 708 | 720 | 733 | 747 |

Total Housing Stock

| | 2015 |
|---|---|
| Multi Res High Rise | 23% |
| Multi Res Low Rise | 11% |
| Row House | 13% |
| Single Family | 53% |

New Housing Starts

| | 2020 | 2025 | 2030 |
|---|---|---|---|
| Multi Res High Rise | 27% | 26% | 27% |
| Multi Res Low Rise | 11% | 10% | 10% |
| Row House | 18% | 20% | 20% |
| Single Family | 44% | 43% | 42% |

| 2035 |
|---|
| 31% |
| 12% |
| 21% |
| 36% |

Residential Demand by End Use (TWh) 2015, 2025, 2035: Outlooks A,B,C,D

| Net Energy (TWh) | 2015 | 2025 | 2025 | 2025 | 2025 |
|---|---|---|---|---|---|
| | | A | B | C | D |
| AC Central | 3.1 | 2.9 | 3.0 | 3.0 | 3.0 |
| AC Room | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Clothes Dryers | 2.5 | 2.4 | 2.5 | 2.5 | 2.5 |
| Clothes Washers | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Computers | 1.1 | 1.2 | 1.3 | 1.3 | 1.3 |
| Cooking | 2.5 | 2.1 | 2.2 | 2.2 | 2.2 |
| Dehumidifiers | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Dishwashers | 0.5 | 0.4 | 0.5 | 0.5 | 0.5 |
| Domestic Hot Water | 4.1 | 3.2 | 3.3 | 3.8 | 4.2 |
| Elevators | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Forced Air Central Heating | 1.5 | 1.2 | 1.2 | 2.7 | 3.6 |
| Freezers | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| Lighting | 7.9 | 5.9 | 6.0 | 6.0 | 6.0 |
| Miscellaneous | 4.0 | 4.7 | 4.9 | 4.9 | 4.9 |
| Baseboard Heating | 6.8 | 5.8 | 5.9 | 5.9 | 5.9 |
| Other Consumer Electronics | 3.7 | 3.9 | 4.1 | 4.1 | 4.1 |
| Refrigerators | 4.3 | 4.3 | 4.4 | 4.4 | 4.4 |
| Set Top Boxes | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 |
| Space Heating Room | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Swimming Pool Pumps | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| Televisions | 2.4 | 2.8 | 2.9 | 2.9 | 2.9 |
| Ventilation And Circulation | 3.1 | 2.5 | 2.6 | 2.6 | 2.6 |

| 2035 | 2035 | 2035 | 2035 |
|---|---|---|---|
| A | B | C | D |
| 2.9 | 3.0 | 3.0 | 3.0 |
| 0.5 | 0.5 | 0.5 | 0.5 |
| 2.1 | 2.2 | 2.2 | 2.2 |
| 0.3 | 0.3 | 0.3 | 0.3 |
| 1.3 | 1.4 | 1.4 | 1.4 |
| 2.2 | 2.3 | 2.3 | 2.3 |
| 0.4 | 0.4 | 0.4 | 0.4 |
| 0.5 | 0.5 | 0.5 | 0.5 |
| 3.1 | 3.3 | 5.6 | 7.9 |
| 0.2 | 0.2 | 0.2 | 0.2 |
| 1.3 | 1.5 | 6.4 | 9.9 |
| 1.7 | 1.8 | 1.8 | 1.8 |
| 4.7 | 4.9 | 4.9 | 4.9 |
| 5.5 | 5.8 | 5.8 | 5.8 |
| 5.5 | 5.7 | 5.7 | 5.7 |
| 4.6 | 4.8 | 4.8 | 4.8 |
| 4.6 | 4.6 | 4.6 | 4.6 |
| 0.9 | 0.9 | 0.9 | 0.9 |
| 0.1 | 0.1 | 0.1 | 0.1 |
| 0.6 | 0.6 | 0.6 | 0.6 |
| 3.3 | 3.5 | 3.5 | 3.5 |
| 2.2 | 2.5 | 2.5 | 2.5 |

| Residential Space Heating Total Stock Shares | | | | |
|---|---|---|---|---|
| **Year** | **Outlook A** | **Outlook B** | **Outlook C** | **Outlook D** |
| 2015 | 18% | 18% | 18% | 18% |
| 2020 | 18% | 18% | 19% | 19% |
| 2025 | 17% | 17% | 22% | 24% |
| 2030 | 17% | 17% | 26% | 32% |
| 2035 | 17% | 17% | 31% | 42% |

| Residential Space Heating New Stock Turnover Shares | | | | |
|---|---|---|---|---|
| **Year** | **Outlook A** | **Outlook B** | **Outlook C** | **Outlook D** |
| 2015 | 14% | 14% | 14% | 14% |
| 2020 | 16% | 16% | 22% | 26% |
| 2025 | 17% | 17% | 30% | 38% |
| 2030 | 17% | 17% | 36% | 50% |
| 2035 | 17% | 17% | 41% | 60% |

**Residential Water Heating Total Stock Shares**

| Year | Outlook A | Outlook B | Outlook C | Outlook D |
|---|---|---|---|---|
| 2015 | 23% | 23% | 23% | 23% |
| 2020 | 20% | 20% | 21% | 21% |
| 2025 | 19% | 19% | 22% | 24% |
| 2030 | 19% | 19% | 26% | 32% |
| 2035 | 19% | 19% | 32% | 45% |

**Residential Water Heating New Stock Turnover Shares**

| Year | Outlook A | Outlook B | Outlook C | Outlook D |
|---|---|---|---|---|
| 2015 | 19% | 19% | 19% | 19% |
| 2020 | 19% | 19% | 22% | 26% |
| 2025 | 19% | 19% | 28% | 37% |
| 2030 | 19% | 19% | 34% | 48% |
| 2035 | 19% | 20% | 40% | 60% |

| | Residential Space Heating Additional Heat Pump Sales in the Year Indicated | | | |
|---|---|---|---|---|
| **Year** | **Outlook A** | **Outlook B** | **Outlook C** | **Outlook D** |
| 2015 | - | - | - | - |
| 2020 | 5,887 | 7,500 | 30,553 | 43,624 |
| 2025 | 7,640 | 10,000 | 66,824 | 104,707 |
| 2030 | 8,156 | 10,000 | 75,566 | 123,438 |
| 2035 | 7,725 | 10,000 | 92,221 | 157,607 |

| | Residential Water Heating Additional Heat Pump Sales in the Year Indicated | | | |
|---|---|---|---|---|
| **Year** | **Outlook A** | **Outlook B** | **Outlook C** | **Outlook D** |
| 2015 | - | - | - | - |
| 2020 | 5,887 | 7,500 | 22,690 | 37,879 |
| 2025 | 7,640 | 10,000 | 43,706 | 77,412 |
| 2030 | 8,156 | 10,000 | 79,871 | 149,742 |
| 2035 | 7,725 | 10,000 | 102,783 | 195,566 |

Commercial Net Energy Demand and Intensity 2015-2035: Outlooks A,B,C,D

| Commercial Net Energy (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 51.3 | 51.2 | 51.5 | 51.0 | 50.6 |
| Outlook B | 51.3 | 51.5 | 52.1 | 51.8 | 51.7 |
| Outlook C | 51.3 | 51.6 | 52.4 | 52.3 | 52.4 |
| Outlook D | 51.3 | 51.6 | 52.4 | 52.4 | 52.5 |

| Commercial Intensity (kWh/sq ft) | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 15.0 | 14.8 | 14.8 | 14.5 | 14.2 |
| Outlook B | 15.0 | 14.8 | 14.8 | 14.5 | 14.2 |
| Outlook C | 15.0 | 14.9 | 14.9 | 14.6 | 14.5 |
| Outlook D | 15.0 | 14.9 | 14.9 | 14.7 | 14.5 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|
| 50.0 | 49.6 | 49.4 | 49.5 | 49.4 | 49.4 | 49.2 | 49.0 | 48.9 | 48.8 | 48.5 |
| 51.3 | 51.2 | 51.3 | 51.5 | 51.6 | 51.9 | 51.9 | 51.9 | 52.0 | 52.1 | 52.1 |
| 52.4 | 52.6 | 53.0 | 53.7 | 54.2 | 54.8 | 55.3 | 55.7 | 56.3 | 56.9 | 57.5 |
| 52.7 | 53.0 | 53.6 | 54.5 | 55.2 | 56.1 | 56.8 | 57.6 | 58.5 | 59.5 | 60.4 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|
| 13.9 | 13.7 | 13.5 | 13.4 | 13.3 | 13.2 | 13.0 | 12.9 | 12.7 | 12.6 | 12.5 |
| 14.0 | 13.7 | 13.6 | 13.5 | 13.4 | 13.3 | 13.1 | 13.0 | 12.9 | 12.7 | 12.6 |
| 14.2 | 14.1 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 13.9 | 13.9 | 13.9 | 13.9 |
| 14.3 | 14.2 | 14.2 | 14.2 | 14.3 | 14.3 | 14.4 | 14.4 | 14.5 | 14.5 | 14.6 |

| 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|
| 48.4 | 48.2 | 48.5 | 48.7 | 49.1 |
| 52.1 | 52.2 | 52.7 | 53.2 | 53.7 |
| 58.1 | 58.9 | 60.1 | 61.4 | 62.8 |
| 61.6 | 62.9 | 64.7 | 66.6 | 68.7 |

| 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|
| 12.3 | 12.2 | 12.2 | 12.1 | 12.1 |
| 12.5 | 12.4 | 12.3 | 12.3 | 12.3 |
| 13.9 | 13.9 | 14.1 | 14.2 | 14.4 |
| 14.7 | 14.9 | 15.2 | 15.4 | 15.8 |

Commercial Demand by End Use (TWh) 2015, 2025, 2035: Outlooks A,B,C,D

| Net Energy (TWh) | 2015 | 2025 | 2025 | 2025 | 2025 |
|---|---|---|---|---|---|
| | | A | B | C | D |
| Space Heating | 4.0 | 4.7 | 4.7 | 7.4 | 8.5 |
| Computer Equipment | 4.8 | 4.8 | 5.2 | 5.2 | 5.2 |
| Cooking | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 |
| Cooling Chillers | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 |
| Cooling DX | 3.6 | 3.5 | 3.6 | 3.6 | 3.6 |
| Domestic Hot Water | 0.8 | 0.4 | 0.4 | 0.7 | 0.8 |
| Elevators | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| HVAC Fans Pumps | 4.6 | 3.8 | 3.9 | 3.9 | 3.9 |
| Lighting | 18.7 | 17.9 | 19.0 | 19.0 | 19.0 |
| Miscellaneous Equipment | 4.9 | 5.4 | 5.7 | 5.7 | 5.7 |
| Other Plug Loads | 3.9 | 4.0 | 4.1 | 4.1 | 4.1 |
| Refrigeration | 3.9 | 3.0 | 3.0 | 3.0 | 3.0 |

| 2035 | 2035 | 2035 | 2035 |
|---|---|---|---|
| A | B | C | D |
| 5.0 | 5.1 | 13.3 | 18.6 |
| 4.7 | 5.4 | 5.4 | 5.4 |
| 0.8 | 0.8 | 0.8 | 0.8 |
| 1.0 | 1.1 | 1.1 | 1.1 |
| 3.4 | 3.8 | 3.8 | 3.8 |
| 0.4 | 0.4 | 1.3 | 1.9 |
| 0.3 | 0.3 | 0.3 | 0.3 |
| 3.3 | 3.6 | 3.6 | 3.6 |
| 17.6 | 19.6 | 19.6 | 19.6 |
| 5.9 | 6.6 | 6.6 | 6.6 |
| 4.0 | 4.2 | 4.2 | 4.2 |
| 2.6 | 2.7 | 2.7 | 2.7 |

Commercial Demand by Building Type (TWh) 2015, 2025, 2035: Outlooks A,B,C,D

| Net Energy (TWh) | 2015 | 2025 | 2025 | 2025 | 2025 |
|---|---|---|---|---|---|
| | | A | B | C | D |
| Food Retail | 3.0 | 2.4 | 2.4 | 2.5 | 2.5 |
| Hospital | 1.2 | 1.1 | 1.1 | 1.2 | 1.2 |
| Hotel | 1.8 | 1.8 | 1.8 | 1.9 | 1.9 |
| Non Food Retail | 7.3 | 6.7 | 6.7 | 7.1 | 7.3 |
| Office | 16.2 | 15.3 | 16.4 | 17.3 | 17.7 |
| Nursing Home | 2.1 | 1.9 | 1.9 | 2.1 | 2.1 |
| Other Commercial Buildings | 6.1 | 6.0 | 6.9 | 7.4 | 7.6 |
| Restaurant | 2.3 | 2.2 | 2.2 | 2.2 | 2.3 |
| Schools | 4.1 | 4.7 | 4.7 | 5.0 | 5.1 |
| University Colleges | 2.5 | 2.7 | 2.7 | 2.8 | 2.9 |
| Warehouse Wholesale | 4.8 | 4.6 | 5.0 | 5.4 | 5.6 |

| 2035 | 2035 | 2035 | 2035 |
|---|---|---|---|
| A | B | C | D |
| 2.3 | 2.3 | 2.5 | 2.6 |
| 1.1 | 1.1 | 1.3 | 1.4 |
| 1.9 | 1.9 | 2.2 | 2.4 |
| 6.5 | 6.5 | 7.6 | 8.3 |
| 14.7 | 16.7 | 19.5 | 21.3 |
| 1.9 | 1.9 | 2.3 | 2.5 |
| 5.9 | 7.7 | 9.1 | 10.0 |
| 2.3 | 2.3 | 2.4 | 2.5 |
| 5.1 | 5.1 | 6.1 | 6.7 |
| 2.9 | 2.9 | 3.3 | 3.6 |
| 4.5 | 5.3 | 6.7 | 7.6 |

| Commercial Space Heating Total Stock Shares | | | | |
|---|---|---|---|---|
| **Year** | **Outlook A** | **Outlook B** | **Outlook C** | **Outlook D** |
| 2015 | 10% | 10% | 10% | 10% |
| 2020 | 11% | 10% | 13% | 14% |
| 2025 | 11% | 11% | 18% | 21% |
| 2030 | 11% | 11% | 24% | 31% |
| 2035 | 11% | 11% | 31% | 45% |

| Commercial Space Heating New Stock Turnover Shares | | | | |
|---|---|---|---|---|
| **Year** | **Outlook A** | **Outlook B** | **Outlook C** | **Outlook D** |
| 2015 | 5% | 5% | 5% | 5% |
| 2020 | 7% | 6% | 16% | 19% |
| 2025 | 7% | 6% | 22% | 31% |
| 2030 | 7% | 6% | 28% | 44% |
| 2035 | 7% | 6% | 34% | 56% |

**Commercial Water Heating Total Stock Shares**

| Year | Outlook A | Outlook B | Outlook C | Outlook D |
|---|---|---|---|---|
| 2015 | 19% | 19% | 19% | 19% |
| 2020 | 18% | 17% | 20% | 21% |
| 2025 | 17% | 17% | 23% | 26% |
| 2030 | 17% | 17% | 28% | 35% |
| 2035 | 17% | 17% | 35% | 48% |

**Commercial Water Heating New Stock Turnover Shares**

| Year | Outlook A | Outlook B | Outlook C | Outlook D |
|---|---|---|---|---|
| 2015 | 15% | 15% | 15% | 15% |
| 2020 | 17% | 17% | 25% | 28% |
| 2025 | 16% | 16% | 30% | 38% |
| 2030 | 16% | 16% | 35% | 49% |
| 2035 | 17% | 17% | 41% | 61% |

| | Commercial Space Heating Heat Pump Square Footage Additions in the Year Indicated | | | |
|---|---|---|---|---|
| **Year** | **Outlook A** | **Outlook B** | **Outlook C** | **Outlook D** |
| 2015 | - | - | - | - |
| 2020 | - | - | 28,917,731 | 40,370,716 |
| 2025 | - | - | 36,385,313 | 59,503,277 |
| 2030 | - | - | 52,264,593 | 91,066,047 |
| 2035 | - | - | 79,774,867 | 143,930,226 |

| | Commercial Water Heating Heat Pump Square Footage Additions in the Year Indicated | | | |
|---|---|---|---|---|
| **Year** | **Outlook A** | **Outlook B** | **Outlook C** | **Outlook D** |
| 2015 | - | - | - | - |
| 2020 | - | - | 25,778,179 | 36,627,618 |
| 2025 | - | - | 33,119,019 | 55,128,367 |
| 2030 | - | - | 48,142,138 | 84,986,428 |
| 2035 | - | - | 73,905,731 | 134,580,833 |

Industrial Net Energy Demand and Intensity 2015-2035: Outlooks A,B,C,D

| Industrial Net Energy (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|
| Outlook A | 34.7 | 35.3 | 34.1 | 33.8 | 32.8 | 32.2 |
| Outlook B | 34.7 | 35.3 | 34.4 | 34.6 | 34.4 | 34.6 |
| Outlook C | 34.7 | 35.3 | 34.4 | 35.0 | 35.3 | 35.9 |
| Outlook D | 34.7 | 35.3 | 34.4 | 35.5 | 36.1 | 37.2 |

| Industrial Intensity (kWh/$07 GDP) | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|
| Outlook A | 0.39 | 0.40 | 0.38 | 0.38 | 0.38 | 0.37 |
| Outlook B | 0.39 | 0.40 | 0.38 | 0.38 | 0.37 | 0.37 |
| Outlook C | 0.39 | 0.40 | 0.38 | 0.39 | 0.38 | 0.39 |
| Outlook D | 0.39 | 0.40 | 0.38 | 0.39 | 0.39 | 0.40 |

| 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|
| 31.8 | 31.2 | 30.4 | 29.8 | 29.4 | 28.8 | 28.4 | 28.0 | 28.0 | 28.0 | 27.9 |
| 34.8 | 34.8 | 34.3 | 34.1 | 34.1 | 33.6 | 33.7 | 33.5 | 33.6 | 33.8 | 33.8 |
| 36.5 | 37.0 | 37.0 | 37.2 | 37.6 | 37.6 | 38.0 | 38.3 | 38.9 | 39.5 | 40.0 |
| 38.3 | 39.2 | 39.6 | 40.3 | 41.1 | 41.5 | 42.4 | 43.1 | 44.2 | 45.2 | 46.1 |

| 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.37 | 0.36 | 0.35 | 0.34 | 0.34 | 0.33 | 0.32 | 0.32 | 0.31 | 0.31 | 0.30 |
| 0.37 | 0.37 | 0.36 | 0.35 | 0.34 | 0.34 | 0.33 | 0.32 | 0.32 | 0.32 | 0.31 |
| 0.39 | 0.39 | 0.38 | 0.38 | 0.38 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 |
| 0.41 | 0.41 | 0.41 | 0.41 | 0.42 | 0.41 | 0.42 | 0.42 | 0.42 | 0.43 | 0.43 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 28.0 | 28.1 | 28.4 | 28.8 |
| 33.9 | 34.1 | 34.5 | 34.9 |
| 40.5 | 41.1 | 41.9 | 42.8 |
| 47.0 | 48.2 | 49.4 | 50.7 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 0.30 | 0.30 | 0.30 | 0.30 |
| 0.31 | 0.31 | 0.31 | 0.31 |
| 0.37 | 0.37 | 0.37 | 0.38 |
| 0.43 | 0.43 | 0.44 | 0.45 |

Industrial Demand by Subsector (TWh) 2015, 2025, 2035: Outlooks A,B,C,D

| Net Energy (TWh) | 2015 | 2025 | 2025 | 2025 | 2025 |
|---|---|---|---|---|---|
| | | A | B | C | D |
| Chemicals | 3.1 | 3.5 | 3.5 | 3.9 | 4.2 |
| Fabricated Metals | 1.9 | 1.9 | 1.9 | 2.1 | 2.3 |
| Food And Beverage | 2.3 | 2.3 | 2.3 | 2.5 | 2.8 |
| Mining | 6.5 | 5.7 | 7.4 | 8.1 | 8.9 |
| Transportation And Machinery | 3.3 | 1.8 | 3.0 | 3.3 | 3.6 |
| Miscellaneous Industrial | 3.6 | 3.9 | 4.0 | 4.4 | 4.9 |
| Non-Metallic Minerals | 1.4 | 1.2 | 1.2 | 1.3 | 1.4 |
| Paper Manufacturing | 2.8 | 1.1 | 2.1 | 2.3 | 2.6 |
| Petroleum Refineries | 1.8 | 1.8 | 1.8 | 2.0 | 2.2 |
| Plastic And Rubber | 2.2 | 2.0 | 2.0 | 2.2 | 2.5 |
| Primary Metals | 4.7 | 3.1 | 3.9 | 4.3 | 4.7 |
| Wood Products | 1.1 | 0.9 | 0.9 | 1.0 | 1.1 |

| 2035 | 2035 | 2035 | 2035 |
|---|---|---|---|
| A | B | C | D |
| 4.0 | 4.0 | 4.9 | 5.9 |
| 2.0 | 2.0 | 2.5 | 2.9 |
| 2.6 | 2.6 | 3.2 | 3.7 |
| 4.6 | 7.0 | 8.6 | 10.1 |
| 1.9 | 3.1 | 3.8 | 4.5 |
| 3.9 | 4.4 | 5.3 | 6.3 |
| 1.2 | 1.2 | 1.4 | 1.7 |
| 0.6 | 1.9 | 2.3 | 2.7 |
| 2.0 | 2.0 | 2.5 | 2.9 |
| 2.1 | 2.1 | 2.6 | 3.1 |
| 2.7 | 3.7 | 4.5 | 5.4 |
| 1.0 | 1.0 | 1.2 | 1.4 |

Forecasts for Transportation Electrification Demand

| Transportation Demand (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|
| Transit (A & B) | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 |
| Transit (C & D) | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 |
| EV (A) | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 |
| EV (B) | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 |
| EV (C & D) | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 |

| 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.2 | 0.3 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 0.2 | 0.3 | 0.5 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.8 | 1.0 | 1.1 | 1.3 | 1.5 | 1.6 |
| 0.3 | 0.5 | 0.7 | 0.9 | 1.1 | 1.3 | 1.6 | 1.9 | 2.1 | 2.4 | 2.6 |
| 0.4 | 0.6 | 0.8 | 1.1 | 1.5 | 2.0 | 2.5 | 3.1 | 3.8 | 4.5 | 5.2 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 0.5 | 0.5 | 0.5 | 0.5 |
| 0.6 | 0.6 | 0.6 | 0.6 |
| 1.7 | 1.8 | 2.0 | 2.0 |
| 2.8 | 3.0 | 3.2 | 3.4 |
| 6.0 | 6.7 | 7.4 | 8.1 |

Forecasts for Electric Vehicle Stock

| **Thousands of EVs** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** |
|---|---|---|---|---|---|---|---|
| Outlook A | 5 | 8 | 11 | 17 | 25 | 37 | 55 |
| Outlook B | 5 | 9 | 15 | 24 | 41 | 68 | 104 |
| Outlooks C & D | 5 | 9 | 15 | 24 | 41 | 68 | 109 |

| 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|---|---|---|---|---|---|---|---|---|---|---|
| 80 | 109 | 145 | 187 | 237 | 286 | 336 | 385 | 432 | 476 | 515 |
| 146 | 197 | 257 | 325 | 399 | 477 | 557 | 637 | 712 | 781 | 843 |
| 166 | 241 | 334 | 450 | 588 | 749 | 929 | 1126 | 1336 | 1554 | 1775 |

| 2033 | 2034 | 2035 |
|---|---|---|
| 549 | 579 | 605 |
| 902 | 955 | 1003 |
| 1993 | 2202 | 2401 |

Forecast for Agriculture

| Net Energy (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|
| Agriculture | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |

| 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 1.9 | 1.9 | 1.9 | 1.9 |

| Load Factor | Outlook A | Outlook B | Outlook C | Outlook D |
|---|---|---|---|---|
| 2025 | 0.67 | 0.68 | 0.70 | 0.72 |
| 2035 | 0.67 | 0.68 | 0.69 | 0.63 |

Peak Contribution

| Peak Contribution (%) | Residential (non heat/AC) | Commercial (non heat/AC) |
|---|---|---|
| 2015 | 23% | 25% |
| 2035 - A | 22% | 25% |
| 2035 - B | 21% | 25% |
| 2035 - C | 22% | 16% |
| 2035 - D | 20% | 13% |

| Industrial | Residential heat | Residential cooling | Commercial heat | Commercial cooling |
|---|---|---|---|---|
| 16% | 0% | 17% | 0% | 18% |
| 14% | 0% | 17% | 0% | 18% |
| 15% | 0% | 16% | 0% | 18% |
| 17% | 14% | 0% | 24% | 0% |
| 17% | 15% | 0% | 29% | 0% |

| Transportation | Other |
|---|---|
| 0% | 2% |
| 2% | 2% |
| 2% | 2% |
| 4% | 3% |
| 3% | 3% |

**From:** Gavin He
**To:** John Kim; Emily Kerr; Francisco Chinchon; Darren Scanlan
**Subject:** FW: Potential Rate Mitigation
**Date:** Monday, December 05, 2016 10:30:15 PM

---

Hi all,

Just sharing more following up communications with you.

Regards,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Monday, December 05, 2016 9:57 PM
To: Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Cc: Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; David McLean (MOF) <David.McLean@ontario.ca>
Subject: Re: Potential Rate Mitigation

Hi Gadi,

I agree. The option should be put out on the table.

Ron

> On Dec 5, 2016, at 9:26 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:
>
> Thanks, Ron. I like the idea of adding in the table on existing fiscally funded mitigation programs.
>
> I also agree with your last line, but only two of the three parts (price mitigation, the fiscal plan and use of proceeds) can stand. Given that it's obviously an imperative of the government to provide more price mitigation, the simplest way to minimize damage to the fiscal plan is to tweak the positioning on uses of cap and trade proceeds, although as Tim mentioned in a meeting I was in today, the current direction is to go the other way. I think we need to at least throw the idea on the table, though.
>
>> On Dec 5, 2016, at 9:18 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>>
>> Hi Gadi,
>>
>> If you recall, we did that table a couple weeks ago on existing fiscally funded mitigation programs. We can suggest adding that in. And, as for the GGRA, I think one of the challenges is it was supposed to be for incremental measures to reduce GHGs (not replacing funding for existing measures. But, that said, that was notion I noodled on too, but it would require at least a change in positioning, convincing the Minister of MOECC, as the arbiter of such and/or change the legislation.
>>
>> Ron
>>
>>> On Dec 5, 2016, at 9:08 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:
>>>
>>> Big numbers, and I didn't in my scan through see much credit given to the fiscal sacrifices already made. Maybe those amounts could be added in the context section?

>>>
>>> Would any of the fiscal plan hits be eligible as offsets for our Cap and Trade revenues? I suppose because so little of our electricity production is carbon producing, probably not, but if ICI moves consumption off-peak does it reduce the need for gas plants to operate?
>>>
>>> And at least the idea of offsetting the federal portion of the HST is gone
>>>
>>>> On Dec 5, 2016, at 8:03 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>>>>
>>>> Hi Chris,
>>>>
>>>> Will do.
>>>>
>>>> Ron
>>>>
>>>>> On Dec 5, 2016, at 8:02 PM, Pearce, Christopher (MOF) <Christopher.Pearce@ontario.ca> wrote:
>>>>>
>>>>> Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.
>>>>>
>>>>>
>>>>> From: Katona, Keley (ENERGY)
>>>>> Sent: December 5, 2016 7:44 PM
>>>>> To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)
>>>>> Subject: FW: Potential Rate Mitigation
>>>>>
>>>>> Hi,
>>>>>
>>>>> See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?
>>>>>
>>>>> If there are questions, I'm happy to discuss.
>>>>>
>>>>> Thanks,
>>>>> Keley
>>>>>
>>>>> From: Imbrogno, Serge (ENERGY)
>>>>> Sent: December-05-16 7:41 PM
>>>>> To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
>>>>> Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
>>>>> Subject: Potential Rate Mitigation
>>>>>
>>>>> Hi,
>>>>>
>>>>> Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.
>>>>>
>>>>> Serge
>>>>>
>>>>>
>>>>> <Price Mitigation Proposals_Dec5-16_v11.pptx>

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Angie Georgakakos |
| **Subject:** | FW: Potential Rate Mitigation |
| **Date:** | Monday, December 05, 2016 9:39:35 PM |
| **Attachments:** | Price Mitigation Proposals_Dec5-16_v11.pptx<br>ATT00001.htm |

---

**From:** Ronald Kwan
**Sent:** Monday, December 05, 2016 8:14 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** Fwd: Potential Rate Mitigation

Hi,

Lets meet in the morning to discuss.

We'll need a product for EOD. Could be an annotated slide deck, as well as a markup. Suggestion on any other formats?

Ron

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Date:** December 5, 2016 at 8:02:36 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
> **Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>
> **Subject: Fw: Potential Rate Mitigation**
>
> Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.
>
> From: Katona, Keley (ENERGY)
> Sent: December 5, 2016 7:44 PM
> To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)
> Subject: FW: Potential Rate Mitigation
>
> Hi,

See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?

If there are questions, I'm happy to discuss.

Thanks,
Keley

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II); and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.

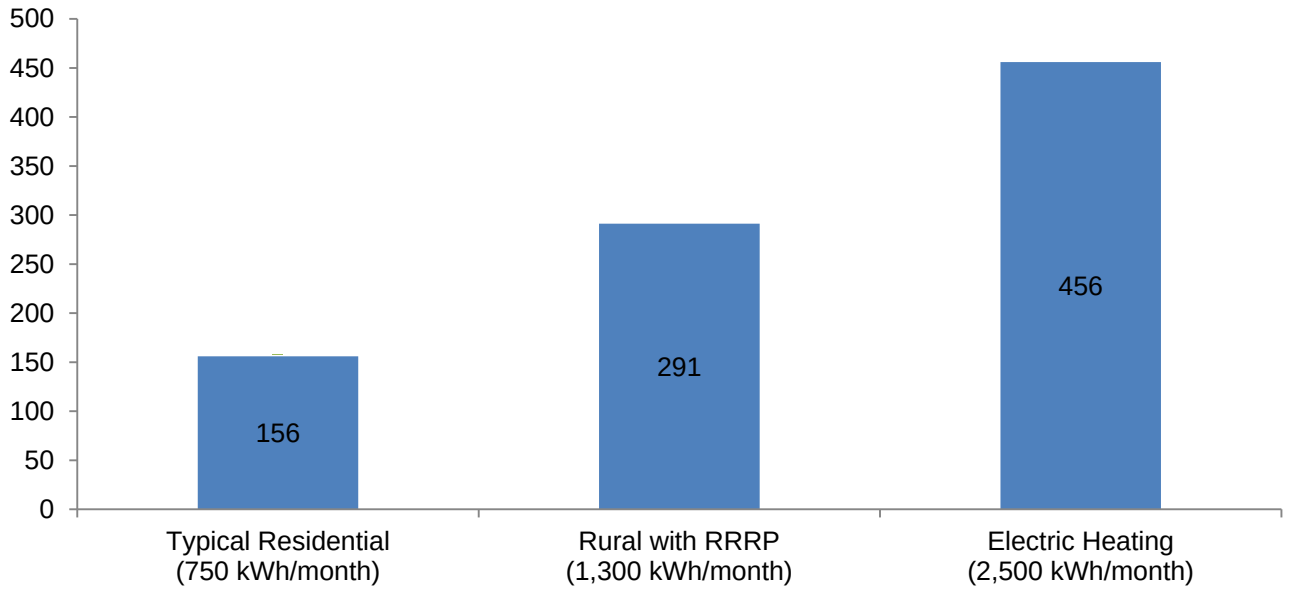
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

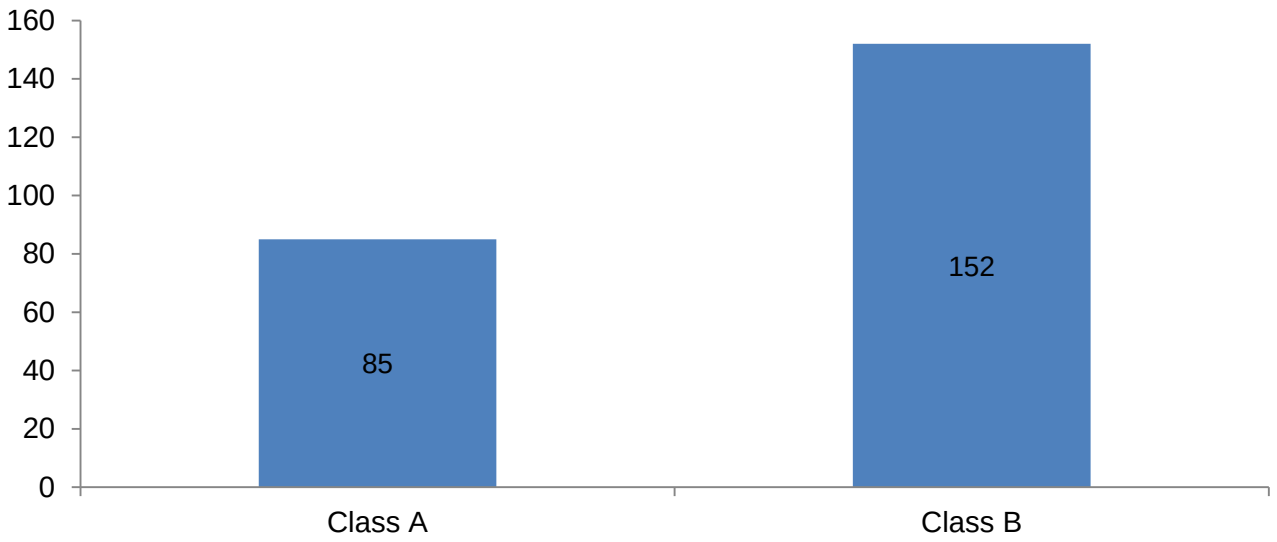



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of $xx [placeholder for OFA] on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $20 to $35 million annual fiscal pressure to the province [TBC by OPG / OFA].

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESB) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.
- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.
- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

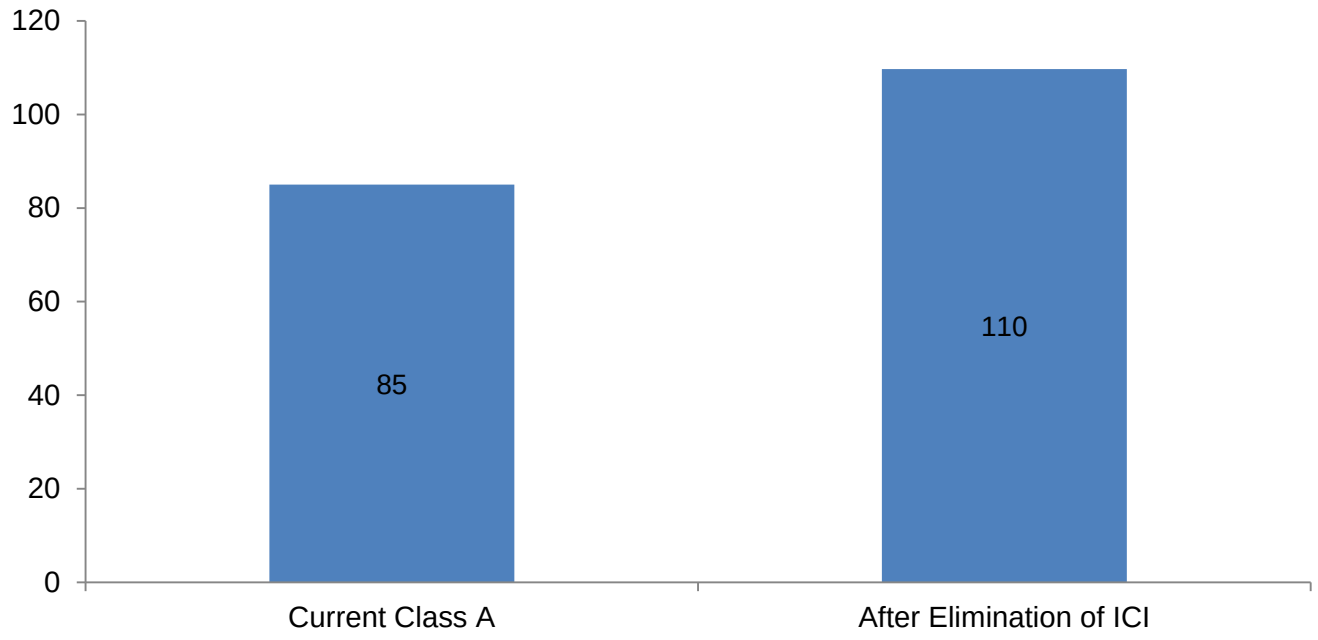
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

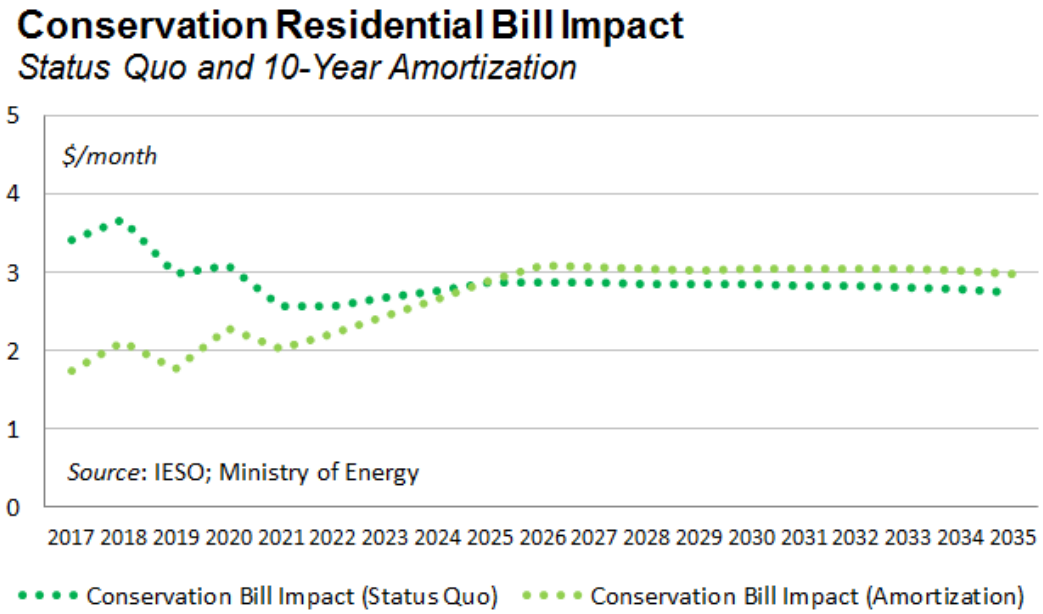
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

# Electricity Consumer Classes

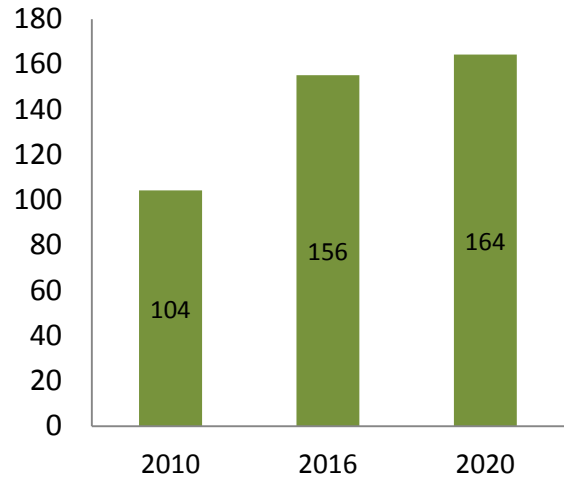
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

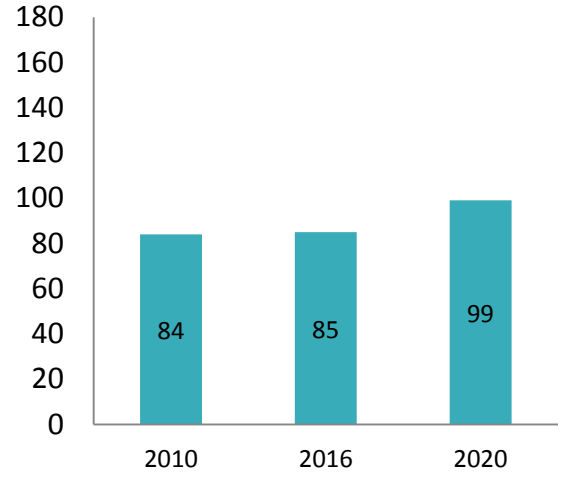
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

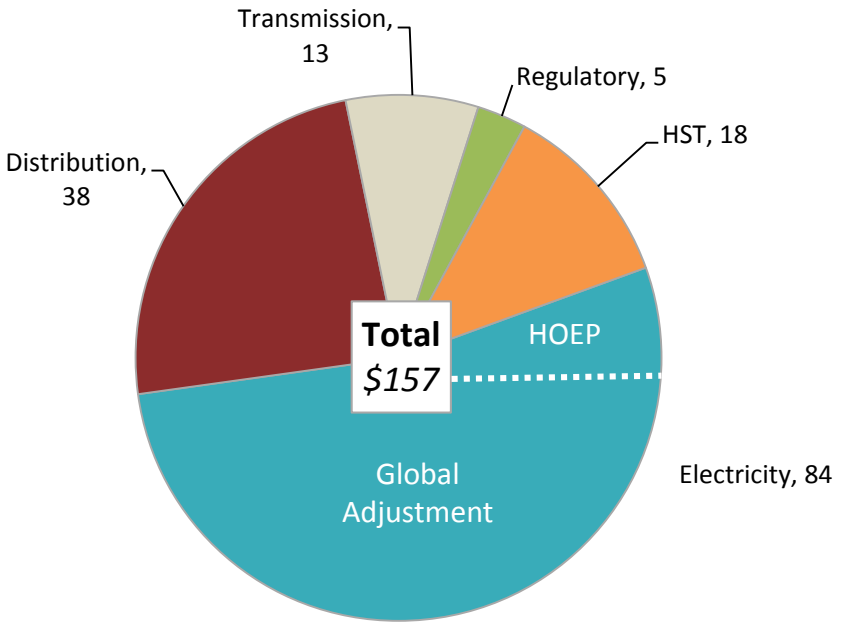
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



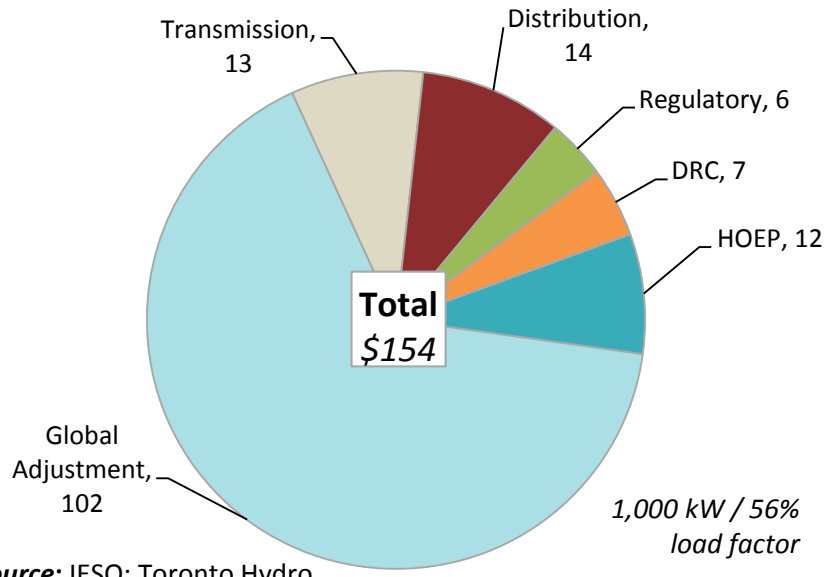

***Source*:** OEB, Toronto Hydro

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

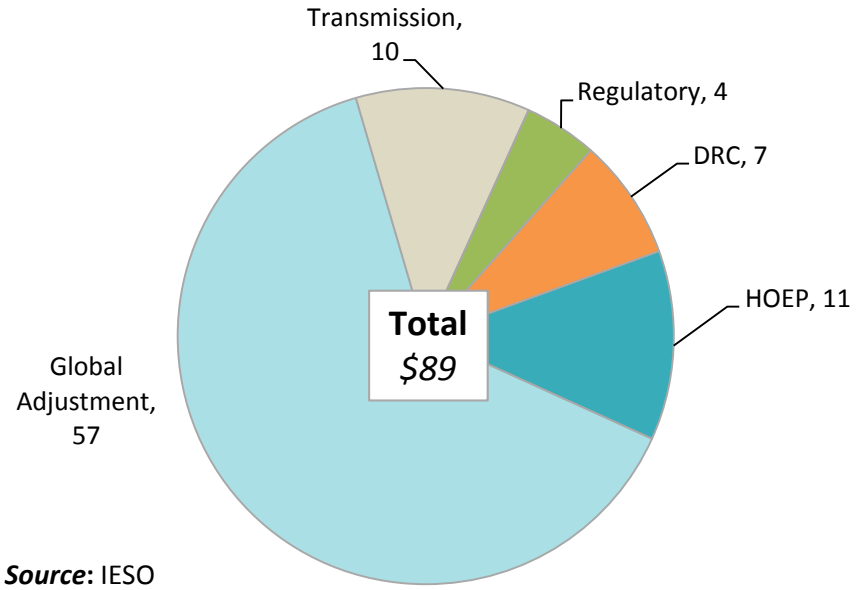
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



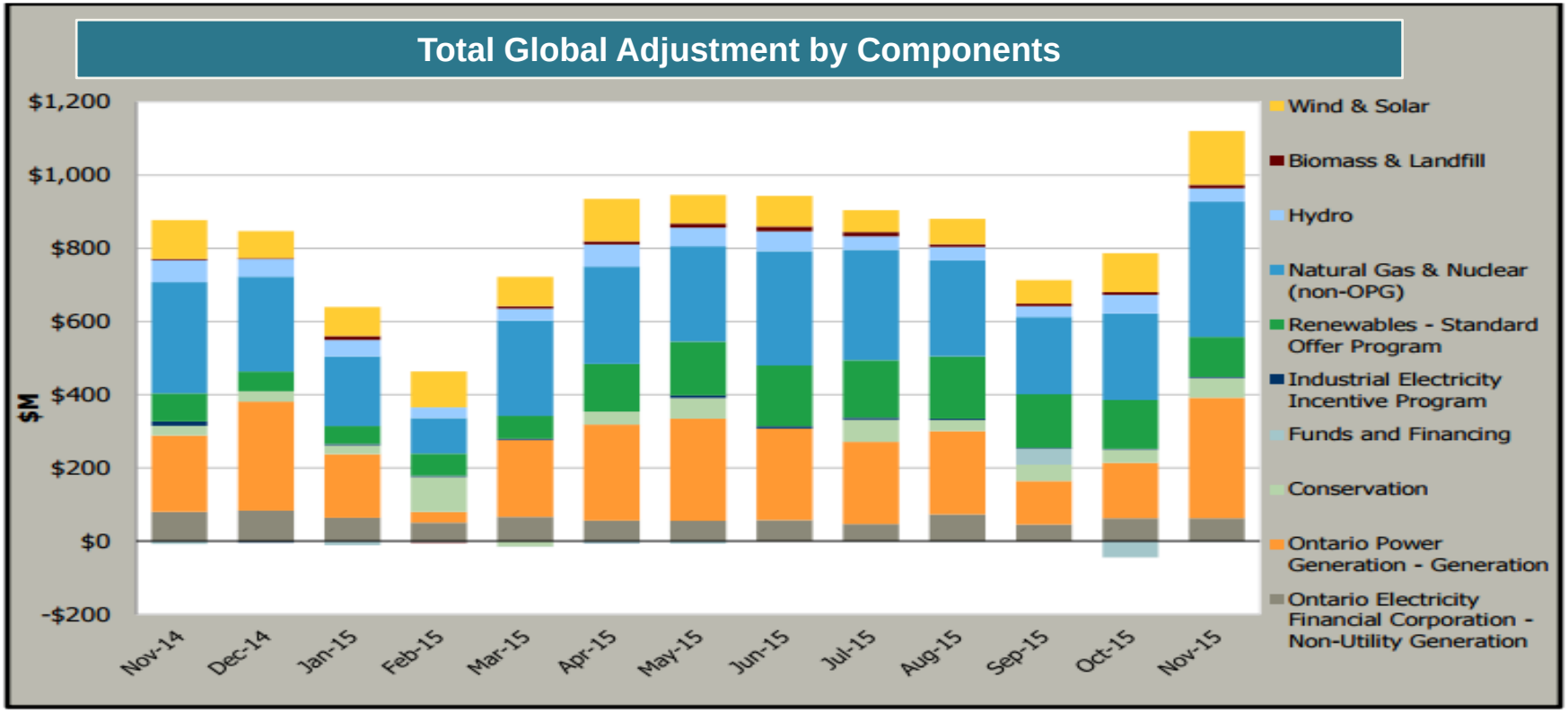

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon; John Kim; Emily Kerr; Darren Scanlan |
| **Cc:** | Gavin He |
| **Subject:** | FW: Potential Rate Mitigation |
| **Date:** | Wednesday, December 07, 2016 10:27:31 PM |
| **Attachments:** | Price Mitigation Proposals_Dec7-16_v13 Clean.pptx |

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Hi,

Comments?

Ron

-----Original Message-----
From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
Sent: December-07-16 7:10 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Elizabeth Mendes (MOF) <Elizabeth.Mendes@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
Subject: Fw: Potential Rate Mitigation

FYI - tomorrow's deck.

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: McLean, David (MOF) <David.McLean@ontario.ca>
Sent: Wednesday, December 7, 2016 6:56 PM
To: Pearce, Christopher (MOF); Young, Gwendolynne (MOF); Ize-Dukuze, Marilyn (MOF); Clarke-Darshanand, Jamille (MOF)
Subject: Fw: Potential Rate Mitigation

For MPC tomorrow

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
Sent: Wednesday, December 7, 2016 6:55 PM
To: Kwamena, Boafoa (CAB); McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB)
Subject: FW: Potential Rate Mitigation

FYI

From: Imbrogno, Serge (ENERGY)
Sent: December-07-16 6:51 PM
To: Orsini, Steve (CAB); Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: RE: Potential Rate Mitigation

HI,
Here’s the latest version of the deck. We tried to incorporate comments from MOF / TBS. This version is with my MO for review but it will likely be the version we will use at Major Projects tomorrow. Keley can share with your EAs.
Serge

From: Imbrogno, Serge (ENERGY)

Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate before tax, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms. The rebate will result in a savings of about $11/month for a typical residential consumer;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program. In combination with the 8% rebate, the updated RRRP program will result in a savings of about $45/month for a typical rural customer;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit. ICI provides participating consumers with an electricity bill savings of up to one-third;
  - Suspending the second round of the Large Renewable Procurement (LRP II) and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in costs; and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.

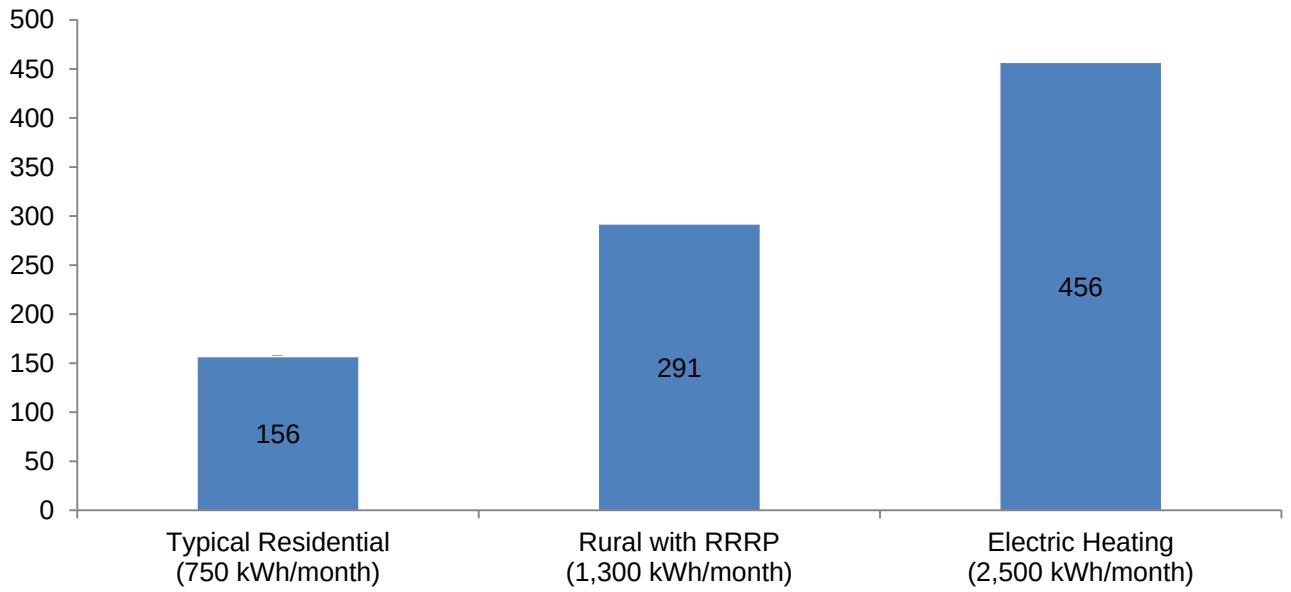
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecasts ($159 / 750kWh)

**Residential Electricity Bills, After Tax**
*in $/month*

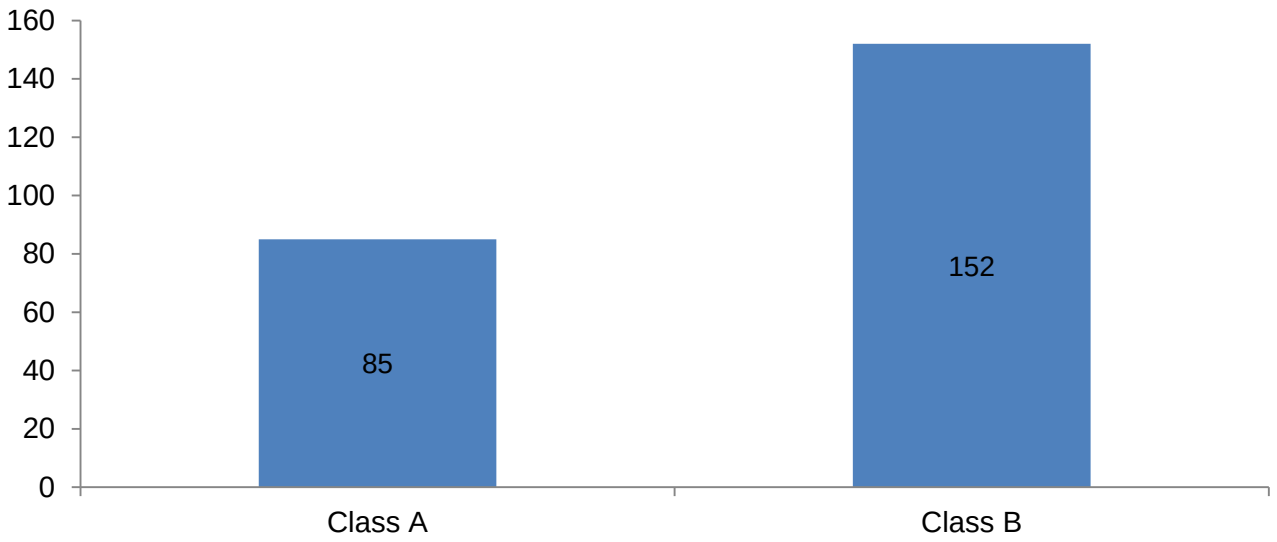



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how electricity sector programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | - | 1.00 | 1.03 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies*** | TBD | TBD | TBD | TBD | TBD | TBD | Medium-to-Long-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs). ***Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | - | 1.34 | 1.38 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Medium-to-Long-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- A number of the social assistance programs such as the OESP, RRRP and First Nations rates can be funded through the tax-base. **Note:** Table on slide 13 shows some preliminary costs based on some assumptions which could mean up to $416 million in costs to taxpayers in 2017 and up to $465 million in costs in 2020

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of about $450 million annually on the Province until April 2018 (i.e., The current planned date for removing DRC from all electricity bills) and zero thereafter.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $30 million annual fiscal pressure in 2017 to the province based on new borrowing and increasing to about $70 million by 2021.

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.

# Proposed Taxpayer Funded Electricity Price Mitigation

- As shown in the Ministry of Finance table, if various measures proposed in this deck were to be accepted, taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **OCEB** | - | - | - | - | - |
| **OREC** | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| **Ending DRC[2]** | 330 | 330 | -- | -- | -- |
| **NIERP** | 120 | 120 | 120 | 120 | 120 |
| **NOEC** | 25 | 25 | 25 | 25 | 25 |
| **OEPTC[3]** | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| **1. OESP** | | 106 | 119 | 127 | 132 |
| **2. RRRP** | | 292 | 300 | 306 | 315 |
| **3. First Nations Delivery Rate** | | 18 | 18 | 18 | 18 |
| **4. Fund ICI through Tax Base** | | 900+100 | 900+100 | 900+ | 900+ |
| **5. Departure Tax** | | TBD | TBD | TBD | TBD |
| **6. Conservation Amortisation** | TBD | TBD | TBD | TBD | TBD |
| **7. DRC Ended for Class B** | 110 | 450 | -- | -- | -- |
| **8. Other** | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,305** | **3,901** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be about $150 million. The bulk of the costs (i.e., capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESB) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- By 2020, funding the OESP, RRRP and the First Nation rate reduction through a regulatory charge is estimated to cost approximately $2.45 for a typical residential customer using 750 kWh per month. Transitioning that funding to the tax-base would reduce a typical residential customer bill by that same amount. As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base. To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits).

- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.

- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.

- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. The estimated fiscal impacts of funding the RRRP through the tax base do not include these costs, and future consideration of how these costs could be supported by the tax base will have to be undertaken.

- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs) and remains steady at this participation level in 2021 and 2022, with no increase in credit amounts.

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

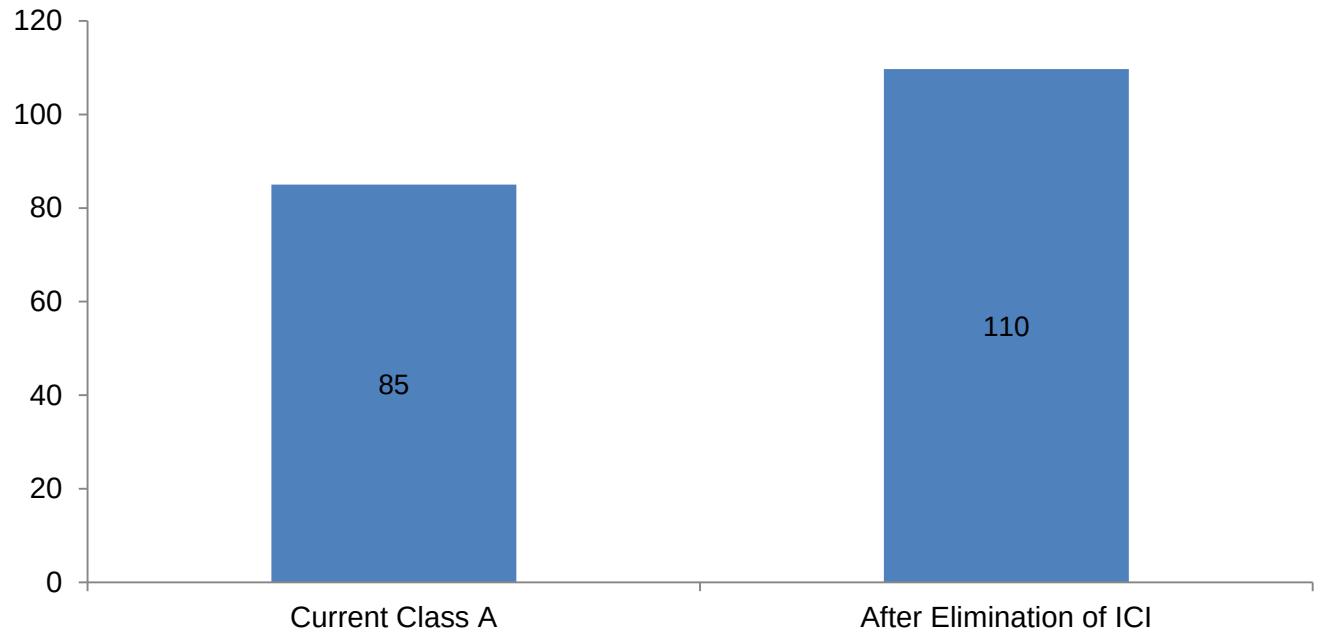
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

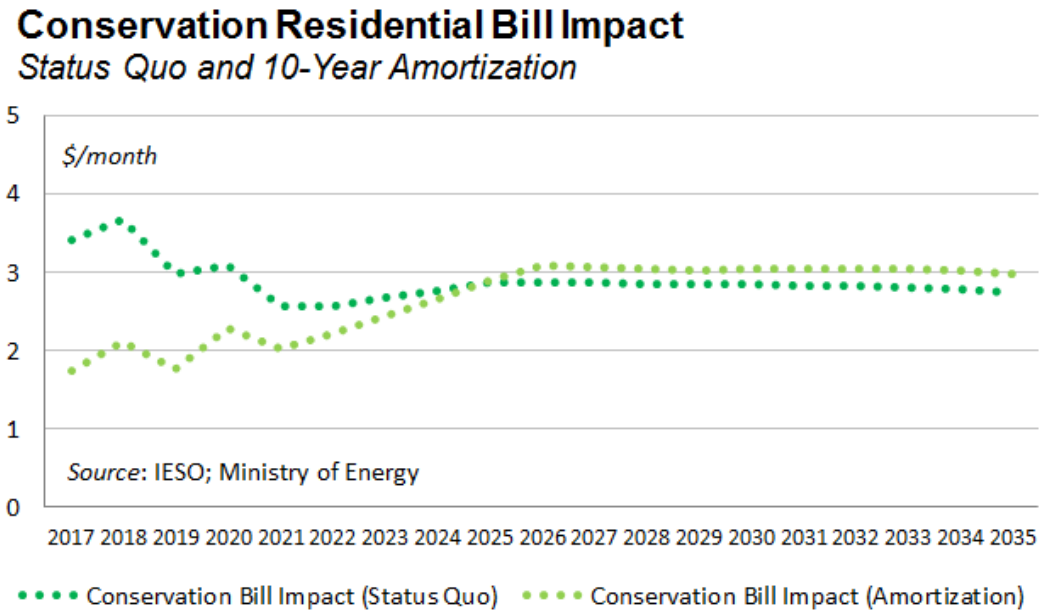
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro- November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $30 million annual fiscal pressure in 2017 to the province based on new borrowing and increasing to about $70 million by 2021, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.
- If the Province were to transfer $2.6 billion in economic benefits to the rate base over 10 years suggest the following impacts (assuming 140TWh per year):
  - Residential Ratepayer Impact (if spread over 10 years): up to $1.39 per month on a typical bill; and
  - Industrial Ratepayer Impact (if spread over 10 years): up to $1.86 / MWh

**Considerations**

- Cost savings to ratepayers and associated fiscal impacts would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- The departure tax was effectively a true-up for lower PILs payments from Hydro One in previous years – it was not a one-time windfall for the Province. In other words, it ensures that Hydro One paid all its tax obligations under the PILs regime before moving into the normal corporate tax regime.
- The related ~$2.4 billion fiscal benefit to the Province (from the deferred tax benefit) has already been credited to the Trillium Trust to be used to build infrastructure under Moving Ontario Forward.
- Repurposing funds paid to OEFC may have an impact on the defeasance of electricity stranded debt.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

*[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]*

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

# Electricity Consumer Classes

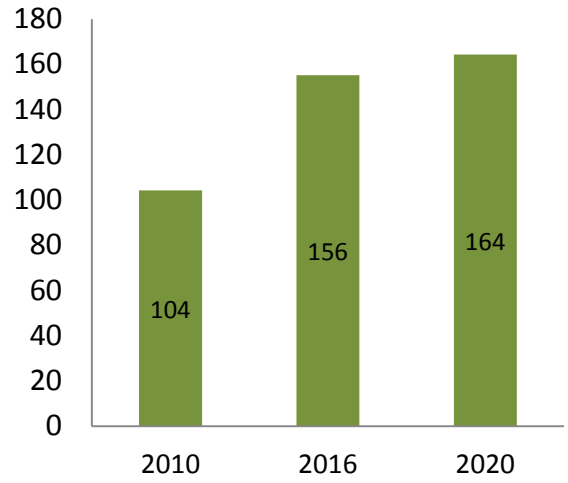
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

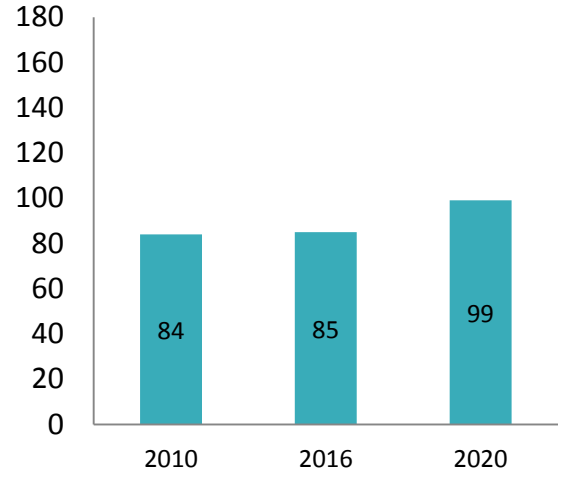
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# 2015 Indicative Industrial Electricity Prices – Jurisdictional Comparison

| 2015 Indicative Industrial Electricity Prices (Canadian ¢/kWh) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jurisdiction | Cost | | Jurisdiction | Cost | | Jurisdiction | Cost | | Jurisdiction | Cost |
| 1 | Manitoba | 4.67 | 17 | Arkansas | 7.49 | 33 | Newfoundland | 8.65 | 49 | Nova Scotia | 10.02 |
| 2 | Quebec | 5.17 | 18 | Tennessee | 7.53 | **34** | **U.S. Average** | **8.71** | 50 | North Dakota | 10.75 |
| 3 | Washington | 5.64 | 19 | Alabama | 7.58 | 35 | New York | 8.72 | 51 | Florida | 10.79 |
| 4 | Alberta | 5.87 | 20 | South Carolina | 7.68 | 36 | Indiana | 8.74 | 52 | Delaware | 10.96 |
| 5 | Ontario - North | 6.35 | 21 | Utah | 7.70 | 37 | Ohio | 8.75 | 53 | Maryland | 11.86 |
| 6 | Oklahoma | 6.64 | 22 | Oregon | 7.72 | 38 | Wyoming | 8.87 | 54 | Maine | 12.64 |
| 7 | Montana | 6.68 | 23 | West Virginia | 7.80 | 39 | Minnesota | 8.89 | 55 | Vermont | 13.14 |
| 8 | Kentucky | 6.80 | 24 | Saskatchewan | 7.81 | 40 | Prince Edward Island | 8.90 | 56 | California | 13.85 |
| 9 | British Columbia | 7.04 | 25 | Nevada | 7.83 | 41 | Colorado | 9.05 | 57 | New Jersey | 14.44 |
| 10 | Iowa | 7.06 | 26 | Arizona | 8.00 | 42 | Michigan | 9.13 | 58 | New Hampshire | 17.17 |
| 11 | Louisiana | 7.06 | 27 | Idaho | 8.05 | 43 | Virginia | 9.23 | 59 | Massachusetts | 17.56 |
| **12** | **Canadian Average** | **7.31** | 28 | North Carolina | 8.09 | 44 | South Dakota | 9.31 | 60 | Connecticut | 17.58 |
| 13 | Missouri | 7.32 | 29 | New Mexico | 8.09 | 45 | Kansas | 9.54 | 61 | Alaska | 18.85 |
| 14 | Georgia | 7.35 | 30 | Illinois | 8.24 | 46 | Nebraska | 9.56 | 62 | Rhode Island | 19.97 |
| 15 | Texas | 7.37 | 31 | Ontario - South | 8.35 | 47 | Pennsylvania | 9.59 | 63 | Hawaii | 31.10 |
| 16 | New Brunswick | 7.48 | 32 | Mississippi | 8.41 | 48 | Wisconsin | 9.87 | | | |

Note: Estimates may differ from actual costs to a consumer based on location, connection, and operational characteristics. Prices exclude taxes and, in other jurisdictions, participation in any applicable jurisdictional benefit programs.

The Ontario industrial price is based on the average all-in price for year-to-date May 2015, and includes the Hourly Ontario Energy Price (arithmetic average), Class A Global Adjustment, delivery, wholesale market service charges and the Debt Retirement Charge. The 2 cent per kilowatt hour difference between northern Ontario and southern Ontario reflects the Northern Industrial Electricity Rate Program rebate.

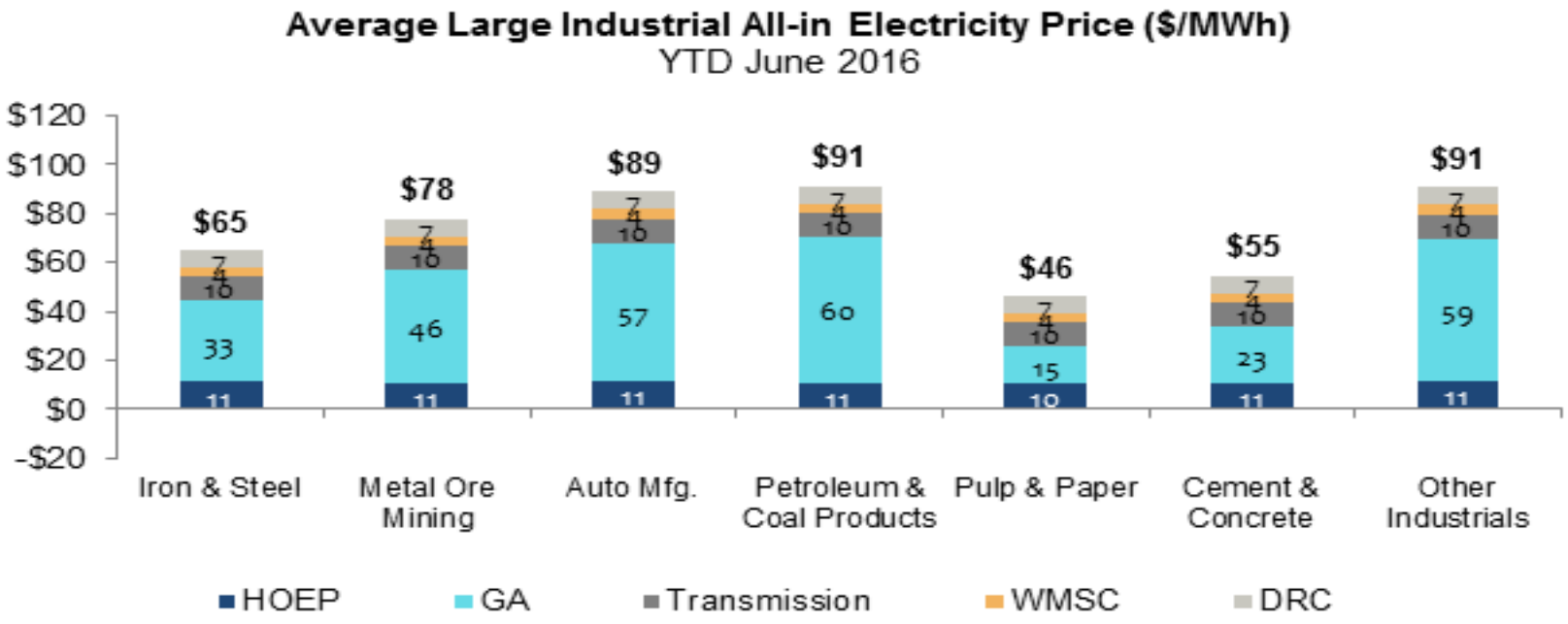
All other Canadian prices (except Ontario) are from the Hydro Quebec Rate Comparison for rates effective April 1, 2015 for select local distribution companies servicing specific cities. Where Hydro Quebec reports prices for two cities in a province (e.g., Calgary and Edmonton), an average of the two is used; in provinces where only one city is reported (e.g., Vancouver in BC, Montreal in QC), that one price is used to represent the province for indicative comparison purposes. In the Hydro Quebec Rate Comparison, a large consumer reflects 5 MW with monthly consumption of 3,060 MWh.

American jurisdictions reflect year-to-date May 2015 data from the US Energy Information Administration's survey of approximately 500 of the largest electric utilities. The price reflects the average revenue reported by the electric utility from electricity sold to the industrial sector. The value represents an estimated average retail price, but does not necessarily reflect the price charged to an individual consumer. Prices are converted at an exchange rate of 1 USD = 1.30 CAD, an approximation of the average for 2015 (1 USD = 1.2787 CAD).

# Indicative Electricity Prices Across Industrial Sectors

- The chart below shows estimated average all-in electricity prices by sector.

- Prices vary across sectors mainly due to differences in the level of Global Adjustment (GA) paid, which in turn reflects both the ability and willingness of companies to lower usage in the highest demand hours.



# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Current Status on Taxpayer Funded Electricity Price Mitigation

- The Ministry of Finance table shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.5 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion and before considering any additional funding from the tax base.

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| **OCEB** | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| **OREC** | - | - | - | - | - | 300 | 1,100* |
| **Ending DRC[2]** | - | - | - | - | 85 | 330 | 330 |
| **NIERP** | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| **NOEC** | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| **OEPTC[3]** | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

*Source: ENERGY PRRT Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

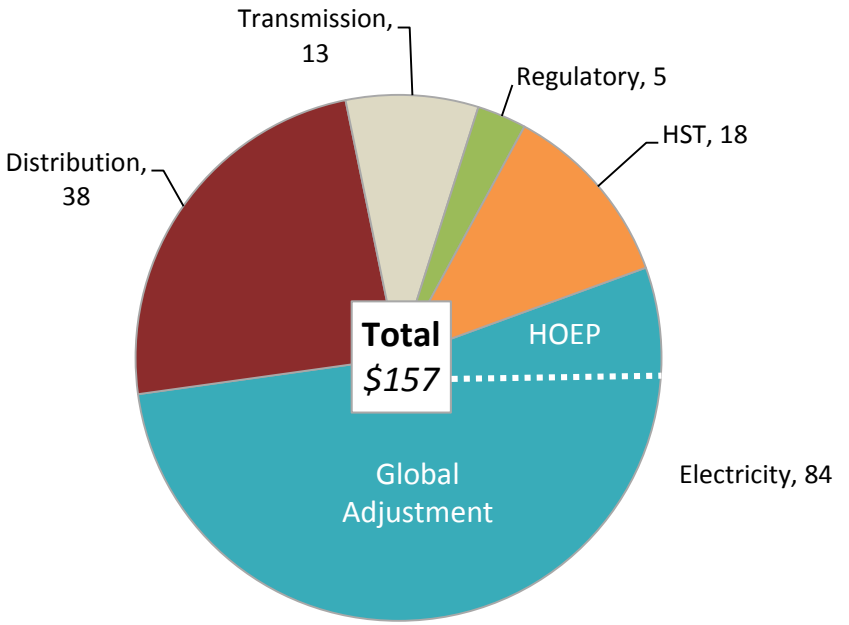
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



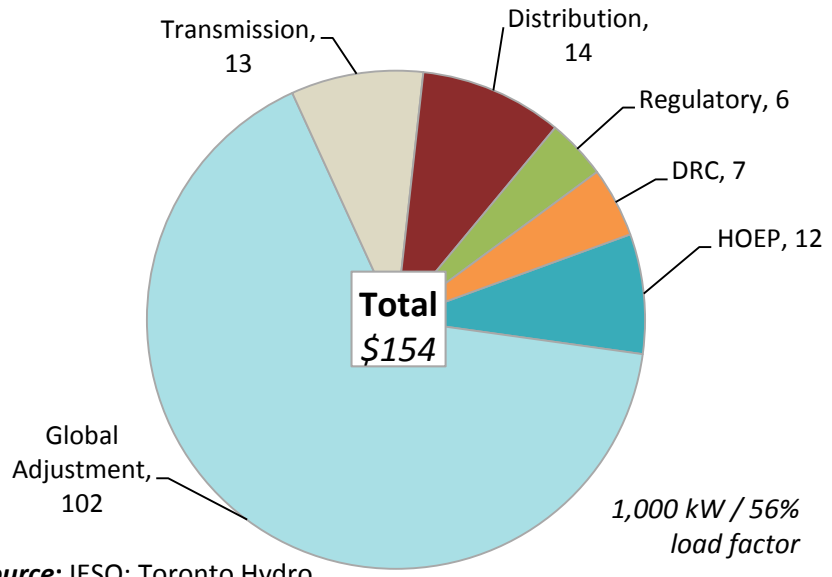

***Source*:** OEB, Toronto Hydro

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

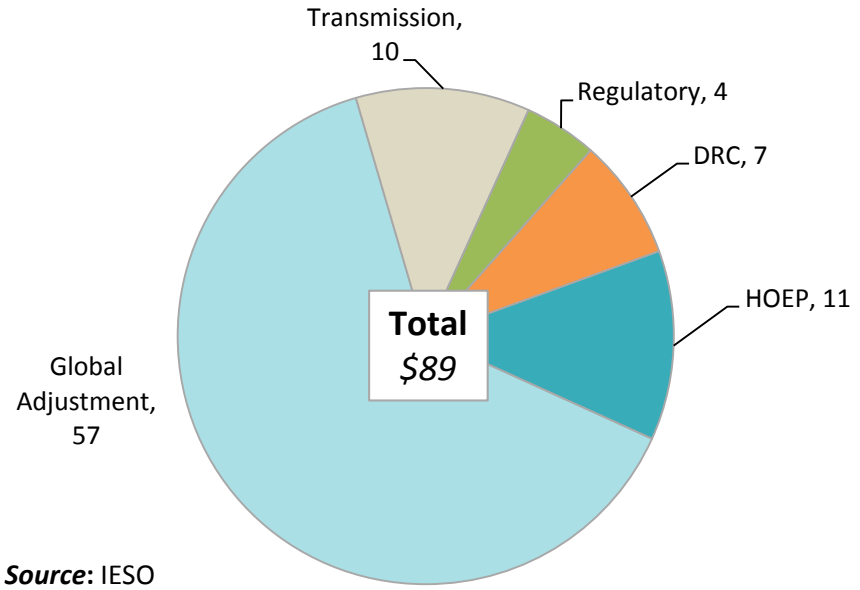
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



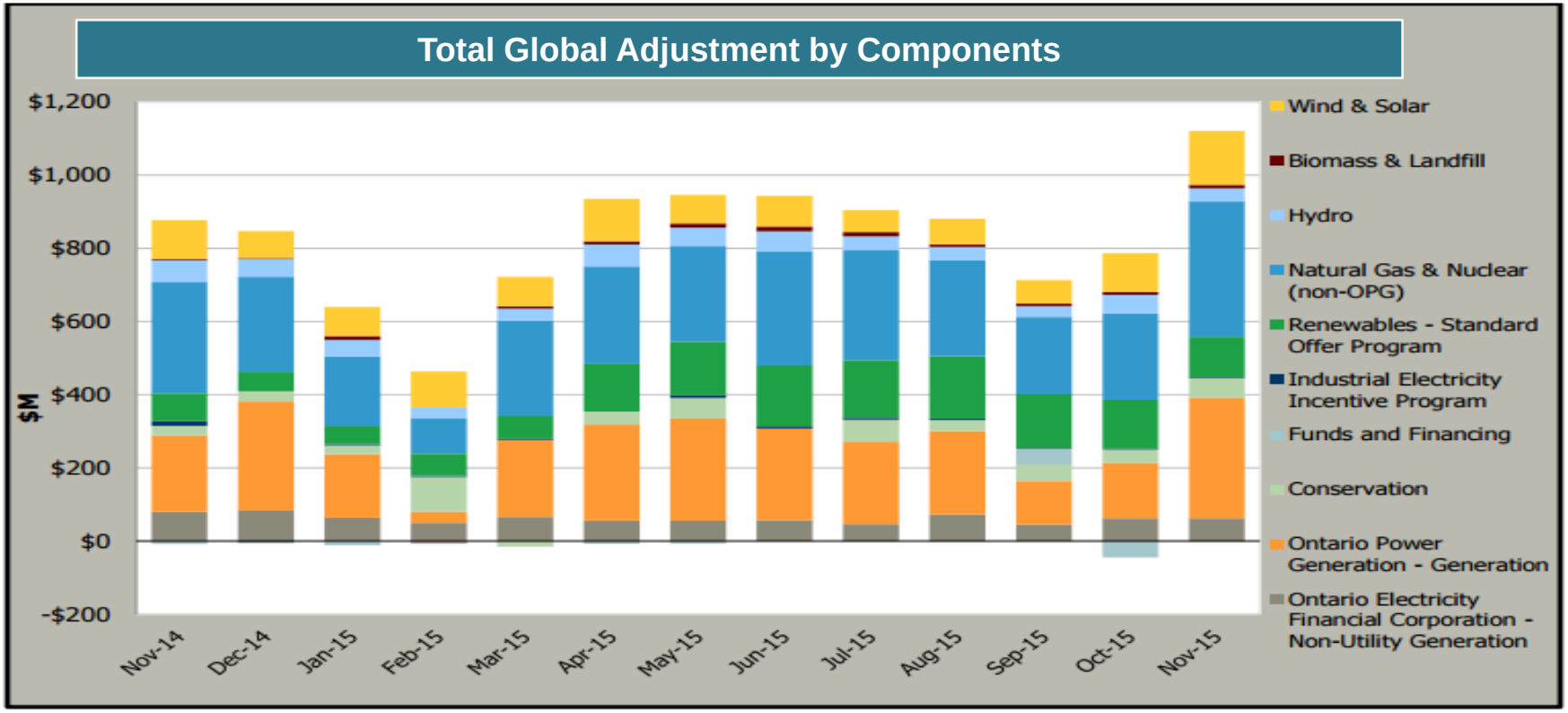

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

**From:** John Kim
**To:** Salman Qadir
**Cc:** Shajee Kathirgamanathan; Gavin He; Adam Prokop
**Subject:** FW: Price Mitigation Deck
**Date:** Tuesday, December 06, 2016 10:57:28 AM
**Attachments:** Price Mitigation Proposals_Dec5-16_v11_SPFB Markup.pptx

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Hi Salman,

Let's consolidate SPFB's too.

Thanks,

John.

---

**From:** Emily Kerr
**Sent:** Tuesday, December 06, 2016 10:56 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Price Mitigation Deck

Hi John,

I have included comments in the attached version of the price mitigation deck on slides 3, 4, 5, 8, 13, 14, 15, 20.

I will be out this afternoon, so could you combine with comments on the deck you will submit to Ron.

Emily

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II); and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.

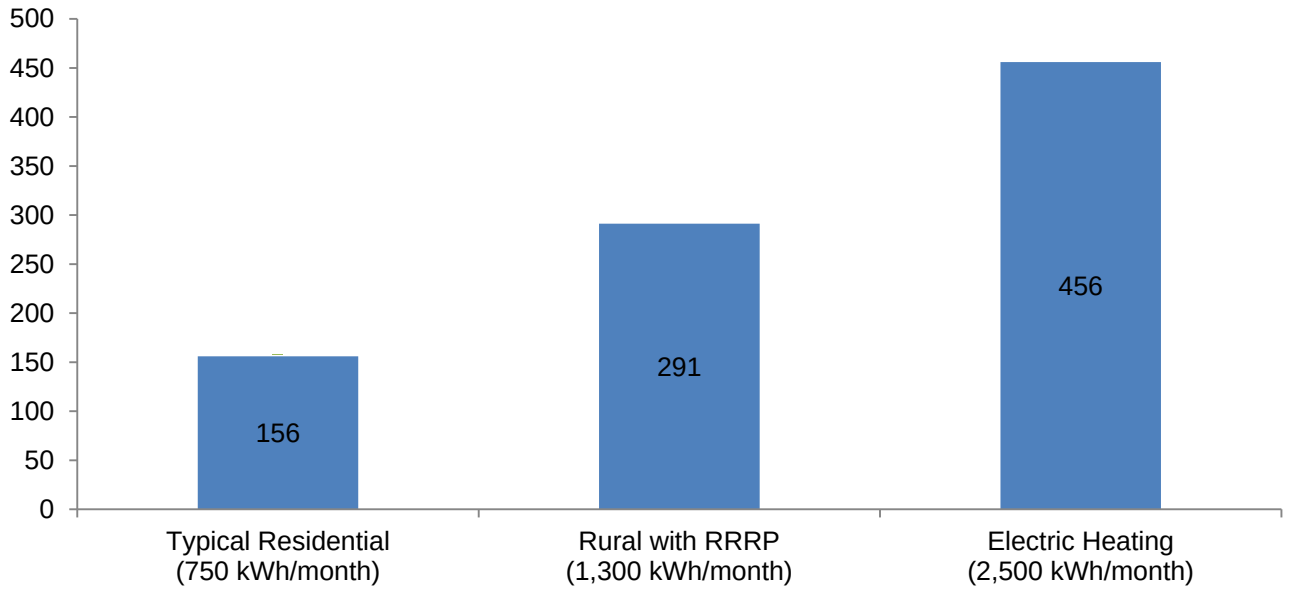
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

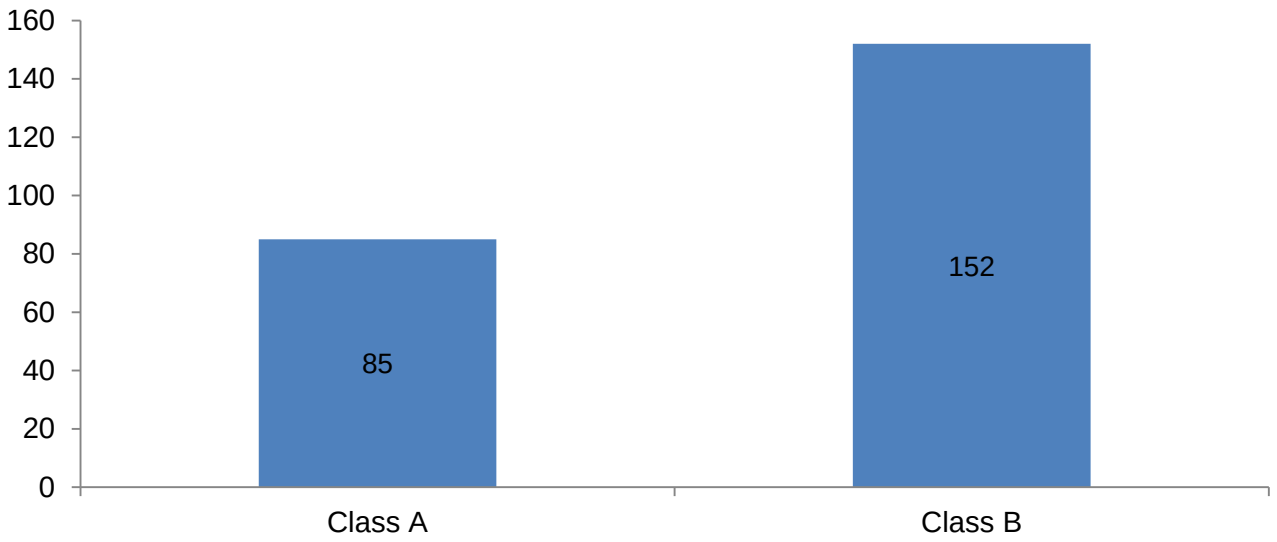



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of $xx [placeholder for OFA] on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $20 to $35 million annual fiscal pressure to the province [TBC by OPG / OFA].

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESB) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.
- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.
- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

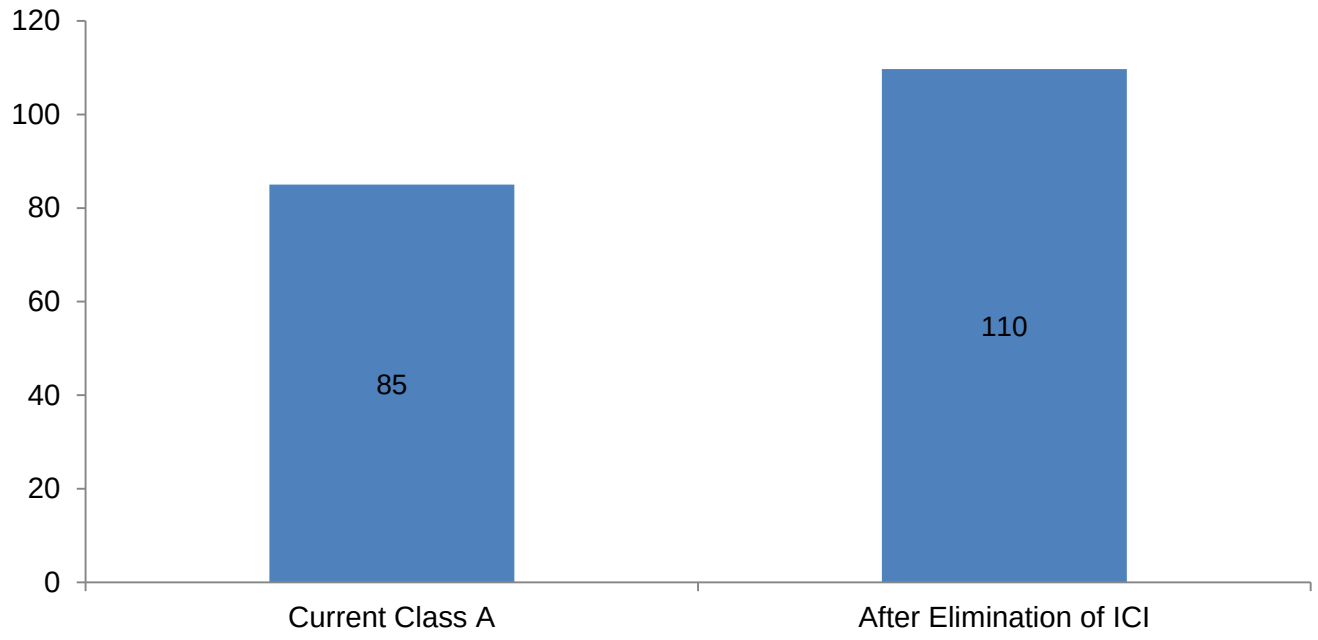
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

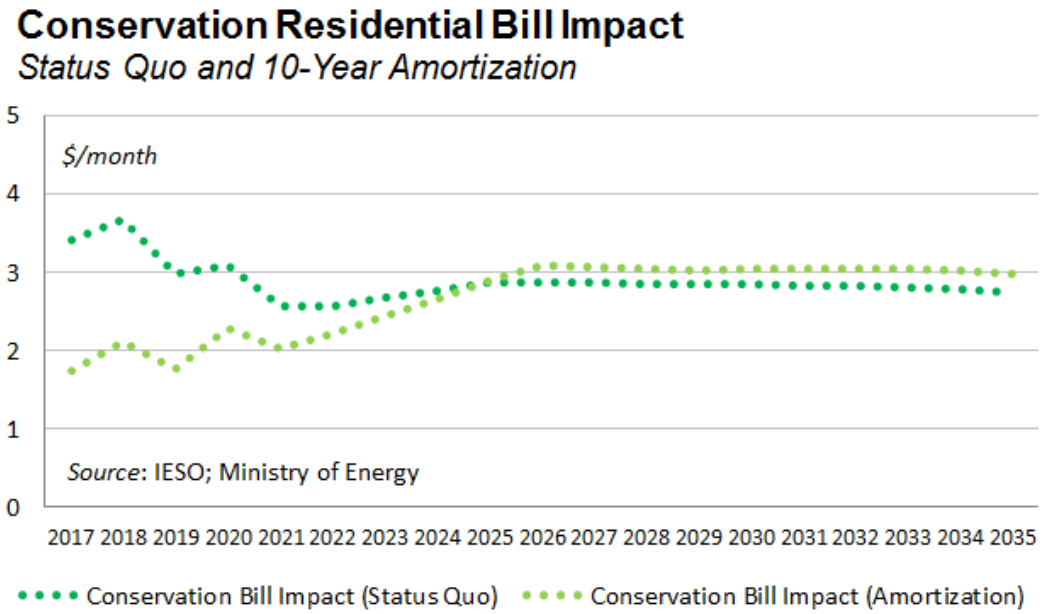
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

# Electricity Consumer Classes

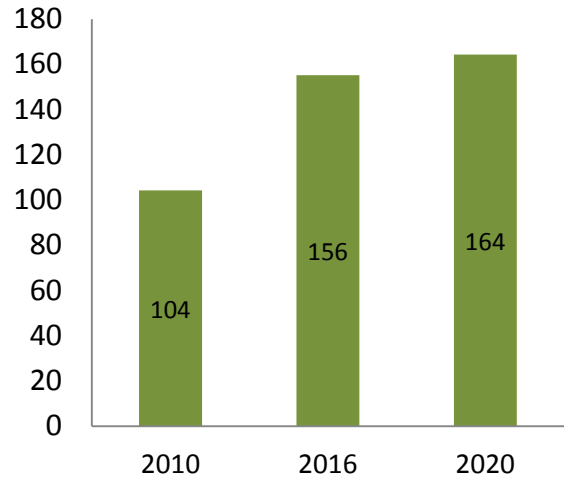
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

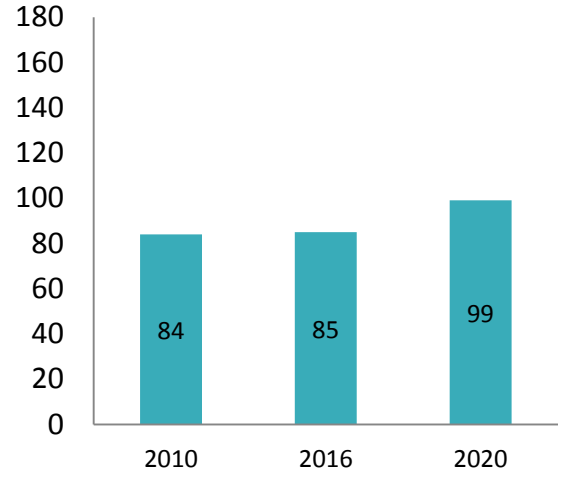
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

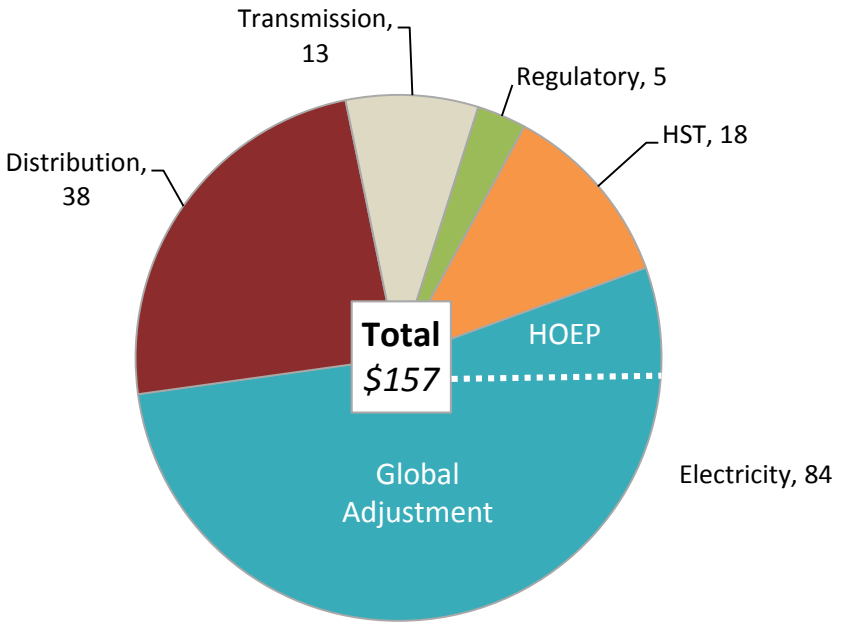
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



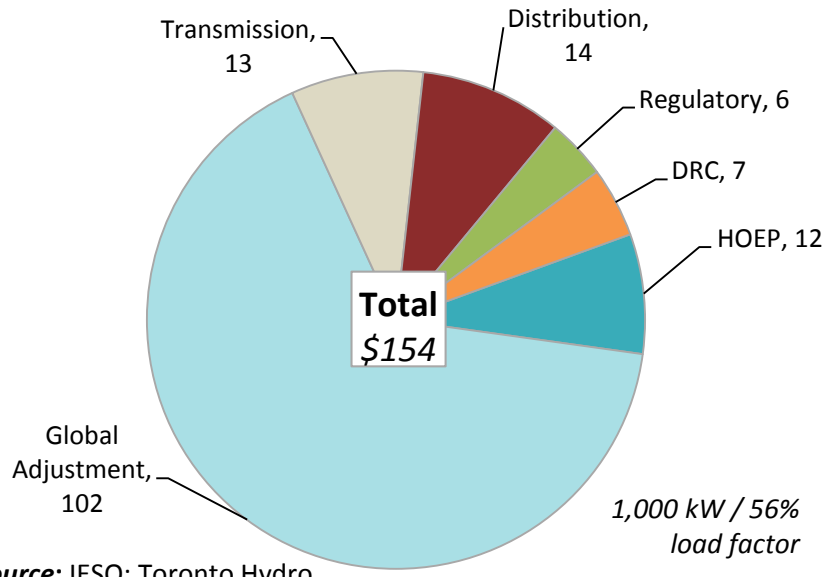

***Source*:** OEB, Toronto Hydro

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

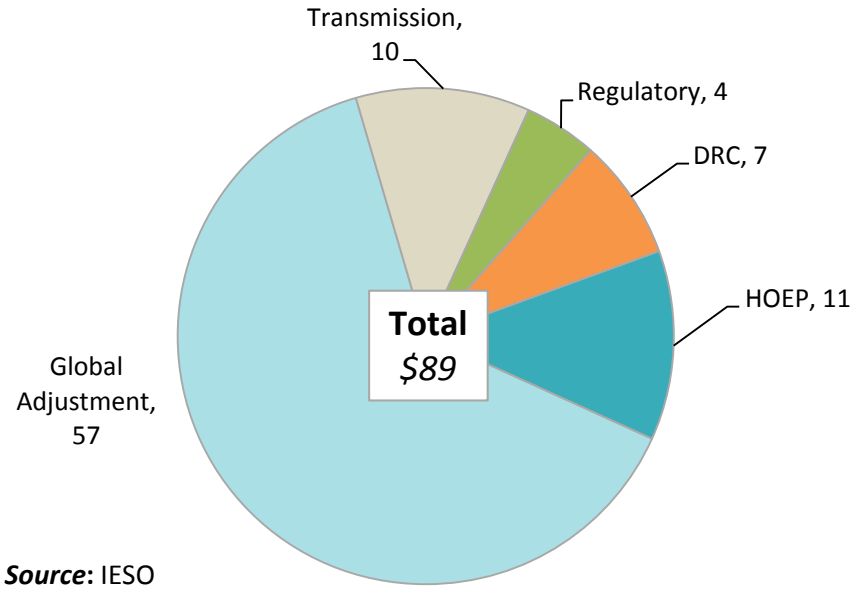
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



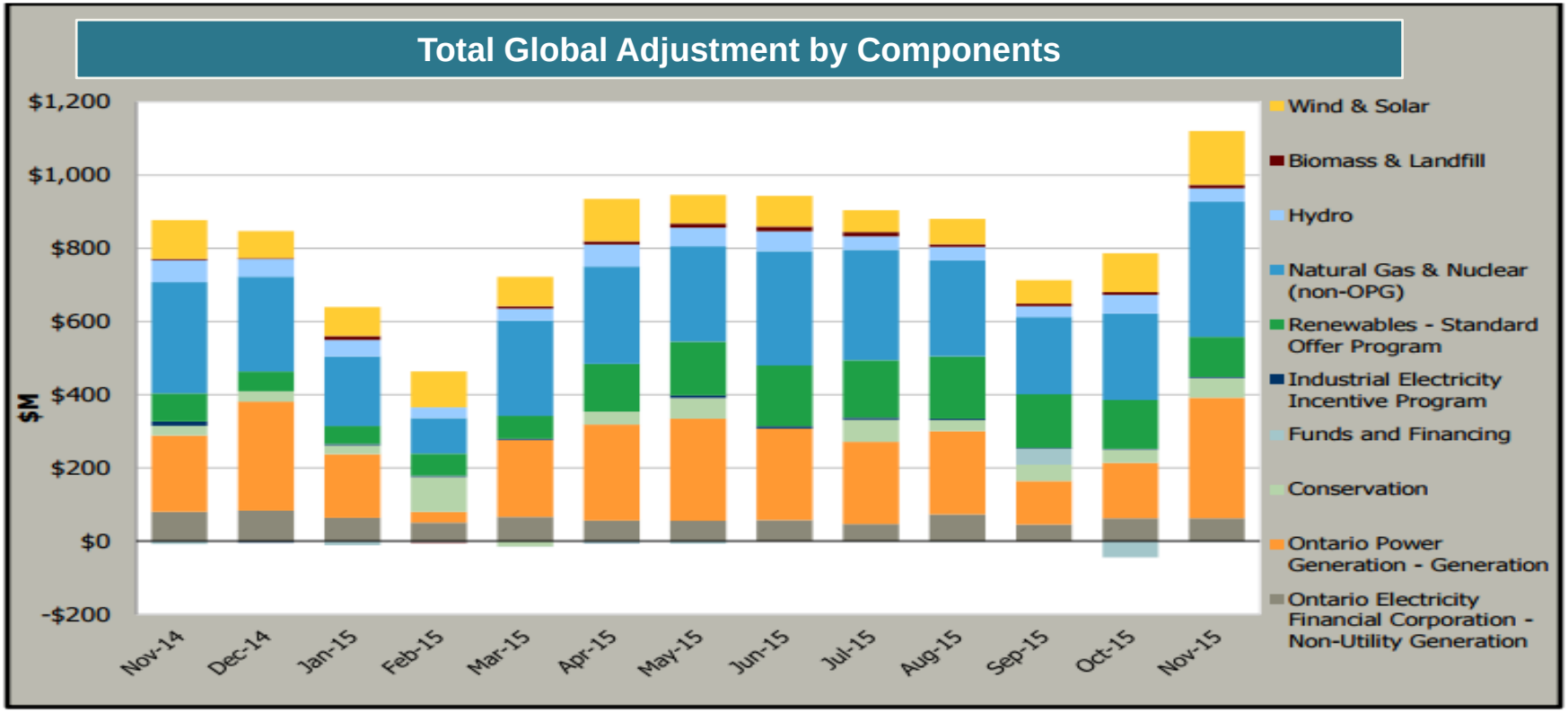

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

**From:** John Kim
**To:** Francisco Chinchon
**Subject:** FW: Price Mitigation Deck
**Date:** Tuesday, December 06, 2016 1:46:12 PM
**Attachments:** Price Mitigation Proposals_Dec5-16_v11_CEFDmarkup_withSPFB&SIFB_v2.pptx

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Latest attached too….a bit disjointed. Lol.

---

**From:** Salman Qadir
**Sent:** Tuesday, December 06, 2016 1:44 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: Price Mitigation Deck

Hi John,

V2 now incorporates all comments.

Salman

---

**From:** Salman Qadir
**Sent:** Tuesday, December 06, 2016 1:34 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: Price Mitigation Deck

Here is the latest draft. I have not moved that slide that we were creating to the end (after summary) yet (Slide 7).

Z:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016

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**From:** John Kim
**Sent:** Tuesday, December 06, 2016 10:57 AM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** FW: Price Mitigation Deck

Hi Salman,

Let's consolidate SPFB's too.

Thanks,

John.

---

**From:** Emily Kerr
**Sent:** Tuesday, December 06, 2016 10:56 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Price Mitigation Deck

Hi John,

I have included comments in the attached version of the price mitigation deck on slides 3, 4, 5, 8, 13, 14, 15, 20.

I will be out this afternoon, so could you combine with comments on the deck you will submit to Ron.

Emily

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement ~~GEIA~~ renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

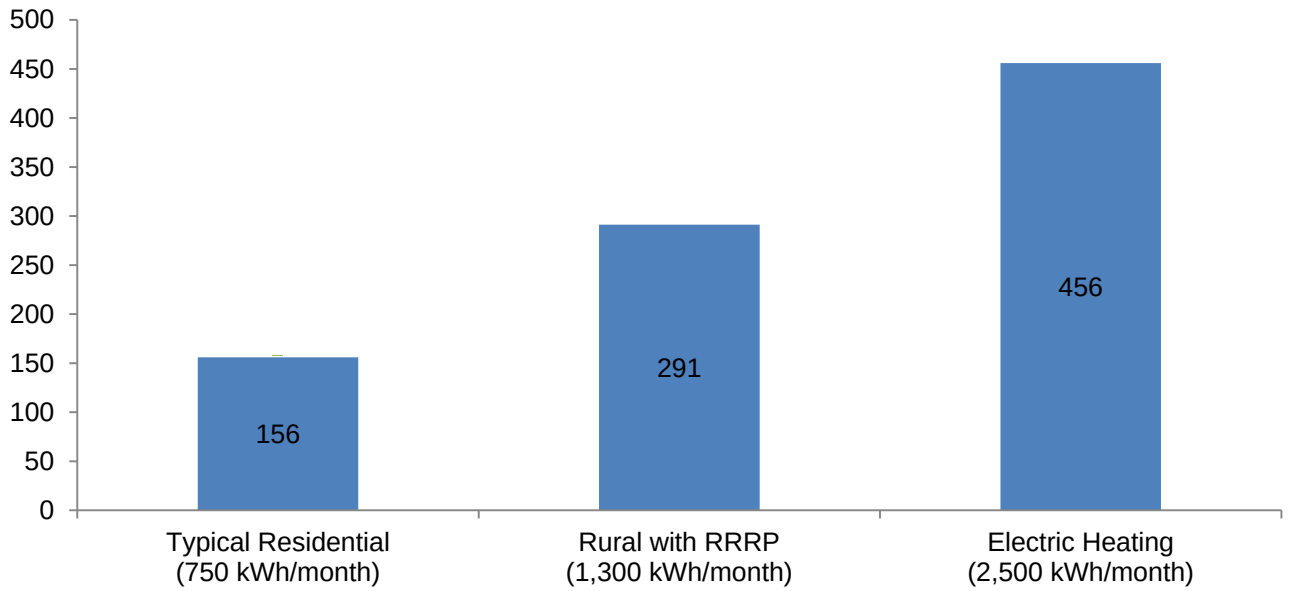
- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate before tax, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II) and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in costs; and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 ~~Long-Term Energy Plan (2013~~ LTEP~~)~~ forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

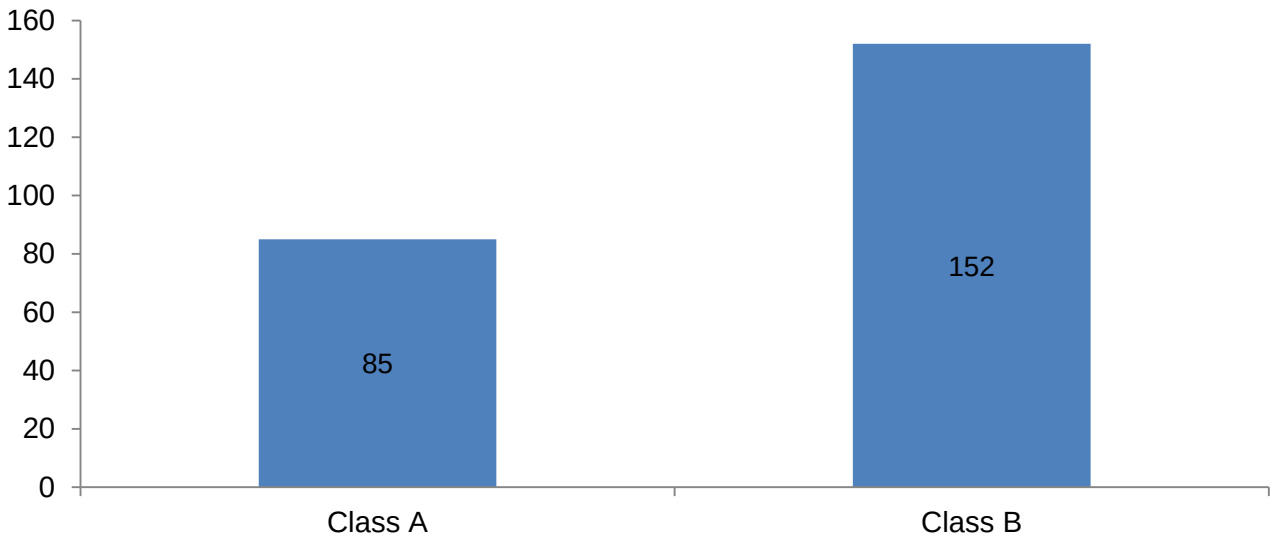



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,200* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,105** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from November LRC Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

SLIDE ADDED BY CEFD

# Taxpayer Funded Electricity Price Mitigation

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | | | |
| OREC | 300 | 1,200* | 1,200* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | 330 | 330 | 330 |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **TOTAL** | **1,195** | **2,105** | **2145** | **2156** | **2156** |
| 1. Electricity Market Renewal Initiative | | TBD | TBD | TBD | TBD |
| 2. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 2. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 3. Fund ICI through Tax Base | | 900 | 900 | 900 | 900 |
| **TOTAL** | **1195** | **3,421** | **3,482** | **3,507** | **3,521** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of $xx [placeholder for OFA] on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $20 to $35 million annual fiscal pressure to the province [TBC by OPG / OFA].

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESBP) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.

- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.

- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.

- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

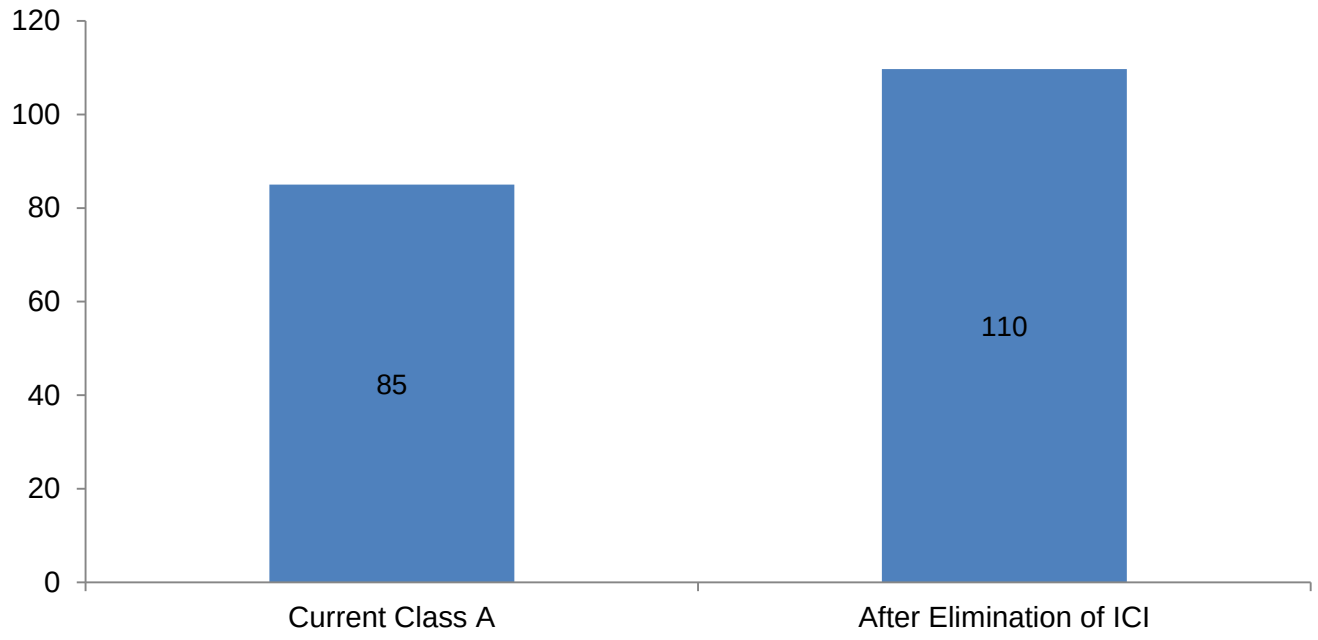
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

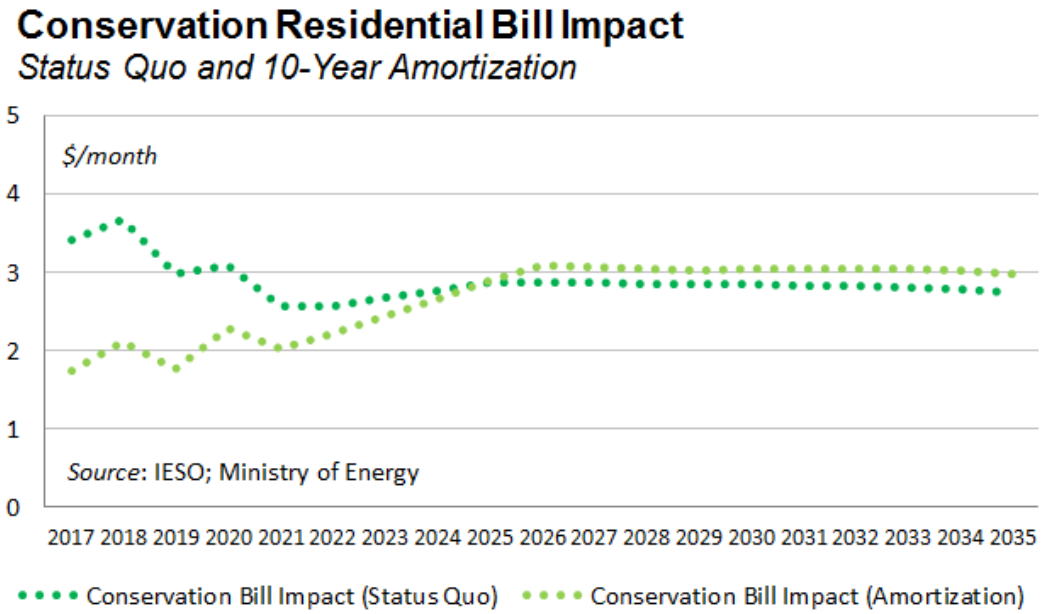
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

# Electricity Consumer Classes

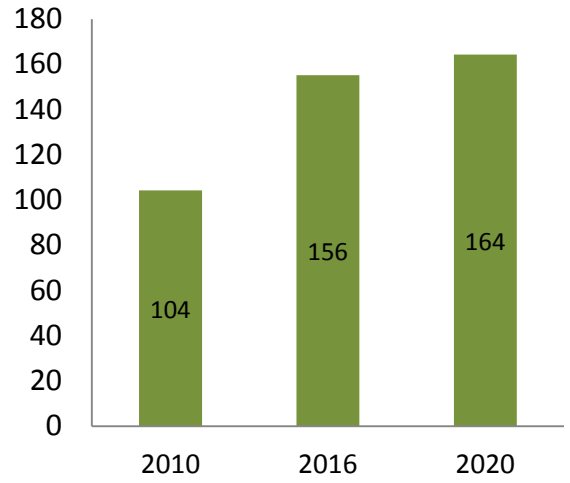
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

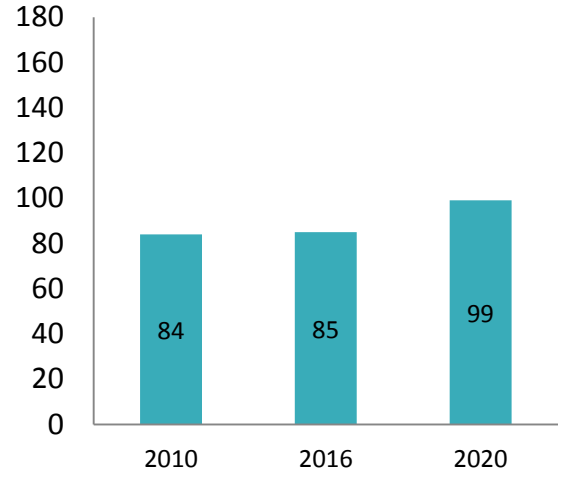
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

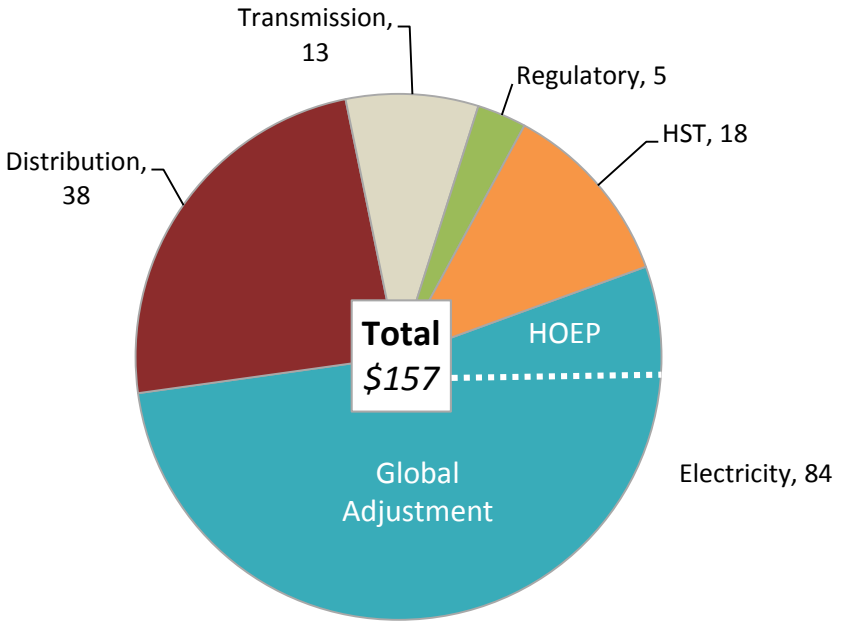
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



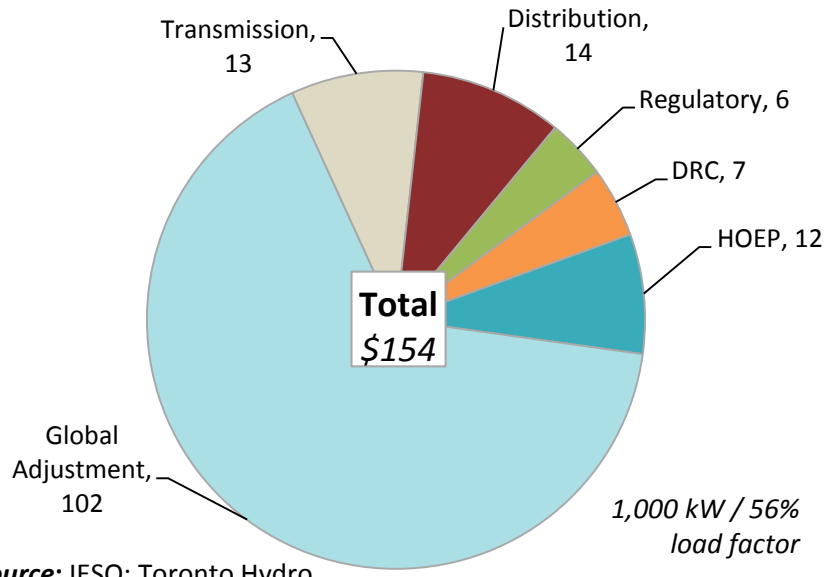

***Source*: OEB, Toronto Hydro**

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

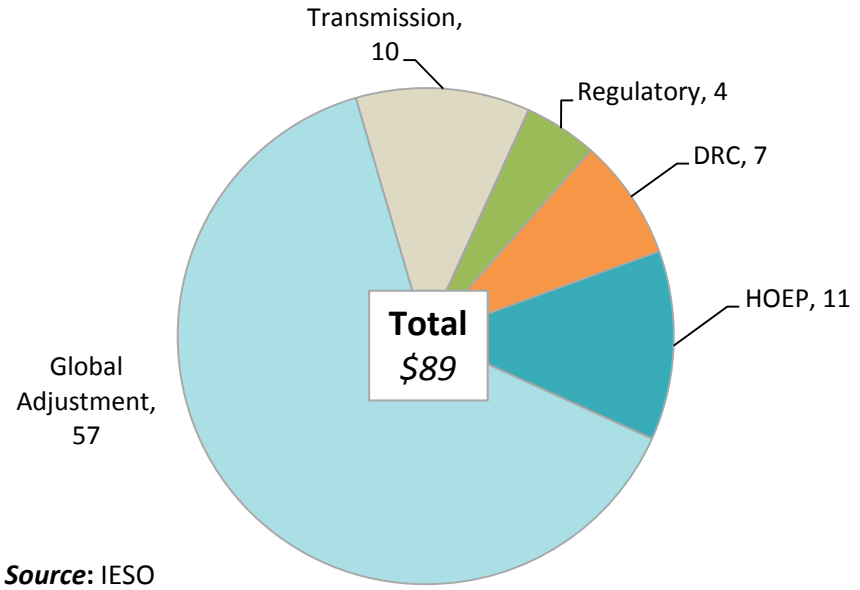
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



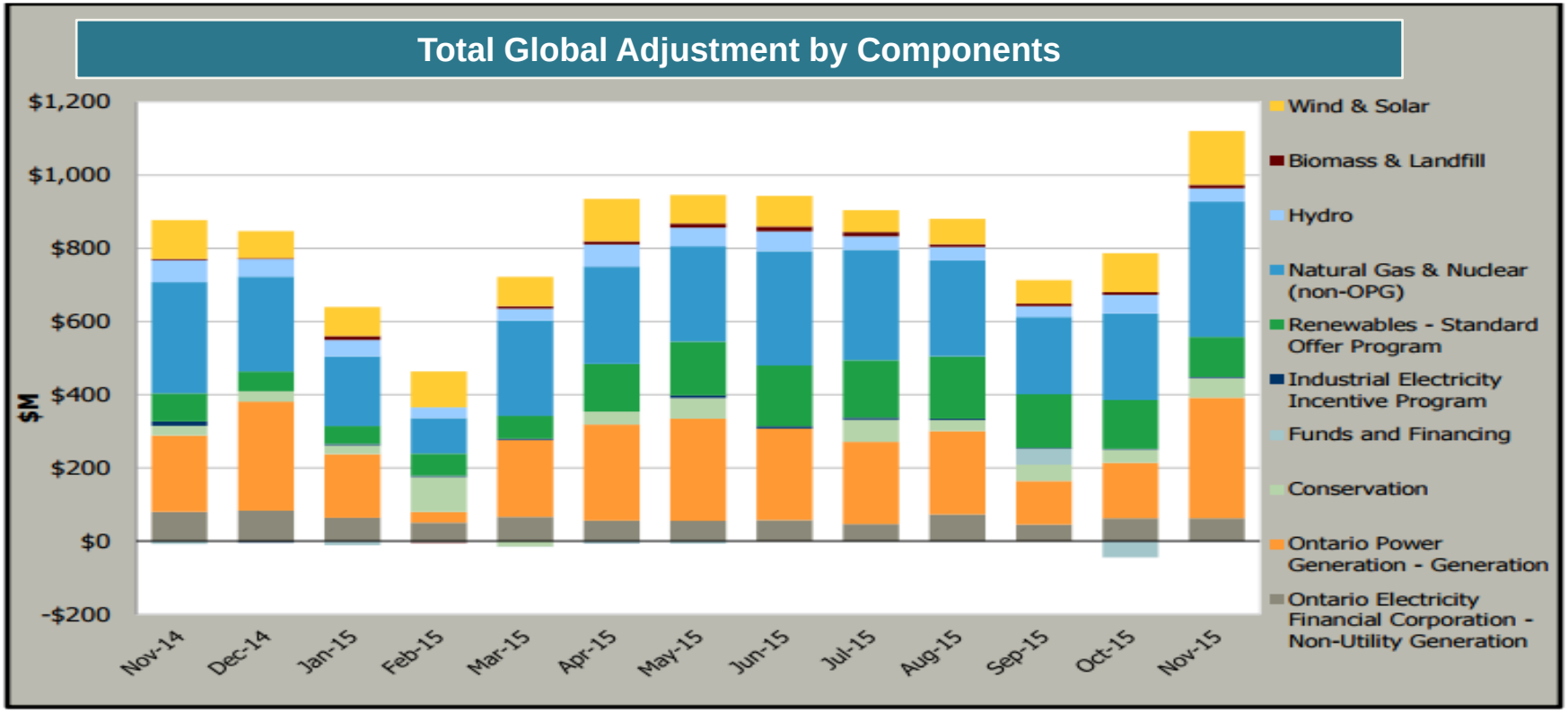

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

**From:** Shajee Kathirgamanathan
**To:** John Kim; Salman Qadir
**Subject:** FW: Price Mitigation Minute
**Date:** Tuesday, September 20, 2016 5:42:57 PM
**Attachments:** RAN Electricity Price Mitigation v13 2016 09 12 CLEAN.doc

---

The approved minute was also the proposed one in the final version of the TB note. Please see attached.

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, September 20, 2016 5:33 PM
**To:** Madeleine Morgenstern (PPAGS) <Madeleine.Morgenstern@ontario.ca>
**Subject:** RE: Price Mitigation Minute

Great thanks!

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Morgenstern, Madeleine (TBS) [mailto:Madeleine.Morgenstern@ontario.ca]
**Sent:** Tuesday, September 20, 2016 5:33 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Price Mitigation Minute

There were no changes to our minute, so that is the final approved minute.

Thanks,
Madeleine

---

**From:** Shajee Kathirgamanathan [mailto:Shajee.Kathirgamanathan@ofina.on.ca]
**Sent:** September-20-16 5:31 PM
**To:** Morgenstern, Madeleine (TBS)
**Subject:** RE: Price Mitigation Minute

Thanks Madeleine.

Can you provide the agreed upon Minute? … Or was the proposed Minute in the Note the one that was approved in the end?

Thanks!

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Morgenstern, Madeleine (TBS) [mailto:Madeleine.Morgenstern@ontario.ca]
**Sent:** Tuesday, September 20, 2016 5:28 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Price Mitigation Minute

Hi Shajee,

Here's the final TB note for the electricity item.

Thanks,
Madeleine

---

**From:** Shajee Kathirgamanathan [mailto:Shajee.Kathirgamanathan@ofina.on.ca]
**Sent:** September-20-16 2:57 PM
**To:** Morgenstern, Madeleine (TBS)
**Subject:** Price Mitigation Minute

Hi Madeleine,

Hope you're well.

Would you have the finalized Minute from the Electricity Price Mitigation initiative?

I have the attached note, but considering it says Proposed Minute, would there be any sort of document we could have on what was finalized?

Thanks,
Shajee

**Shajee Kathirgamanathan**
Senior Advisor
Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
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**TREASURY BOARD / MANAGEMENT BOARD OF CABINET**
**REQUEST ASSESSMENT NOTE**

| | |
|---|---|
| **Ministry:** | Energy |
| **Meeting Date:** | September 12, 2016 |
| **Agenda Class:** | Major |
| **Last reviewed by:** N/A | **Tracking to:** Cabinet - September 12, 2016 |

| **SUBMISSION TITLE:** | Electricity Price Mitigation |
|---|---|

## I. DECISION BEFORE THE BOARD

The Ministry of Energy is requesting approval of a suite of initiatives providing relief to various electricity consumer classes.

## II. RECOMMENDATIONS:

| | |
|---|---|
| • Approve a suite of initiatives to provide relief to various electricity consumer classes (pending Cabinet policy approval):<br>– Providing an 8% rebate to Regulated Price Plan eligible consumers;<br>– Expanding the Industrial Conservation Initiative;<br>– Updating the Rural or Remote Rate Protection program; and,<br>– Using $270M in cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade by providing a modest reduction in rates. Balance of proceeds intended for electricity relief through the Climate Change Action Plan ($60M), could provide some fiscal offsets.<br>• Approve $300M in 2016-17 in Supplementary Estimates for electricity price mitigation.<br>• Direct the Ministry to report back to TB/MBC through the annual planning process with updated future year impacts, and obtain any required TB/MBC approvals to implement the initiatives.<br>• Recommend proceeding to Cabinet with the proposed legislation and amendments to existing regulations to implement the initiatives. | *Board Judgment* |

## III. FINANCIAL SUMMARY

| **$ Millions** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|
| Initiative cost requested | 300.0 | 1006.0 | 1004.0 |
| Initiative cost recommended | 300.0 | 1006.0 | 1004.0 |
| Recommended program base | 300.0 | 1006.0 | 1004.0 |
| Offset Recommended – Applies if cap and trade proceeds diverted to in-plan initiatives | 0.0 | (60.0) | (60.0) |
| Total Fiscal Impact | 300.0 | 946.0 | 944.0 |

## IV. KEY COMMENTS AND CONSIDERATIONS

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online. Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period. Appendix C provides supporting background information.

As part of the 2016 Budget, the government committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the Budget commitment and additional price mitigation, while delivering on the Province's climate change objectives, the Ministry of Energy has developed price mitigation initiatives that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

The Ministry is proposing the following to mitigate electricity prices for consumers (Appendix D provides more information on each item below):

- Provide an 8% rebate on the pre-tax cost of electricity to consumers eligible for the Regulated Price Plan (i.e., residential, small business and farms), equivalent to the provincial portion of HST.
- Expand Industrial Conservation Initiative (ICI) eligibility by lowering the threshold to 1 MW, to provide support to additional commercial, institutional and small industrial consumers.
- Update the Rural or Remote Rate Protection (RRRP) program, to provide relief to rural customers.
- Use cap and trade proceeds to provide a modest rate reduction for commercial and industrial electricity consumers.

Public high-profile communications would coincide with introduction of legislation (September 2016). Currently, the 8% rebate would be available starting January 1, 2017, along with updating the RRRP. Expanding ICI won't be added to bills until 2018 due to the time required to implement the expansion and for billing changes. The impact of cap and trade would not be added to electricity bills until 2017.

The following tables provide an overview of the four initiatives, recipients, projected financial impact, grouping them based on whether taxpayers or ratepayers cover the costs:

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Taxpayers cover the costs (Potential to impact the Province's Fiscal Plan)** | | | |
| **1.** | 8% Rebate to Regulated Price Plan | Fiscal<br>About $1.0B | Residential, small business and farms, and other small users |
| **2a.** | Use cap and trade proceeds to provide a modest reduction in rates for commercial and industrial electricity consumers. (Implementation details under development). | ($270M) in cap and trade proceeds to offset $270M in costs for reducing rates<br><br>No Fiscal Impact | The CCAP allocated up to $330M/year in cap and trade proceeds for electricity price mitigation.<br><br>See item 2b. regarding the residual amount of cap and trade proceeds ($330M - $270M = $60M) |
| **2b.** | While CCAP anticipated $330M/year was required to keep electricity affordable, the residential portion of this commitment is met by the 8% rebate. As such, some of the CCAP allocated proceeds can be redirected to other GHG reduction initiatives already in the fiscal plan. | Fiscal<br>($60M) | Provides fiscal plan flexibility of $60M/year if these proceeds are diverted to offset costs of other existing in-plan initiatives that reduce GHG emissions. |
| | **Total Fiscal Impact** | $946M | Matches Financial Summary on page 1 for 2017-18 |

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Ratepayers cover the costs (No impact to the Province's Fiscal Plan)** | | | |
| **3** | Expanding ICI eligibility to customers above 1MW in all sectors | Rate base<br>($47M/$82M)** | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors |
| **4.** | Updating Rural or Remote Rate Protection | Rate base<br>($110M) | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. |

** Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.

Due to the nature of the ICI Global Adjustment mechanism and cost recovery of RRRP, the rate base proposals (#3 and #4) above benefit the targeted recipients, but come at a cost to all other electricity ratepayers in Ontario.

The following table from the Ministry highlights the benefits by electricity consumer class.

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Benefit | | Class B (Commercial) Benefit | Class A (Industrial) Benefit | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br>(-8%) | -$45/ month<br>(-20%) | -$3/MWh<br>(-2%) | -$3/ MWh<br>(-3%) | Up to -$52/MWh<br>(-34%) |

**Notes:** * The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

See Appendix E for more illustrative bill impacts. See Appendix F for an electricity bill mock-up.

Fiscal Impact

The Ministry estimates proceeding with an 8% Regulated Price Plan (RPP) rebate without a cap would cost an estimated $1.0 billion per year. The Ministry's estimate of $300M needed for 2016-17 (to cover the first three months of 2017 when the 8% rebate applies) will be addressed through Supplementary Estimates. The Ministry will use the annual planning process to update future year impacts.

The Ministry also indicates the current proposal would use cap and trade proceeds to eliminate carbon price impacts/ grid emission reductions to ratepayers, as was established through the CCAP. This proposal does not require the full $330M/year notionally allocated through the CCAP, which could provide fiscal plan flexibility of about $60M per year to commit to other GHG reduction initiatives in the fiscal plan.

Cap and Trade Proceeds

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers (on average). While residential and other consumers would benefit from the 8% pre-tax rebate, this does not apply to non-Regulated Price Plan eligible consumers (larger industrial, commercial, and other consumers). As such, the Ministry is proposing to direct a portion of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to provide a modest rate reduction. This proposal fulfills the policy objective established in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to electricity ratepayers.

To be characterized as a regulatory charge under the cap and trade program, auction proceeds need to be spent on programs that are reasonably likely to reduce or support the reduction of greenhouse gases. The Ministry has indicated that their proposal would use proceeds to offset the costs of committed investments that reduce greenhouse gases (e.g., non-emitting generation and conservation programs) and incent fuel-switching away from fossil fuels.

Considerations – Implementation

At this point, the Ministry has presented a high level overview of major implementation pieces:

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010. If passed, the legislation would require a general regulation. Amendments would also be required to various regulations to expand ICI and RRRP.
- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. The Ministry indicates it will consult with LDCs (possibly through the Ontario Energy Board) to accurately assess these impacts once the program has been announced. In the past, LDCs have asked for at least six months' notice when implementing billing system changes. Timing concerns may be alleviated by allowing LDCs to provide retroactive payments rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- Detailed messaging on bills could be implemented. The rebate would not be directly linked to HST. With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.
- The Ministry will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

Legal Considerations

8% Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):

- Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):

- To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural or remote customers):

- Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):

- To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

Other Considerations

- This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets for the 8% rebate.
- The 8% rebate would provide a typical residential consumer about an $11 per month benefit on average, exceeding the Budget 2016 $2 per month on average cap and trade commitment. The proposal to offer a modest rate reduction for industrial and commercial consumers also exceeds the Budget commitment to simply offset the impact of cap and trade on these consumers.
- Reductions in electricity prices that do not consider consumption amounts (e.g., without the cap in the previous OCEB program) do not promote electricity conservation and may be seen as unaligned with climate change objectives.
- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
  - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
  - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
  - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

| | | | |
|---|---|---|---|
| **Name of analyst:** | James Strang<br>With input from TPD and OFA | **Phone number:** | 416-327-2071 |
| **Date:** | September 12, 2016 | **Log number:** | |
| **Branch / Division:** | GGPR/ PEMD/ Treasury Board Secretariat<br>Tax Policy Division/ Ministry of Finance<br>Ontario Financing Authority/ Ministry of Finance | | |

## APPENDIX A: PROPOSED MINUTE

Approve electricity price mitigation for residential, commercial and industrial consumers.

In this regard:

i) Approve a suite of initiatives to provide relief to various electricity consumer classes:

   a) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor, starting January 1, 2017.

   b) Increase the total amount of rate protection available to R2 low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2003.

   c) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

   d) Expand eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

   e) Provide a modest rate reduction to commercial and industrial electricity consumers using cap and trade auction proceeds to offset the cost.

ii) Recommend to Cabinet the proposed Ontario Rebate for Electricity Consumers Act, 2016 and that the Ministry proceed to Legislation and Regulations Committee before the end of 2016 with supporting regulations under the proposed Ontario Rebate for Electricity Consumers Act, 2016.

iii) Approve the implementation details associated with the suite of initiatives:

   a) Approve:

      1. The creation of a new item entitled "Ontario Rebate for Electricity Consumers" in the Electricity Price Mitigation Program (Vote/Item 2905-3).

      2. The creation of a new Transfer Payment entitled "Ontario Rebate for Electricity Consumers" in Rebate for Electricity Consumers (Vote/Item 2905-3).

      3. An expenditure increase in the amount of $300,000,000 in 2016-17 in the Transfer Payment entitled "Rebate for Electricity Consumers[1]" in Rebate for Electricity Consumers (Vote/Item 2905-3). Direct the Ministry to return any under-spending to the Treasury Board Contingency Fund.

[1] Pending approval of the proposed Ontario Rebate for Electricity Consumers Act, 2016

b) Note:

1. Funding for 2016-17 will be implemented through Supplementary Estimates in the Fall of 2016.

2. Future year impacts of $1,006,000,000 in 2017-18 and $1,004,000,000 in 2018-19, and $1,004,000,000 in 2019-20 and ongoing.

c) Direct the Ministry to report back to Treasury Board/Management Board of Cabinet in the 2017-18 Program Review, Renewal, and Transformation process on updated future year impacts, and a potential offset strategy for resource requirements to support program implementation

iv) Further to the Cabinet Minute of May 11, 2016 and the Treasury Board Minute of May 19, 2016, note the reallocation of cap and trade auction proceeds from the up to $1,320,000,000 that was previously allocated through the Climate Change Action Plan for electricity price mitigation, as follows:

a) The Ministry of Energy to work with the Ministry of the Environment and Climate Change, Treasury Board Secretariat, Ministry of Finance, Cabinet Office and Office of the Premier, to allocate up to $1,080,000,000, from 2017-18 to 2020-21, of Cap and Trade auction proceeds to address rate-impacts on non-Regulated Price Plan electricity consumers (e.g., industrial, commercial and institutional) related to cap and trade and the expansion of other rate-based programs, subject to the evaluation by the Minister of the Environment and Climate Change.

In this regard:

1) Direct the Ministry of Energy to work with the Ministry of the Environment and Climate Change and report back to Cabinet by the end of 2016 with options on the appropriate mechanism.

b) The remaining up to $240,000,000, from 2017-18 to 2020-21, which was previously allocated in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to ratepayers, to be used for other existing initiatives within the fiscal plan and the Climate Change Action Plan that reduce greenhouse gas emissions, subject to the evaluation by the Minister of the Environment and Climate Change.

In this regard:

1) Direct the Ministry of the Environment and Climate Change to work with Treasury Board Secretariat and Ministry of Finance to identify other existing initiatives within the fiscal plan and the Climate Change Action Plan that reduce greenhouse gas emissions that can be funded with the remaining up to $240,000,000, from 2017-18 to 2020-21.

v) To support implementation of electricity price mitigation, the Ministry is proceeding with the following amendments to existing regulations:

a) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the Electricity Act, 1998 to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and allow electricity consumers and market participants between 1 MW and 5 MW to opt in.

b) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural or Remote Rate Protection Plan to R2 low density electricity customers and provide for a periodic adjustment mechanism.

vi) Direct the Ministry to work with Office of the Premier and Cabinet Office on the development and implementation of an integrated communications strategy.

# APPENDIX B: FINANCIAL TABLES

| FINANCIAL IMPACTS: CHANGES TO EXPENSE AND REVENUE | | | | | TABLE B1 |
|---|---|---|---|---|---|
| | | *Fiscal Plan Basis* | | | *Appropriations Basis* |
| **$ Millions** | | **2016-17** | **2017-18** | **2018-19** | **2016-17** |
| Initiative cost recommended | | 0.0000 | 0.0000 | 0.0000 | |
| *Expense changes:* | | | | | |
| Operating item (Supplementary Estimates inclusion for 2016-17 amount) | Oper | 300.0000 | 1006.0000 | 1004.0000 | 0.0000 |
| Operating Offset | Oper | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | | | | | |
| | | | | | |
| *Revenue changes:* | | | | | |
| Revenue Increase/ Offset - Applies if cap and trade proceeds diverted to in-plan initiatives | | 0.0000 | (60.0000) | (60.0000) | |
| Revenue decrease | | 0.0000 | 0.0000 | 0.0000 | |
| **Total Fiscal Impact (draw from c-funds)** | | **300.0000** | **946.0000** | **940.0000** | **0.0000** |

# APPENDIX C: ELECTRICITY SECTOR BACKGROUND

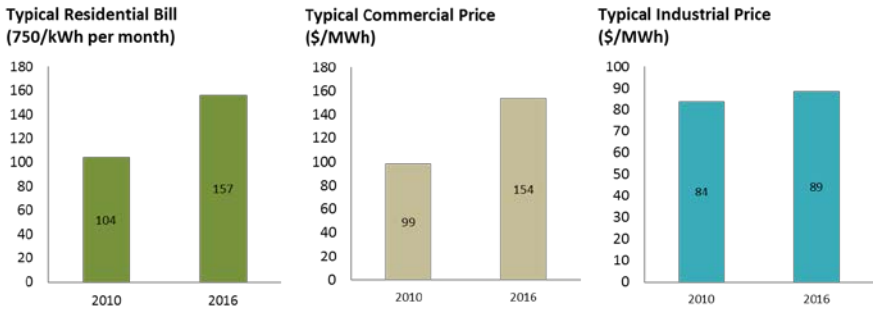
The Ministry has provided the following information to provide electricity sector context this item.

There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

*** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period.




**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

Existing Rate Mitigation efforts are on-going:

- Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs.
  - For example, Northern Ontario residential electricity consumers receive tax credits in recognition of higher electricity costs in the north and rural consumers receive a subsidy funded through the rate-base due to the higher cost of delivering power to rural areas.
  - As of 2016, the government removed the Debt Retirement Charge (DRC) from residential electricity bills. While this saves a typical residential electricity ratepayer about $60 per year, it is less than the benefit previously provided through the Ontario Clean Energy Benefit (OCEB).
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers.

- The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- The Rural or Remote Rate Protection (RRRP) program is provided to rural or remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- Because electricity costs must be fully recovered from electricity consumers, rate mitigation funded through the rate-base often represents a shifting of costs from one consumer group to another (i.e., industrial to residential and commercial consumers).
  - Rate-based initiatives are generally associated with incenting changes in behaviour that provide electricity system benefits (i.e., shifting electricity consumption from on-peak to off-peak periods).

The table below shows the estimated cost shifts in the province's electricity system that result from three existing government programs (i.e., ICI, RRRP and OESP):

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

Since 2013, a number of actions have and are being taken to reduce overall electricity system costs. Despite these actions to reduce system costs, electricity rates continue to increase for consumers:

- Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
- Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
- Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
- Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
- Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.

## APPENDIX D: FURTHER INFORMATION SUPPORTING PROPOSED INITIATIVES

The following information has been provided by the Ministry.

**1. Provide an 8% rebate to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms), equivalent to the provincial portion of HST**

The Ministry is proposing to introduce legislation/regulation to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit. This would be equivalent to the provincial portion of the HST.

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).
- An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

| **Eligible for the 8% rebate** (< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate** (> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Farms eligible for Regulated Price Plan (Including Class B farms that opted out of the Regulated Price Plan)<br>• Small businesses<br>– Coffee / snack retailer<br>– Convenience store<br>– Apparel store<br>– Hair salon<br>– Small insurance office | • Class A consumers<br>– Manufacturer<br>– Large grocery store<br>– Mines<br>– Auto assembly plants<br>• Class B consumers<br>– Commercial offices (low rise)<br>– Hotel<br>– General warehousing |

**2. Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial)**

Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers). Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would (the benefit would be seen by consumers starting in 2018):

- Reduce electricity peak demand and electricity system costs by incenting more consumers to lower their electricity demand during peak periods;
- Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
- Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| Short-term | Up to 21% | 80 | 47 | Increase of $0.42/month |
| Long-term | Up to 34% | 165 | 82 | Increase of $0.74/month |

The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility. The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating. Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.

## 3. Update the Rural or Remote Rate Protection (RRRP) program, to provide relief to rural customers

The Ministry is proposing to provide an additional $110M in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

RRRP is a rate-based funded program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.

- Today, RRRP is a $175M program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
- The majority of the program funding ($127M) provided to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a rebate of $31.50. The proposed update to the program would increase the benefit to $60/month
- RRRP funding supporting R2 customers has been capped at the current level since 2003. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

An additional $110M in program funding would see an increased benefit of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.

- This would increase the R2 portion of the RRRP to $237 million with a monthly impact on an average residential consumer of ~$0.60.
- The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the benefit remains constant.

## 4. Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.

- To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).
- However, providing an 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other GHG reduction initiatives in the fiscal plan.

The rate reduction proposal would provide additional benefit to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $240M over the first four year compliance period).

# APPENDIX E: ILLUSTRATIVE BILL IMPACTS

The Ministry has provided the following illustrative bill impacts:

| | Current Bill ( before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $139 /month | N/A | 8% pre-tax rebate: - $11 | $128 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $229 /month | RRRP: –$32 | 8% pre-tax rebate + Updated RRRP: - $45 | $184 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $101 /month | OESP: -$38 | 8% pre-tax rebate: - $8 | $93 /month |
| Small Business (Toronto – 403,200 kWh/month) | $149 /MWh | N/A | 8% pre-tax rebate: - $12/MWh | $137 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $203 /MWh | N/A | 8% pre-tax rebate: - $16/MWh | $187 /MWh |

**Notes:**

***** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as $1,332 per year for a family.

** Income of less than $28,000, family of 4.

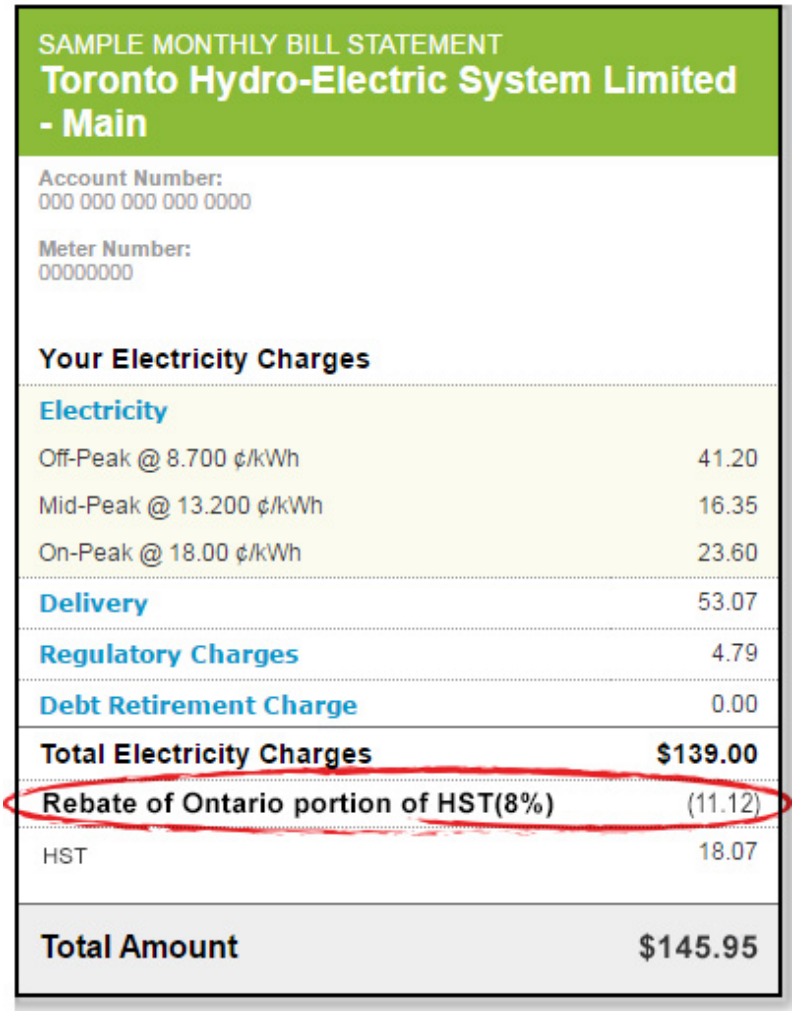
The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Totals may not add due to rounding.

| | Current Rate | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Rate |
|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | $105 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI + NIERP: -$69/MWh | Proceeds Recycling: -$2.60/MWh | $66 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling + ICI: Up to -$52/MWh | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $149 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $151 /MWh |

**Notes:**

The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

## APPENDIX F: ILLUSTRATIVE BILL MOCK-UP



SAMPLE MONTHLY BILL STATEMENT

**Toronto Hydro-Electric System Limited - Main**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| **Rebate of Ontario portion of HST(8%)** | (11.12) |
| HST | 18.07 |
| **Total Amount** | **$145.95** |

**Note:** Final bill presentment pending submission to LRC.

## APPENDIX G: BACKGROUND CONTEXT

**Budget commitment** (*2016 Ontario Budget - Chapter I: Building Prosperity and Creating Jobs*)**:**

The government will also take steps to ensure that the net impact of cap and trade would not result in an overall increase in electricity costs for commercial and industrial consumers, and that there would be a modest benefit of up to $2 per month, on average, to residential consumers.

**CCAP public document** (under *Action Area – Buildings and Homes: Reduce emissions from fossil-fuel use in buildings*)**:**

Keep Electricity Rates Affordable: Use cap and trade proceeds to offset the cost of greenhouse gas pollution reduction initiatives that are currently funded by residential and industrial consumers through their bills.

**CCAP policy minute** (May 11, 2016)**:**

ENERGY develop additional options to addressing rate-impacts on electricity consumers and work with MOECC, the Premier's Office and Cabinet Office regarding the selected option for inclusion in the action plan

**CCAP TB/MBC minute** (May 19, 2016)**:**

i) Approve-in-principle the following estimated ranges to guide potential investment of cap and trade proceeds over four years, from 2017-18 to 2020-21, should proceeds be available:

| **CCAP Action** | **Initiative** | **Potential Funding range from proceeds over 4-year period** | **Estimated GHG reduction in 2020 associated with potential funding** |
|---|---|---|---|
| Moving toward a lower-carbon energy supply with adequate capacity and affordable low-carbon electricity. | Eliminate Carbon Price Impacts / Grid Emission Reductions to Ratepayers | · Range - $1,000,000,000 to $1,320,000,000 | 3,000,000 Tonnes (Energy Planning) |

**From:** Shajee Kathirgamanathan
**To:** John Kim
**Subject:** FW: Price-Mitigation - CEFD Slides-Dec6-2016_v4.pptx
**Date:** Tuesday, December 06, 2016 4:02:06 PM
**Attachments:** Price-Mitigation - CEFD Slides-Dec6-2016_v4.pptx

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Just minor edits. In red.

Back for Francisco?

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

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**From:** John Kim
**Sent:** Tuesday, December 06, 2016 3:51 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Price-Mitigation - CEFD Slides-Dec6-2016_v4.pptx

Could you take a quick look?

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# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

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# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost [about $1.5 billion per year in new fiscal costs].
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 billion in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time), with the total tax-based costs rising to about $3.5 billion in 2017-18.
  - These existing mitigation costs are not presented in Energy's deck.
  - Also not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

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# Context: Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

# Energy's Proposals

Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded. They could be upwards of $2 bn/year, (plus the departure tax), which is not included in the fiscal plan, which would challenge the path to balance.

- OESP & RRRP (Total of about $0.4 Bn/yr): This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI -- About $900+ M/yr): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes that about 30% price increase (from $85/MWh to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
  - As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $100 million).

- Departure Tax: As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.
  - This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
  - Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

- Other fiscal cost risks (Total of about $0.8+ Bn):
  - Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
  - Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
  - Lowering of the debt interest paid by OPG (about $30 – 70 million/yr between 2017 and 2021),

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# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
  - These targeted, low-income measures were introduced after the HST was introduced.
  - The OESP provides a larger, targeted and on-bill relief to qualifying consumers.

- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
  - As with the prior OCEB cap, provides a rough incentive for conservation and correlation to larger homes. A higher cap in winter may help with space-heating issue.
  - May be challenging to implement.

- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | The government removed the DRC from residential electricity users' bills as of January 1, 2016. This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline: Taxpayer-funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

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# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

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# Proposed Taxpayer Funded Electricity Price Mitigation
(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | | | | |
| 7. DRC Ended for Class B | | | | | |
| 8. Other | | | | | |
| **TOTAL** | **1195** | **3,421** | **3,152** | **3,177** | **3,191** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.2 billion, or more, by 2020-21. That is about a 60% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | John Kim |
| **Subject:** | FW: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Saturday, January 14, 2017 5:45:45 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx<br>Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy_SIFBEFBmarkup.pptx<br>Price-Mitigation - CEFD Slides-Dec6-2016_v7.pptx |

---

**From:** Gavin He
**Sent:** Monday, January 09, 2017 6:54 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi John,

As requested, please find attached the materials we have.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Monday, January 09, 2017 3:50 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Yup, sure, no problem.

---

**From:** Gavin He
**Sent:** January 9, 2017 3:48 PM
**To:** John Kim
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi John,

I am at the Frost Building now and will send you the materials after I got back to the office later today. Is that ok?

Regards,
Gavin He

On Jan 9, 2017, at 15:30, John Kim <John.Kim@ofina.on.ca> wrote:

Hi Gavin,

Could you send me the version that we worked on earlier as well as related file in attachments?

Thanks,

John.

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**From:** Gavin He
**Sent:** January 9, 2017 12:14 PM
**To:** John Kim; Shajee Kathirgamanathan
**Cc:** Francisco Chinchon; Darren Scanlan
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi John/Shajee,

Just a quick update from the meeting. Ron wants a short presentation deck on the Departure Tax proposal, which will include contents on Departure Tax, Deferred Tax Benefit, Stranded Debt impact, and etc. SIFB will lead on this task and will share the deck with EFB for comments on SD related materials.

Francisco/Darren – please feel free to add anything that I might have missed or stated incorrectly.

Thanks,
Gavin He

---

**From:** Francisco Chinchon
**Sent:** Monday, January 09, 2017 10:13 AM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Works for us.

---

**From:** Ronald Kwan

**Sent:** Monday, January 09, 2017 10:12 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi,

We can have a preliminary discussion today, say at 11:30?

Ron

---

**From:** Francisco Chinchon
**Sent:** January-09-17 10:11
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

Thanks and happy new year! I understand Shajee is sick today. Darren and I are available or we could wait until tomorrow.

Thanks,

Francisco

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**From:** Ronald Kwan
**Sent:** Monday, January 09, 2017 10:09 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Welcome back.

Can we set up a time later this morning to discuss.

Thanks,
Ron

---

**From:** Gavin He
**Sent:** January-06-17 10:32
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

Attached are the notes along with the request.

Thanks,
Gavin He

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**From:** Ronald Kwan
**Sent:** Friday, January 06, 2017 10:25 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Please see the request. Lease start drafting a thorough analysis.

Thanks,
Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 6, 2017 at 10:23:12 AM EST
> **To:** "David McLean (MOF)" <David.McLean@ontario.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>,

Gavin He <Gavin.He@ofina.on.ca>
**Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**

Hi David,

Yes, we can work on that for early next week.

Ron

> On Jan 6, 2017, at 10:20 AM, McLean, David (MOF) <David.McLean@ontario.ca> wrote:
>
> Hi Ron,
>
> The DM has asked if you and your team could build on the analysis contained in this note on the departure tax component. He'd like something thorough focused specifically on that proposal.
>
> If possible, he'd like to see something as early as feasible next week. Is that doable?
>
> Thanks,
>
> Dave
>
> -----Original Message-----
>
> From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
>
> Sent: December 13, 2016 7:21 AM
>
> To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)
>
> Cc: McLean, David (MOF); Pearce, Christopher (MOF)
>
> Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
>
> Thanks Chris.
>
> Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----

From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]

Sent: December-12-16 9:18 AM

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----

From: Thompson, Scott (MOF)

Sent: December 11, 2016 12:25 PM

To: McLean, David (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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From: Orsini, Steve (CAB)

Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)

To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)

Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: December-11-16 12:04 PM

To: Orsini, Steve (CAB)

Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

---

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

<Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx>

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its deck.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

Energy's proposals generally involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value, including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |
| **E**nd the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

<u>OESP & RRRP (Total of about $0.4 to 0.45 Billion/year</u>):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

<u>Fund Conservation Programs through the Tax-Base</u>:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**December 12, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8%  per cent rebate ($11/month savings), updating RRRP ($45/month savings, combined with the 8% rebate), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured,  the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP),  which provides an opportunity to consider a range of policy changes to  how the Ontario energy sector operates.

# Broad Policy Themes / Rationale

- No longer use rate-base to pay for social programs [despite the system benefit rationale] by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.
- Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.
- Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" beyond the Moving Ontario Forward initiative to make certain investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties ~~and expansion of natural gas to rural areas~~, etc. (note that expanding access to natural gas is already included under Moving Ontario Forward.)
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" a single rate plan as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time.
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.16 | 2.31 | 2.41 | 2.49 | 2.54 | 2.58 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.13 | 0.13 | 0.14 | 0.14 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.88 | 3.08 | 3.21 | 3.33 | 3.39 | 3.44 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 2.82 | 3.05 | 2.47 | 2.56 | 2.13 | 2.14 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.10 | 0.10 | 0.11 | 0.11 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Taxpayer Funded Electricity Price Mitigation

| *($M)* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | | 398 | 419 | 433 | 447 |
| 2. Expand the OESP (i.e., 50% increase) | TBD | TBD | TBD | TBD | TBD |
| 3. Fund Conservation Programs Through The Tax-Base | 110 | 450 | 450 | 450 | 450 |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC efficiencies | - | - | - | - | - |
| c. OPG – Borrowing | - | - | - | - | - |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | 110 | 450 | - | - | - |
| 8. Cancel / Adjust FIT | - | - | - | - | - |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| 2. Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy

# Considerations / Outcomes

- The proposed initiatives provide the following opportunities to:
  - Lower the cost of electricity for all consumers;
  - Re-set how electricity programs and energy infrastructure is funded (i.e., shifting costs to the tax-base from rate-base);
  - Provide electricity consumers with greater choices (i.e., signal rate plan);
  - Provide system benefits (e.g., market renewal); and
  - Increase cost effectiveness and improve efficiency.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

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# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

DRAFT

# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost [about $1.3 – 1.9 plus bn per year in new fiscal costs].
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 billion in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time), with the total tax-based costs rising to about $3.3-3.9 plus billion in 2017-18, if Energy`s proposals are adopted.
  - These existing mitigation costs are not presented in Energy's deck.
  - Not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

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Option 1

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion.

# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

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Option 2

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[2] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,450** | **895** | **1,705** |

1. 2016-17, 2017-18 based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge

NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $900 million.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $1.7 billion.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

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# Energy's Proposals

Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded. They could be upwards of $2 bn/year, (plus the departure tax), which is not included in the fiscal plan, which would challenge the path to balance.

- OESP & RRRP (Total of about $0.4 Bn/yr): This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI -- About $900+ M/yr): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes that about 30% price increase (from $85/MWh to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
  - As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $100 million).

- Departure Tax: As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.
  - This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
  - Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

- Other fiscal cost risks (Total of about $0.8+ Bn):
  - Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
  - Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
  - Lowering of the debt interest paid by OPG (about $30 – 70 million/yr between 2017 and 2021),

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# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
  - These targeted, low-income measures were introduced after the HST was introduced.
  - The OESP provides a larger, targeted and on-bill relief to qualifying consumers.

- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
  - As with the prior OCEB cap, provides a rough incentive for conservation and correlation to larger homes. A higher cap in winter may help with space-heating issue.
  - May be challenging to implement.

- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

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# Proposed Taxpayer Funded Electricity Price Mitigation Option 1
(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | | | |
| 8. Other | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,305** | **3,901** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

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# Proposed Taxpayer Funded Electricity Price Mitigation Option 2

(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **895** | **1,705** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | | | |
| 8. Other | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,105** | **3,501** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

Option 1

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | Removing the DRC from residential users was a policy decision to help mitigate residential rate pressures – particularly in the context of the end of OCEB – rather than based on defeasance as per the original conception of the DRC. ~~The government removed the DRC from residential electricity users' bills as of January 1, 2016.~~ This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

# Background on Taxpayer-funded Electricity Price Mitigation

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Option 2

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
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1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

# Timeline: Taxpayer-funded Electricity Price Mitigation

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Option 1

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

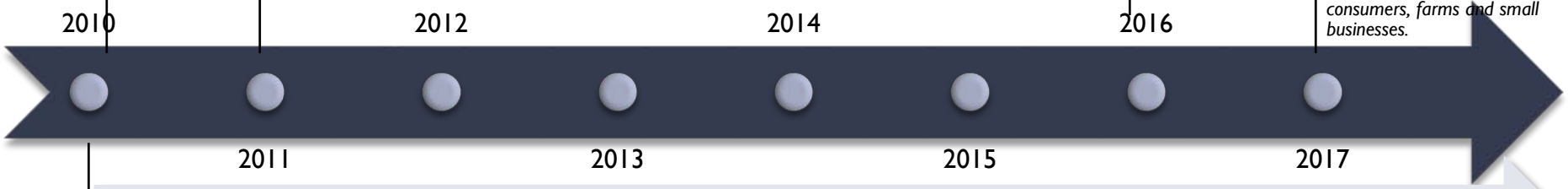
*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*Removing the DRC from residential users was a policy decision to help mitigate residential rate pressures rather than based on defeasance as per the original conception of the DRC. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*




**History of Northern Industrial Electricity Price Relief**

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

# Timeline: Taxpayer-funded Electricity Price Mitigation

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Option 2

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

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**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

**History of Northern Industrial Electricity Price Relief**

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**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

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# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Note: The Province has invested capital into OPG and Hydro One with the expectation that as commercial corporations, the Province would receive a risk-adjusted return in exchange for these investments.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

# Potential Fiscal Impact to the Electricity Sector

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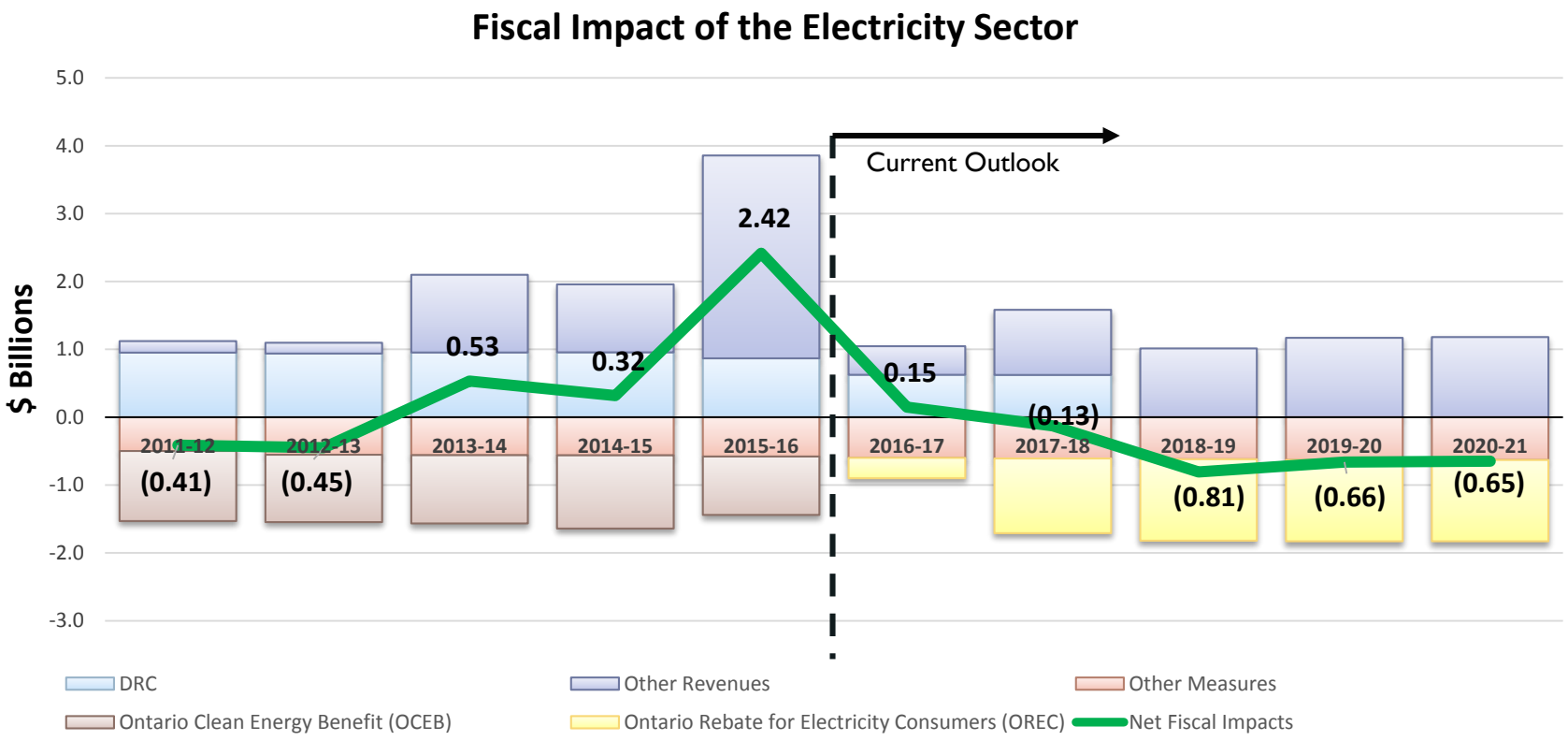
Option 2

- The below chart provides an overview of the fiscal impact from the electricity sector




Other Revenues include payments in lieu of taxes (PILs), and property tax PILs in the case of Hydro One, directed to the OEFC. The provincial portion of these taxes would be a fiscal benefit to the province, regardless of company ownership.

**From:** Darren Scanlan
**To:** Arie Jarczyn; Wentao Shi
**Cc:** Francisco Chinchon; John Kim; Shajee Kathirgamanathan
**Subject:** FW: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx
**Date:** Friday, January 06, 2017 10:37:39 AM
**Attachments:** Comments on Electricity Sector Transformation Proposals v6 (CEFD).docx

---

Hi Arie, Wentao,

Please see below. Can you start on drafting a more thorough note on the departure tax proposal? I think we need to focus on how exactly the proposal would work, and what exactly it means to OEFC / Province and ratepayers. I know when we first received ENERGY's deck we did some analysis on the ratepayer impacts, so perhaps we can revisit that. Can you also work with Shajee on bullets on the implications for stranded debt?

Thanks,
Darren

---

**From:** Ronald Kwan
**Sent:** Friday, January 06, 2017 10:25 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Please see the request. Lease start drafting a thorough analysis.

Thanks,
Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 6, 2017 at 10:23:12 AM EST
> **To:** "David McLean (MOF)" <David.McLean@ontario.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, Gavin He <Gavin.He@ofina.on.ca>
> **Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Hi David,
>
> Yes, we can work on that for early next week.
>
> Ron

On Jan 6, 2017, at 10:20 AM, McLean, David (MOF) <David.McLean@ontario.ca> wrote:

Hi Ron,

The DM has asked if you and your team could build on the analysis contained in this note on the departure tax component. He'd like something thorough focused specifically on that proposal.

If possible, he'd like to see something as early as feasible next week. Is that doable?

Thanks,

Dave

-----Original Message-----

From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]

Sent: December 13, 2016 7:21 AM

To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)

Cc: McLean, David (MOF); Pearce, Christopher (MOF)

Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----

From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]

Sent: December-12-16 9:18 AM

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----

From: Thompson, Scott (MOF)

Sent: December 11, 2016 12:25 PM

To: McLean, David (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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From: Orsini, Steve (CAB)

Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)

To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)

Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: December-11-16 12:04 PM

To: Orsini, Steve (CAB)

Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures.  It's still an early draft and

we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

---

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<Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx>

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its deck.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

Energy's proposals generally involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
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| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
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| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
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**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value, including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |
| **E**nd the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**December 12, 2016**

| | |
|---|---|
| **From:** | John Kim |
| **To:** | John Kim |
| **Subject:** | FW: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Saturday, January 14, 2017 5:45:46 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx<br>Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy_SIFBEFBmarkup.pptx<br>Price-Mitigation - CEFD Slides-Dec6-2016_v7.pptx |

---

**From:** Gavin He
**Sent:** Monday, January 09, 2017 6:54 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi John,

As requested, please find attached the materials we have.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Monday, January 09, 2017 3:50 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Yup, sure, no problem.

---

**From:** Gavin He
**Sent:** January 9, 2017 3:48 PM
**To:** John Kim
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi John,

I am at the Frost Building now and will send you the materials after I got back to the office later today. Is that ok?

Regards,
Gavin He

On Jan 9, 2017, at 15:30, John Kim <John.Kim@ofina.on.ca> wrote:

Hi Gavin,

Could you send me the version that we worked on earlier as well as related file in attachments?

Thanks,

John.

---

**From:** Gavin He
**Sent:** January 9, 2017 12:14 PM
**To:** John Kim; Shajee Kathirgamanathan
**Cc:** Francisco Chinchon; Darren Scanlan
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi John/Shajee,

Just a quick update from the meeting. Ron wants a short presentation deck on the Departure Tax proposal, which will include contents on Departure Tax, Deferred Tax Benefit, Stranded Debt impact, and etc. SIFB will lead on this task and will share the deck with EFB for comments on SD related materials.

Francisco/Darren – please feel free to add anything that I might have missed or stated incorrectly.

Thanks,
Gavin He

---

**From:** Francisco Chinchon
**Sent:** Monday, January 09, 2017 10:13 AM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Works for us.

---

**From:** Ronald Kwan

**Sent:** Monday, January 09, 2017 10:12 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi,

We can have a preliminary discussion today, say at 11:30?

Ron

---

**From:** Francisco Chinchon
**Sent:** January-09-17 10:11
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

Thanks and happy new year! I understand Shajee is sick today. Darren and I are available or we could wait until tomorrow.

Thanks,

Francisco

---

**From:** Ronald Kwan
**Sent:** Monday, January 09, 2017 10:09 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Welcome back.

Can we set up a time later this morning to discuss.

Thanks,
Ron

---

**From:** Gavin He
**Sent:** January-06-17 10:32
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

Attached are the notes along with the request.

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, January 06, 2017 10:25 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Please see the request. Lease start drafting a thorough analysis.

Thanks,
Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 6, 2017 at 10:23:12 AM EST
> **To:** "David McLean (MOF)" <David.McLean@ontario.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>,

Gavin He <Gavin.He@ofina.on.ca>
**Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**

Hi David,

Yes, we can work on that for early next week.

Ron

> On Jan 6, 2017, at 10:20 AM, McLean, David (MOF) <David.McLean@ontario.ca> wrote:
>
> Hi Ron,
>
> The DM has asked if you and your team could build on the analysis contained in this note on the departure tax component. He'd like something thorough focused specifically on that proposal.
>
> If possible, he'd like to see something as early as feasible next week. Is that doable?
>
> Thanks,
>
> Dave
>
> -----Original Message-----
>
> From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
>
> Sent: December 13, 2016 7:21 AM
>
> To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)
>
> Cc: McLean, David (MOF); Pearce, Christopher (MOF)
>
> Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
>
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> Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

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To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

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| Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value, including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |
| **E**nd the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

<u>OESP & RRRP (Total of about $0.4 to 0.45 Billion/year</u>):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

<u>Fund Conservation Programs through the Tax-Base</u>:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**December 12, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8%  per cent rebate ($11/month savings), updating RRRP ($45/month savings, combined with the 8% rebate), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured,  the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP),  which provides an opportunity to consider a range of policy changes to  how the Ontario energy sector operates.

# Broad Policy Themes / Rationale

- No longer use rate-base to pay for social programs [despite the system benefit rationale] by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.
- Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.
- Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" beyond the Moving Ontario Forward initiative to make certain investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties ~~and expansion of natural gas to rural areas~~, etc. (note that expanding access to natural gas is already included under Moving Ontario Forward.)
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" a single rate plan as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time.
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.16 | 2.31 | 2.41 | 2.49 | 2.54 | 2.58 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.13 | 0.13 | 0.14 | 0.14 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.88 | 3.08 | 3.21 | 3.33 | 3.39 | 3.44 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 2.82 | 3.05 | 2.47 | 2.56 | 2.13 | 2.14 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.10 | 0.10 | 0.11 | 0.11 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Taxpayer Funded Electricity Price Mitigation

| *($M)* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | | 398 | 419 | 433 | 447 |
| 2. Expand the OESP (i.e., 50% increase) | TBD | TBD | TBD | TBD | TBD |
| 3. Fund Conservation Programs Through The Tax-Base | 110 | 450 | 450 | 450 | 450 |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC efficiencies | - | - | - | - | - |
| c. OPG – Borrowing | - | - | - | - | - |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | 110 | 450 | - | - | - |
| 8. Cancel / Adjust FIT | - | - | - | - | - |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| 2. Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy

# Considerations / Outcomes

- The proposed initiatives provide the following opportunities to:
  - Lower the cost of electricity for all consumers;
  - Re-set how electricity programs and energy infrastructure is funded (i.e., shifting costs to the tax-base from rate-base);
  - Provide electricity consumers with greater choices (i.e., signal rate plan);
  - Provide system benefits (e.g., market renewal); and
  - Increase cost effectiveness and improve efficiency.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

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# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

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# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost [about $1.3 – 1.9 plus bn per year in new fiscal costs].
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 billion in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time), with the total tax-based costs rising to about $3.3-3.9 plus billion in 2017-18, if Energy`s proposals are adopted.
  - These existing mitigation costs are not presented in Energy's deck.
  - Not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

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Option 1

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion.

# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

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Option 2

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[2] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,450** | **895** | **1,705** |

1. 2016-17, 2017-18 based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge

NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $900 million.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $1.7 billion.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

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# Energy's Proposals

Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded. They could be upwards of $2 bn/year, (plus the departure tax), which is not included in the fiscal plan, which would challenge the path to balance.

- OESP & RRRP (Total of about $0.4 Bn/yr): This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI -- About $900+ M/yr): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes that about 30% price increase (from $85/MWh to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
  - As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $100 million).

- Departure Tax: As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.
  - This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
  - Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

- Other fiscal cost risks (Total of about $0.8+ Bn):
  - Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
  - Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
  - Lowering of the debt interest paid by OPG (about $30 – 70 million/yr between 2017 and 2021),

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# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
  - These targeted, low-income measures were introduced after the HST was introduced.
  - The OESP provides a larger, targeted and on-bill relief to qualifying consumers.

- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
  - As with the prior OCEB cap, provides a rough incentive for conservation and correlation to larger homes. A higher cap in winter may help with space-heating issue.
  - May be challenging to implement.

- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

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# Proposed Taxpayer Funded Electricity Price Mitigation Option 1
(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | | | |
| 8. Other | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,305** | **3,901** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

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# Proposed Taxpayer Funded Electricity Price Mitigation Option 2

(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **895** | **1,705** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | | | |
| 8. Other | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,105** | **3,501** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# Appendix

DRAFT

# Background on Taxpayer-funded Electricity Price Mitigation

Option 1

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | Removing the DRC from residential users was a policy decision to help mitigate residential rate pressures – particularly in the context of the end of OCEB – rather than based on defeasance as per the original conception of the DRC. ~~The government removed the DRC from residential electricity users' bills as of January 1, 2016.~~ This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

# Background on Taxpayer-funded Electricity Price Mitigation

DRAFT

Option 2

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
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# Timeline: Taxpayer-funded Electricity Price Mitigation

DRAFT

Option 1

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

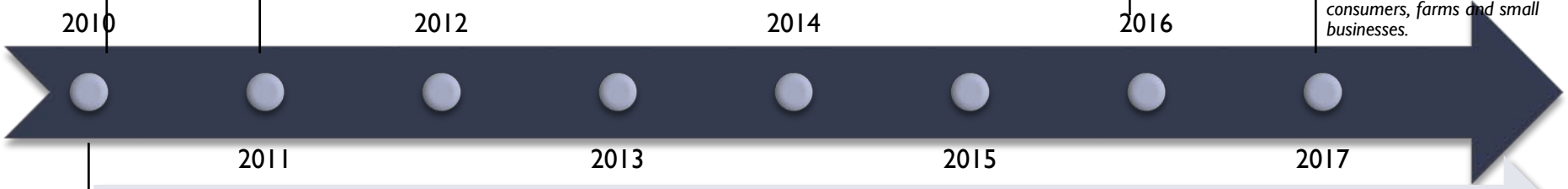
*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*Removing the DRC from residential users was a policy decision to help mitigate residential rate pressures rather than based on defeasance as per the original conception of the DRC. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*




**History of Northern Industrial Electricity Price Relief**

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

# Timeline: Taxpayer-funded Electricity Price Mitigation

DRAFT

Option 2

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

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*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

**History of Northern Industrial Electricity Price Relief**

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**December 2012**

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# Potential Fiscal Impact to the Electricity Sector

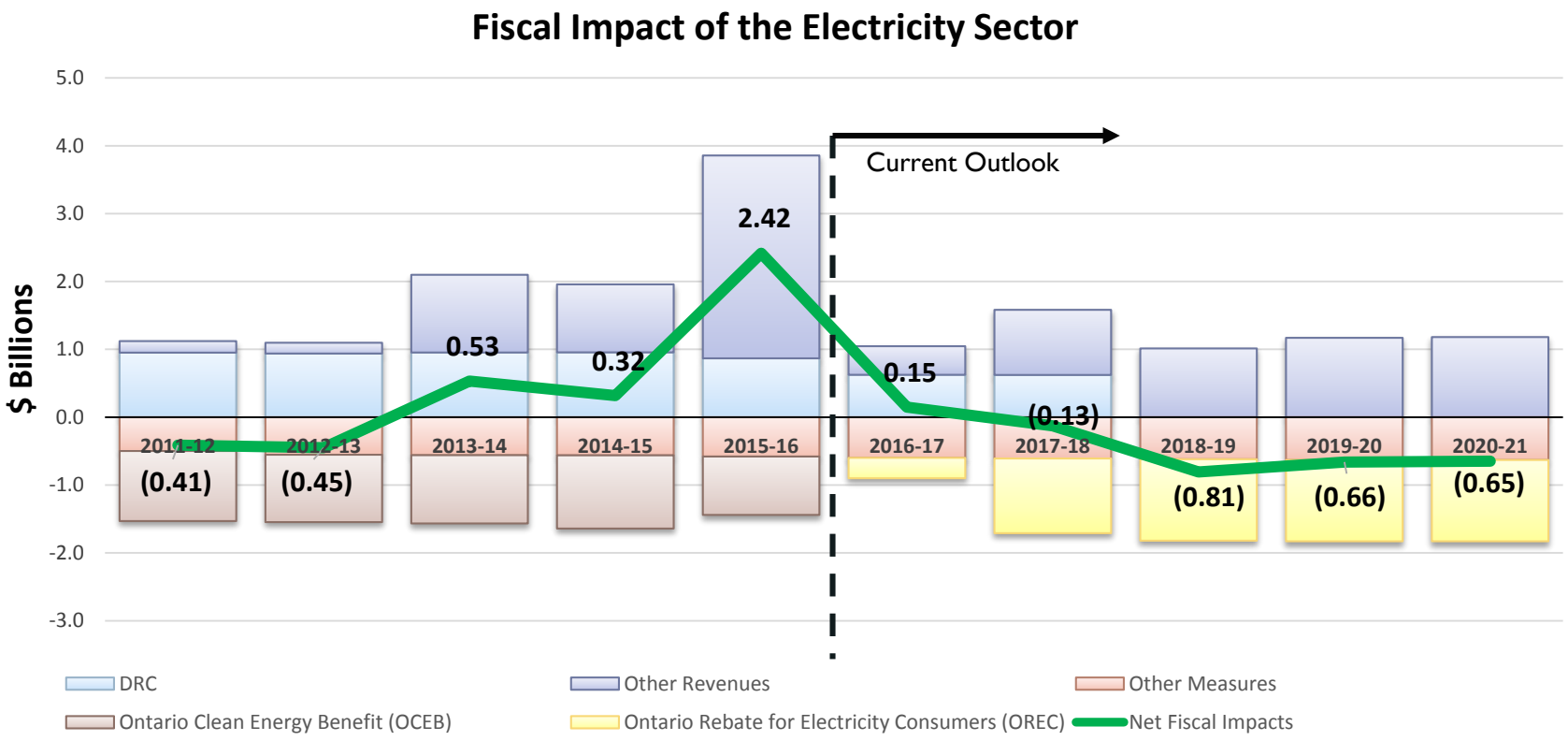
- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Note: The Province has invested capital into OPG and Hydro One with the expectation that as commercial corporations, the Province would receive a risk-adjusted return in exchange for these investments.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

# Potential Fiscal Impact to the Electricity Sector

DRAFT

Option 2

- The below chart provides an overview of the fiscal impact from the electricity sector




Other Revenues include payments in lieu of taxes (PILs), and property tax PILs in the case of Hydro One, directed to the OEFC. The provincial portion of these taxes would be a fiscal benefit to the province, regardless of company ownership.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Sandy Roberts |
| **Subject:** | FW: Question.... |
| **Date:** | Tuesday, November 08, 2016 5:57:40 PM |
| **Attachments:** | RAN Electricity Price Mitigation v13 2016 09 12 FINAL.doc |

Fyi.

**From:** Fung, Felix (TBS) [mailto:Felix.Fung@ontario.ca]
**Sent:** Tuesday, November 08, 2016 5:53 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Question....

Hi John, no, I don't have any new estimates. The set of numbers that I have were from Energy when the item when to TB/MBC (see attached assessment note).

We did build the approximately $1B/year into the Ministry's preliminary allocation.

Thanks,
Felix

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** November-08-16 5:50 PM
**To:** Fung, Felix (TBS)
**Subject:** Question....

Hi Felix….question for you. Do you have any new materials that show the OREC cost estimates? If so, could you share?

Thanks,

John.

Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

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**TREASURY BOARD / MANAGEMENT BOARD OF CABINET**
**REQUEST ASSESSMENT NOTE**

| | |
|---|---|
| **Ministry:** | Energy |
| **Meeting Date:** | September 12, 2016 |
| **Agenda Class:** | Major |
| **Last reviewed by:** N/A | **Tracking to:** Cabinet - September 12, 2016 |

| **SUBMISSION TITLE:** | Electricity Price Mitigation |
|---|---|

## I. DECISION BEFORE THE BOARD

The Ministry of Energy is requesting approval of a suite of initiatives providing relief to various electricity consumer classes.

## II. RECOMMENDATIONS:

| | |
|---|---|
| • Approve a suite of initiatives to provide relief to various electricity consumer classes (pending Cabinet policy approval):<br>– Providing an 8% rebate to Regulated Price Plan eligible consumers;<br>– Expanding the Industrial Conservation Initiative;<br>– Updating the Rural or Remote Rate Protection program; and,<br>– Using $270M in cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade by providing a modest reduction in rates. Balance of proceeds intended for electricity relief through the Climate Change Action Plan ($60M), could provide some fiscal offsets.<br>• Approve $300M in 2016-17 in Supplementary Estimates for electricity price mitigation.<br>• Direct the Ministry to report back to TB/MBC through the annual planning process with updated future year impacts, and obtain any required TB/MBC approvals to implement the initiatives.<br>• Recommend proceeding to Cabinet with the proposed legislation and amendments to existing regulations to implement the initiatives. | *Board Judgment* |

## III. FINANCIAL SUMMARY

| **$ Millions** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|
| Initiative cost requested | 300.0 | 1006.0 | 1004.0 |
| Initiative cost recommended | 300.0 | 1006.0 | 1004.0 |
| Recommended program base | 300.0 | 1006.0 | 1004.0 |
| Offset Recommended – Applies if cap and trade proceeds diverted to in-plan initiatives | 0.0 | (60.0) | (60.0) |
| Total Fiscal Impact | 300.0 | 946.0 | 944.0 |

## IV. KEY COMMENTS AND CONSIDERATIONS

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online. Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period. Appendix C provides supporting background information.

As part of the 2016 Budget, the government committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the Budget commitment and additional price mitigation, while delivering on the Province's climate change objectives, the Ministry of Energy has developed price mitigation initiatives that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

The Ministry is proposing the following to mitigate electricity prices for consumers (Appendix D provides more information on each item below):

- Provide an 8% rebate on the pre-tax cost of electricity to consumers eligible for the Regulated Price Plan (i.e., residential, small business and farms), equivalent to the provincial portion of HST.
- Expand Industrial Conservation Initiative (ICI) eligibility by lowering the threshold to 1 MW, to provide support to additional commercial, institutional and small industrial consumers.
- Update the Rural or Remote Rate Protection (RRRP) program, to provide relief to rural customers.
- Use cap and trade proceeds to provide a modest rate reduction for commercial and industrial electricity consumers.

Public high-profile communications would coincide with introduction of legislation (September 2016). Currently, the 8% rebate would be available starting January 1, 2017, along with updating the RRRP. Expanding ICI won't be added to bills until 2018 due to the time required to implement the expansion and for billing changes. The impact of cap and trade would not be added to electricity bills until 2017.

The following tables provide an overview of the four initiatives, recipients, projected financial impact, grouping them based on whether taxpayers or ratepayers cover the costs:

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Taxpayers cover the costs (Potential to impact the Province's Fiscal Plan)** | | | |
| **1.** | 8% Rebate to Regulated Price Plan | Fiscal<br>About $1.0B | Residential, small business and farms, and other small users |
| **2a.** | Use cap and trade proceeds to provide a modest reduction in rates for commercial and industrial electricity consumers. (Implementation details under development). | ($270M) in cap and trade proceeds to offset $270M in costs for reducing rates<br><br>No Fiscal Impact | The CCAP allocated up to $330M/year in cap and trade proceeds for electricity price mitigation.<br><br>See item 2b. regarding the residual amount of cap and trade proceeds ($330M - $270M = $60M) |
| **2b.** | While CCAP anticipated $330M/year was required to keep electricity affordable, the residential portion of this commitment is met by the 8% rebate. As such, some of the CCAP allocated proceeds can be redirected to other GHG reduction initiatives already in the fiscal plan. | Fiscal<br>($60M) | Provides fiscal plan flexibility of $60M/year if these proceeds are diverted to offset costs of other existing in-plan initiatives that reduce GHG emissions. |
| | **Total Fiscal Impact** | $946M | Matches Financial Summary on page 1 for 2017-18 |

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Ratepayers cover the costs (No impact to the Province's Fiscal Plan)** | | | |
| **3** | Expanding ICI eligibility to customers above 1MW in all sectors | Rate base<br>($47M/$82M)** | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors |
| **4.** | Updating Rural or Remote Rate Protection | Rate base<br>($110M) | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. |

** Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.

Due to the nature of the ICI Global Adjustment mechanism and cost recovery of RRRP, the rate base proposals (#3 and #4) above benefit the targeted recipients, but come at a cost to all other electricity ratepayers in Ontario.

The following table from the Ministry highlights the benefits by electricity consumer class.

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Benefit | | Class B (Commercial) Benefit | Class A (Industrial) Benefit | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br>(-8%) | -$45/ month<br>(-20%) | -$3/MWh<br>(-2%) | -$3/ MWh<br>(-3%) | Up to -$52/MWh<br>(-34%) |

**Notes:** * The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

See Appendix E for more illustrative bill impacts. See Appendix F for an electricity bill mock-up.

Fiscal Impact

The Ministry estimates proceeding with an 8% Regulated Price Plan (RPP) rebate without a cap would cost an estimated $1.0 billion per year. The Ministry's estimate of $300M needed for 2016-17 (to cover the first three months of 2017 when the 8% rebate applies) will be addressed through Supplementary Estimates. The Ministry will use the annual planning process to update future year impacts.

The Ministry also indicates the current proposal would use cap and trade proceeds to eliminate carbon price impacts/ grid emission reductions to ratepayers, as was established through the CCAP. This proposal does not require the full $330M/year notionally allocated through the CCAP, which could provide fiscal plan flexibility of about $60M per year to commit to other GHG reduction initiatives in the fiscal plan.

Cap and Trade Proceeds

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers (on average). While residential and other consumers would benefit from the 8% pre-tax rebate, this does not apply to non-Regulated Price Plan eligible consumers (larger industrial, commercial, and other consumers). As such, the Ministry is proposing to direct a portion of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to provide a modest rate reduction. This proposal fulfills the policy objective established in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to electricity ratepayers.

To be characterized as a regulatory charge under the cap and trade program, auction proceeds need to be spent on programs that are reasonably likely to reduce or support the reduction of greenhouse gases. The Ministry has indicated that their proposal would use proceeds to offset the costs of committed investments that reduce greenhouse gases (e.g., non-emitting generation and conservation programs) and incent fuel-switching away from fossil fuels.

Considerations – Implementation

At this point, the Ministry has presented a high level overview of major implementation pieces:

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010. If passed, the legislation would require a general regulation. Amendments would also be required to various regulations to expand ICI and RRRP.
- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. The Ministry indicates it will consult with LDCs (possibly through the Ontario Energy Board) to accurately assess these impacts once the program has been announced. In the past, LDCs have asked for at least six months' notice when implementing billing system changes. Timing concerns may be alleviated by allowing LDCs to provide retroactive payments rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- Detailed messaging on bills could be implemented. The rebate would not be directly linked to HST. With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.
- The Ministry will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

Legal Considerations

8% Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):

- Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):

- To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural or remote customers):

- Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):

- To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

Other Considerations

- This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets for the 8% rebate.
- The 8% rebate would provide a typical residential consumer about an $11 per month benefit on average, exceeding the Budget 2016 $2 per month on average cap and trade commitment. The proposal to offer a modest rate reduction for industrial and commercial consumers also exceeds the Budget commitment to simply offset the impact of cap and trade on these consumers.
- Reductions in electricity prices that do not consider consumption amounts (e.g., without the cap in the previous OCEB program) do not promote electricity conservation and may be seen as unaligned with climate change objectives.
- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
  - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
  - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
  - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

| | | | |
|---|---|---|---|
| **Name of analyst:** | James Strang<br>With input from TPD and OFA | **Phone number:** | 416-327-2071 |
| **Date:** | September 12, 2016 | **Log number:** | |
| **Branch / Division:** | GGPR/ PEMD/ Treasury Board Secretariat<br>Tax Policy Division/ Ministry of Finance<br>Ontario Financing Authority/ Ministry of Finance | | |

## APPENDIX A: PROPOSED MINUTE

Approve electricity price mitigation for residential, commercial and industrial consumers.

In this regard:

i) Approve a suite of initiatives to provide relief to various electricity consumer classes:

   a) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor, starting January 1, 2017.

   b) Increase the total amount of rate protection available to R2 low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2003.

   c) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

   d) Expand eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

   e) Provide a modest rate reduction to commercial and industrial electricity consumers using cap and trade auction proceeds to offset the cost.

ii) Recommend to Cabinet the proposed Ontario Rebate for Electricity Consumers Act, 2016 and that the Ministry proceed to Legislation and Regulations Committee before the end of 2016 with supporting regulations under the proposed Ontario Rebate for Electricity Consumers Act, 2016.

iii) Approve the implementation details associated with the suite of initiatives:

   a) Approve:

      1. The creation of a new item entitled "Ontario Rebate for Electricity Consumers" in the Electricity Price Mitigation Program (Vote/Item 2905-3).

      2. The creation of a new Transfer Payment entitled "Ontario Rebate for Electricity Consumers" in Rebate for Electricity Consumers (Vote/Item 2905-3).

      3. An expenditure increase in the amount of $300,000,000 in 2016-17 in the Transfer Payment entitled "Rebate for Electricity Consumers[1]" in Rebate for Electricity Consumers (Vote/Item 2905-3). Direct the Ministry to return any under-spending to the Treasury Board Contingency Fund.

[1] Pending approval of the proposed Ontario Rebate for Electricity Consumers Act, 2016

b) Note:

1. Funding for 2016-17 will be implemented through Supplementary Estimates in the Fall of 2016.

2. Future year impacts of $1,006,000,000 in 2017-18 and $1,004,000,000 in 2018-19, and $1,004,000,000 in 2019-20 and ongoing.

c) Direct the Ministry to report back to Treasury Board/Management Board of Cabinet in the 2017-18 Program Review, Renewal, and Transformation process on updated future year impacts, and a potential offset strategy for resource requirements to support program implementation

iv) Further to the Cabinet Minute of May 11, 2016 and the Treasury Board Minute of May 19, 2016, note the reallocation of cap and trade auction proceeds from the up to $1,320,000,000 that was previously allocated through the Climate Change Action Plan for electricity price mitigation, as follows:

a) The Ministry of Energy to work with the Ministry of the Environment and Climate Change, Treasury Board Secretariat, Ministry of Finance, Cabinet Office and Office of the Premier, to allocate up to $1,080,000,000, from 2017-18 to 2020-21, of Cap and Trade auction proceeds to address rate-impacts on non-Regulated Price Plan electricity consumers (e.g., industrial, commercial and institutional) related to cap and trade and the expansion of other rate-based programs, subject to the evaluation by the Minister of the Environment and Climate Change.

In this regard:

1) Direct the Ministry of Energy to work with the Ministry of the Environment and Climate Change and report back to Cabinet by the end of 2016 with options on the appropriate mechanism.

b) The remaining up to $240,000,000, from 2017-18 to 2020-21, which was previously allocated in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to ratepayers, to be used for other existing initiatives within the fiscal plan and the Climate Change Action Plan that reduce greenhouse gas emissions, subject to the evaluation by the Minister of the Environment and Climate Change.

In this regard:

1) Direct the Ministry of the Environment and Climate Change to work with Treasury Board Secretariat and Ministry of Finance to identify other existing initiatives within the fiscal plan and the Climate Change Action Plan that reduce greenhouse gas emissions that can be funded with the remaining up to $240,000,000, from 2017-18 to 2020-21.

v) To support implementation of electricity price mitigation, the Ministry is proceeding with the following amendments to existing regulations:

a) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the Electricity Act, 1998 to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and allow electricity consumers and market participants between 1 MW and 5 MW to opt in.

b) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural or Remote Rate Protection Plan to R2 low density electricity customers and provide for a periodic adjustment mechanism.

vi) Direct the Ministry to work with Office of the Premier and Cabinet Office on the development and implementation of an integrated communications strategy.

# APPENDIX B: FINANCIAL TABLES

| FINANCIAL IMPACTS: CHANGES TO EXPENSE AND REVENUE | | | | | TABLE B1 |
|---|---|---|---|---|---|
| | | *Fiscal Plan Basis* | | | *Appropriations Basis* |
| **$ Millions** | | **2016-17** | **2017-18** | **2018-19** | **2016-17** |
| Initiative cost recommended | | 0.0000 | 0.0000 | 0.0000 | |
| *Expense changes:* | | | | | |
| Operating item (Supplementary Estimates inclusion for 2016-17 amount) | Oper | 300.0000 | 1006.0000 | 1004.0000 | 0.0000 |
| Operating Offset | Oper | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | | | | | |
| | | | | | |
| *Revenue changes:* | | | | | |
| Revenue Increase/ Offset - Applies if cap and trade proceeds diverted to in-plan initiatives | | 0.0000 | (60.0000) | (60.0000) | |
| Revenue decrease | | 0.0000 | 0.0000 | 0.0000 | |
| **Total Fiscal Impact (draw from c-funds)** | | **300.0000** | **946.0000** | **940.0000** | **0.0000** |

# APPENDIX C: ELECTRICITY SECTOR BACKGROUND

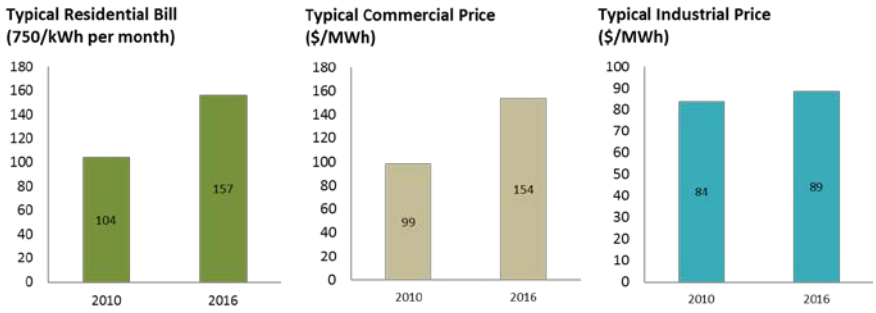
The Ministry has provided the following information to provide electricity sector context this item.

There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

*** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period.




**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

Existing Rate Mitigation efforts are on-going:

- Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs.
  - For example, Northern Ontario residential electricity consumers receive tax credits in recognition of higher electricity costs in the north and rural consumers receive a subsidy funded through the rate-base due to the higher cost of delivering power to rural areas.
  - As of 2016, the government removed the Debt Retirement Charge (DRC) from residential electricity bills. While this saves a typical residential electricity ratepayer about $60 per year, it is less than the benefit previously provided through the Ontario Clean Energy Benefit (OCEB).
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers.

- The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- The Rural or Remote Rate Protection (RRRP) program is provided to rural or remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- Because electricity costs must be fully recovered from electricity consumers, rate mitigation funded through the rate-base often represents a shifting of costs from one consumer group to another (i.e., industrial to residential and commercial consumers).
  - Rate-based initiatives are generally associated with incenting changes in behaviour that provide electricity system benefits (i.e., shifting electricity consumption from on-peak to off-peak periods).

The table below shows the estimated cost shifts in the province's electricity system that result from three existing government programs (i.e., ICI, RRRP and OESP):

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

Since 2013, a number of actions have and are being taken to reduce overall electricity system costs. Despite these actions to reduce system costs, electricity rates continue to increase for consumers:

- Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
- Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
- Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
- Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
- Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.

## APPENDIX D: FURTHER INFORMATION SUPPORTING PROPOSED INITIATIVES

The following information has been provided by the Ministry.

**1. Provide an 8% rebate to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms), equivalent to the provincial portion of HST**

The Ministry is proposing to introduce legislation/regulation to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit. This would be equivalent to the provincial portion of the HST.

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).
- An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

| **Eligible for the 8% rebate** (< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate** (> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Farms eligible for Regulated Price Plan (Including Class B farms that opted out of the Regulated Price Plan)<br>• Small businesses<br>– Coffee / snack retailer<br>– Convenience store<br>– Apparel store<br>– Hair salon<br>– Small insurance office | • Class A consumers<br>– Manufacturer<br>– Large grocery store<br>– Mines<br>– Auto assembly plants<br>• Class B consumers<br>– Commercial offices (low rise)<br>– Hotel<br>– General warehousing |

**2. Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial)**

Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers). Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would (the benefit would be seen by consumers starting in 2018):

- Reduce electricity peak demand and electricity system costs by incenting more consumers to lower their electricity demand during peak periods;
- Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
- Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| Short-term | Up to 21% | 80 | 47 | Increase of $0.42/month |
| Long-term | Up to 34% | 165 | 82 | Increase of $0.74/month |

The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility. The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating. Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.

## 3. Update the Rural or Remote Rate Protection (RRRP) program, to provide relief to rural customers

The Ministry is proposing to provide an additional $110M in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

RRRP is a rate-based funded program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.

- Today, RRRP is a $175M program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
- The majority of the program funding ($127M) provided to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a rebate of $31.50. The proposed update to the program would increase the benefit to $60/month
- RRRP funding supporting R2 customers has been capped at the current level since 2003. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

An additional $110M in program funding would see an increased benefit of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.

- This would increase the R2 portion of the RRRP to $237 million with a monthly impact on an average residential consumer of ~$0.60.
- The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the benefit remains constant.

## 4. Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.

- To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).
- However, providing an 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other GHG reduction initiatives in the fiscal plan.

The rate reduction proposal would provide additional benefit to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $240M over the first four year compliance period).

# APPENDIX E: ILLUSTRATIVE BILL IMPACTS

The Ministry has provided the following illustrative bill impacts:

| | Current Bill ( before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $139 /month | N/A | 8% pre-tax rebate: - $11 | $128 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $229 /month | RRRP: –$32 | 8% pre-tax rebate + Updated RRRP: - $45 | $184 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $101 /month | OESP: -$38 | 8% pre-tax rebate: - $8 | $93 /month |
| Small Business (Toronto – 403,200 kWh/month) | $149 /MWh | N/A | 8% pre-tax rebate: - $12/MWh | $137 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $203 /MWh | N/A | 8% pre-tax rebate: - $16/MWh | $187 /MWh |

**Notes:**

***** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as $1,332 per year for a family.

** Income of less than $28,000, family of 4.

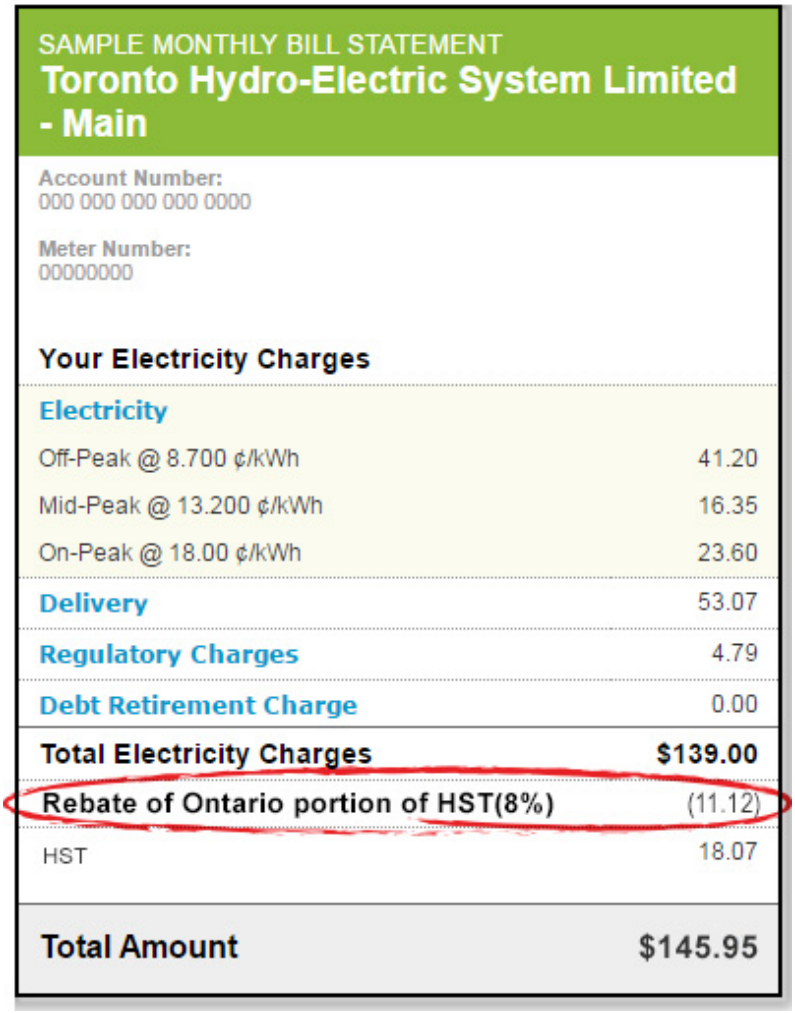
The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Totals may not add due to rounding.

| | Current Rate | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Rate |
|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | $105 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI + NIERP: -$69/MWh | Proceeds Recycling: -$2.60/MWh | $66 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling + ICI: Up to -$52/MWh | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $149 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $151 /MWh |

**Notes:**

The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

## APPENDIX F: ILLUSTRATIVE BILL MOCK-UP



SAMPLE MONTHLY BILL STATEMENT

**Toronto Hydro-Electric System Limited - Main**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| **Rebate of Ontario portion of HST(8%)** | (11.12) |
| HST | 18.07 |
| **Total Amount** | **$145.95** |

**Note:** Final bill presentment pending submission to LRC.

## APPENDIX G: BACKGROUND CONTEXT

**Budget commitment** (*2016 Ontario Budget - Chapter I: Building Prosperity and Creating Jobs*)**:**

The government will also take steps to ensure that the net impact of cap and trade would not result in an overall increase in electricity costs for commercial and industrial consumers, and that there would be a modest benefit of up to $2 per month, on average, to residential consumers.

**CCAP public document** (under *Action Area – Buildings and Homes: Reduce emissions from fossil-fuel use in buildings*)**:**

Keep Electricity Rates Affordable: Use cap and trade proceeds to offset the cost of greenhouse gas pollution reduction initiatives that are currently funded by residential and industrial consumers through their bills.

**CCAP policy minute** (May 11, 2016)**:**

ENERGY develop additional options to addressing rate-impacts on electricity consumers and work with MOECC, the Premier's Office and Cabinet Office regarding the selected option for inclusion in the action plan

**CCAP TB/MBC minute** (May 19, 2016)**:**

i) Approve-in-principle the following estimated ranges to guide potential investment of cap and trade proceeds over four years, from 2017-18 to 2020-21, should proceeds be available:

| **CCAP Action** | **Initiative** | **Potential Funding range from proceeds over 4-year period** | **Estimated GHG reduction in 2020 associated with potential funding** |
|---|---|---|---|
| Moving toward a lower-carbon energy supply with adequate capacity and affordable low-carbon electricity. | Eliminate Carbon Price Impacts / Grid Emission Reductions to Ratepayers | · Range - $1,000,000,000 to $1,320,000,000 | 3,000,000 Tonnes (Energy Planning) |

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan; Gavin He |
| **Subject:** | FW: Rate Mitigation |
| **Date:** | Saturday, January 14, 2017 11:45:56 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v6 (CEFD).docx |

---

Fyi, I just put down a marker so that we could combine the effort tomorrow.

Pls. review my comments and I think we can check and update the details. I think Francisco will focus on the DT and TT so I haven't shared with him yet.

John.

-----Original Message-----
From: John Kim
Sent: Saturday, January 14, 2017 11:45 PM
To: Emily Kerr <Emily.Kerr@ofina.on.ca>
Subject: RE: Rate Mitigation

Hi Emily,

Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.

Thanks,

John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge
>
>
> Sent from my iPad

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

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## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility** | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| **Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time** | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value, including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates |

Formatted Table

| | |
|---|---|
| | • OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• ~~Provide more details regarding th Global Adjustment (GA)~~ |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal ~~impact/accounting treatment, or implementation~~<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |

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**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
    - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
    - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
    - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
    - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.

**Commented [JK1]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

- This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
- As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
- Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
  - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
  - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of options to delay recovery of part of the Global Adjustment (GA) by debt financing and recovering over a 25 to 30 year period.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1:
  - Option 2:
  - Option 3:

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**Commented [JK2]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

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- Option4:

- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

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[Check and Update]

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| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
~~**December 12**~~**January 15, 2016**

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan |
| **Cc:** | Gavin He |
| **Subject:** | FW: Rate Mitigation |
| **Date:** | Saturday, January 14, 2017 2:20:08 PM |
| **Attachments:** | Revised - Debt-Financing GA 170112 - ESPD ADM Approved w LSB CLEAN.PPTX<br>Proposed Initiatives to Transform Ontarios Electricity Sector 20170113.pptx |

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This is the new set of submissions. As mentioned, Gavin is doing a note on the GA piece. It's the second attachment that I'd like you to focus on. FC will be working on the DT component.

Thanks,

John.

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>

> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge
>
>
> Sent from my iPad

Ontario

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# Financing the Global Adjustment

January 13, 2017

*Working Draft for Discussion Purposes Only*

# Purpose

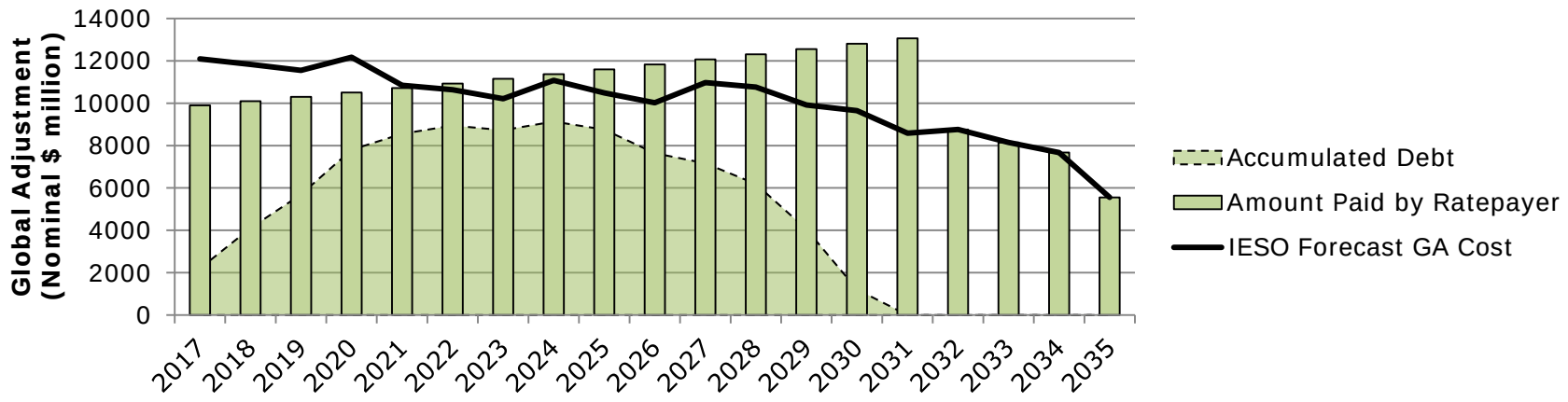
- To analyze the impact of partially financing the cost of the global adjustment (GA) to defer some of the cost to later years.
- The economic, legal and fiscal risks to ratepayers, stakeholders and government are qualitatively discussed.
- The remainder of the presentation quantitatively examines several different scenarios for financing the GA, showing:
  - The impact on residential bills; and
  - The amount of debt incurred.

# Rationale for Financing the GA

- The GA is comprised of costs for regulated and contracted generation, as well as conservation.
- Some contracted generation assets are expected to have a useful life that extends beyond the term of their current financial contracts (typically 20-years).
- Similarly, conservation costs are recovered through the GA on an annual basis while conservation initiatives provide benefits to the electricity system over the course of many years.
- Since the GA only includes costs related to the contractual life of these assets, there may be an opportunity to recognize the longer-term benefit of these assets to the electricity system and “bring forward” that benefit for ratepayers today, while deferring some of the current costs.
- An indicative GA financing proposal is presented that lowers ratepayers costs over the short term by borrowing money but increases costs over the long term when GA costs are forecast to be lower.
- Note that not all generating assets will continue operations at the end of their contract term. Regulatory constraints (i.e., nuclear licences) or low demand conditions (i.e., as experienced with current expiring NUGs) would mean that some generators will shutdown at the expiry of their contract. Future ratepayers would be paying for these assets that are no longer producing power.

# Indicative Proposal to Finance the Global Adjustment

- For the purpose of discussion, it is proposed that the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the total amount of money borrowed has been completely paid back.
- All scenarios are assumed to begin January 1, 2017, setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "smoothed" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- All analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook and assumes a 5% borrowing interest rate.




**Sample financing**: Ratepayers pay less than the cost of GA in early years, borrowing up to $9 billion that is fully paid off in 2031 by charging ratepayers more than the cost of GA in later years.

# Considerations and Risks – Ratepayer

Ratepayer:

- Borrowing money to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves borrowing large amounts of money over a long period of time (16-30 years, depending on the scenario) to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on electricity rates. A long-term interest rate of 5% is assumed for this analysis.

- GA and HOEP provide a natural hedge against each other – when one goes up, the other goes down – keeping total electricity costs relatively stable and predictable. Smoothing only the GA would lead to greater price volatility for consumers.

    - For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate described in the indicative proposal.

- Should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumption, further increasing future costs for individual ratepayers.

# Considerations and Risks – Fiscal and Stakeholder

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.
    - It is unclear whether legislation could determine the manner in which this initiative is accounted for. Further work is required.
- Historically electricity sector financing has been conducted by the Ontario Financing Authority, e.g., managing OEFC's stranded debt and borrowing on behalf of IESO. Further consultation with the OFA will be required to determine the appropriate vehicle for additional borrowing.
- The significant amount of additional Provincial borrowing needed to finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating and overall borrowing capacity. Further analysis is required and would suggest early engagement with the OFA through which money will be borrowed.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" in the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

# Considerations and Risks – Legal

Legal:

- Legislation would be required to authorize the financing proposal.
  - Amendments to the *Electricity Act, 1998* (EA) could authorize the financing of certain costs within or part of the GA. However, whether any other legislation requires amendment is not known at this time.
  - The GA regime currently provides that “true costs” represent the true costs of making payments to generators or counter parties to contracts, not the incurring of discretionary financing or interest costs.
  - Considerations such as the need to analyze legal risks or the need to address costs retroactively (if the proposal requires a January 1, 2017 start) could add to the legal and drafting complexity;

- Introduction of a bill in the week of February 20th is an aggressive timeline that could require diversion of resources from other initiatives.

# GA Debt Financing Scenarios

1. Status Quo

   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

2. Moderate short-term cost reductions with limits

   - The amount of GA paid by ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and increases at inflation (assumed to be 2%) in each subsequent year until the total amount of money borrowed is paid off.
   - Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

3. Maximized short-term cost reductions with limits

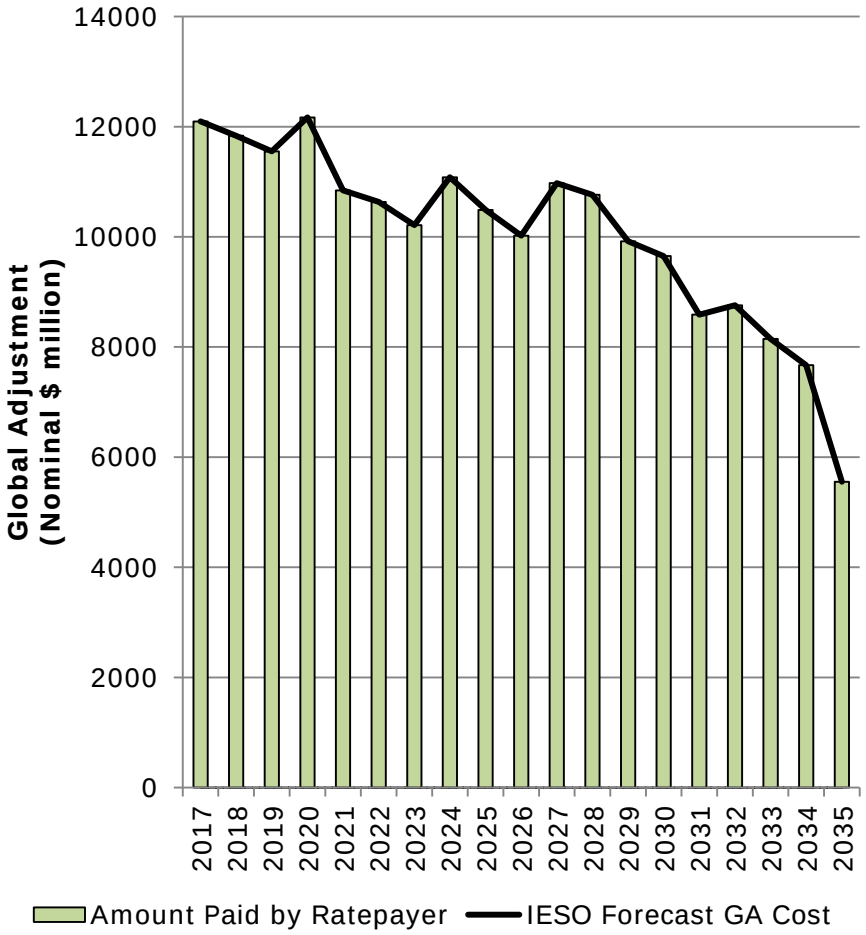
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the total amount of money borrowed is paid off over a 25-30 year financing period.
   - Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

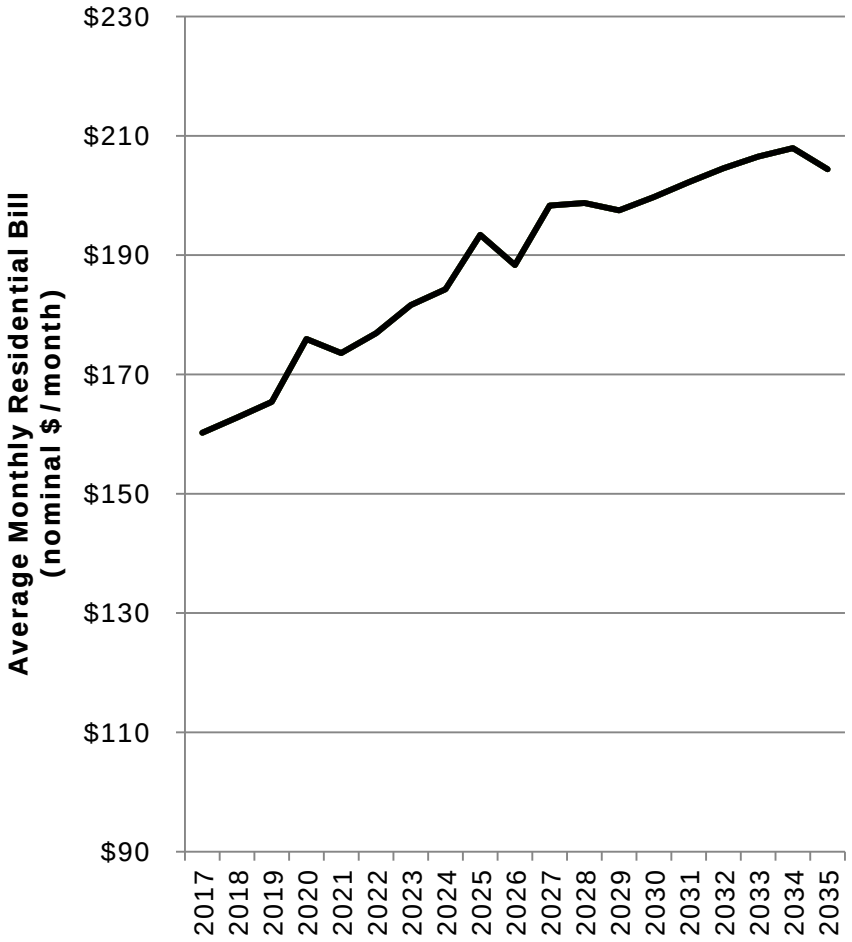
4. Maximized short-term cost reductions, no limits

   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the total amount of money borrowed is paid off over a 25-30 year financing period.
   - No limit is placed on the amount charged to ratepayers above the true cost of GA.

# 1. Status Quo – Global and Residential Impacts

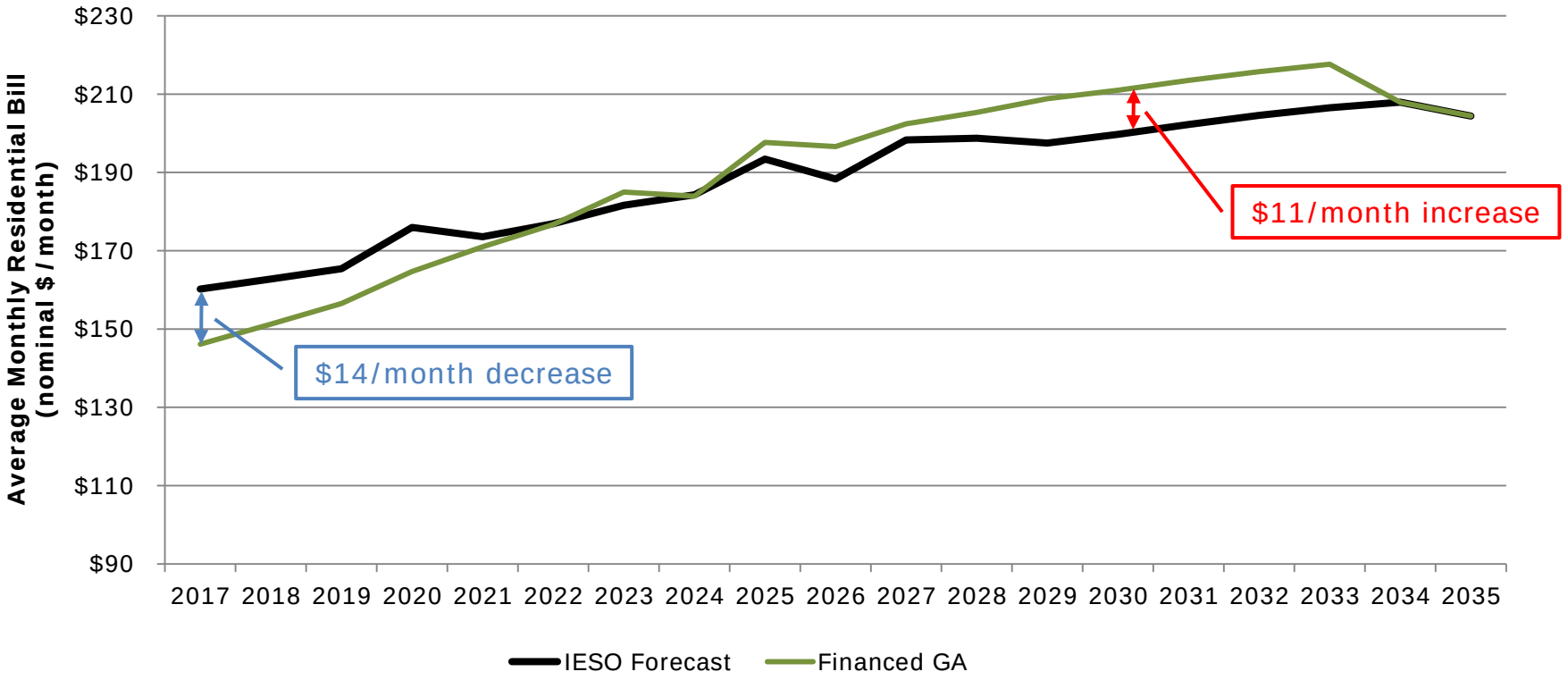
- Ratepayers continue paying the true cost of GA.



# 2. Moderate Short-term Cost Reduction with limits – Residential Impacts

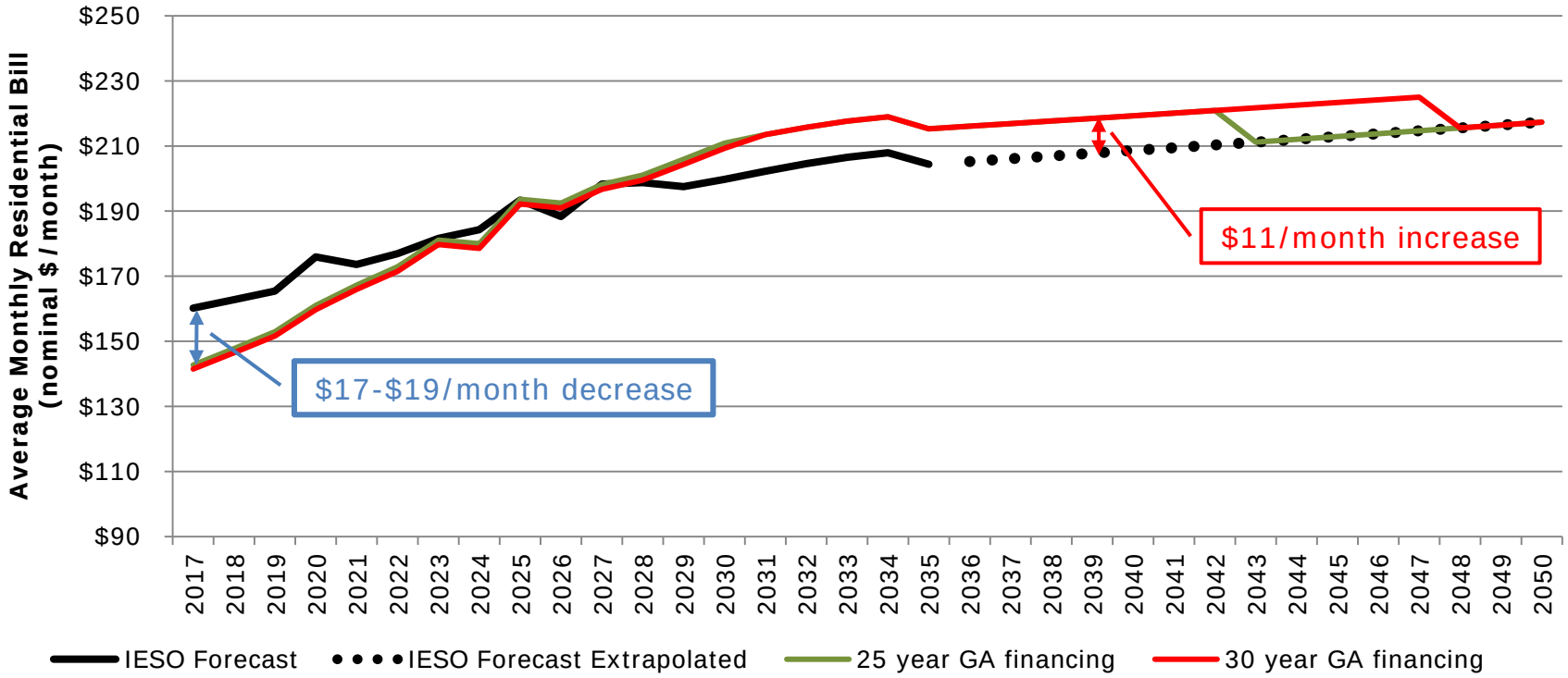
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and is increased at inflation in subsequent years – subject to a cap of no more than $2 billion above the true cost of GA in any given year – until the borrowed money is repaid.




- By **borrowing up to $10.7 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $14/month** at the cost of **a long-term increase over 12 years of up to $11/month** above the true cost of electricity production.

# 3. Maximized Short-term Cost Reduction with limits – Residential Impacts

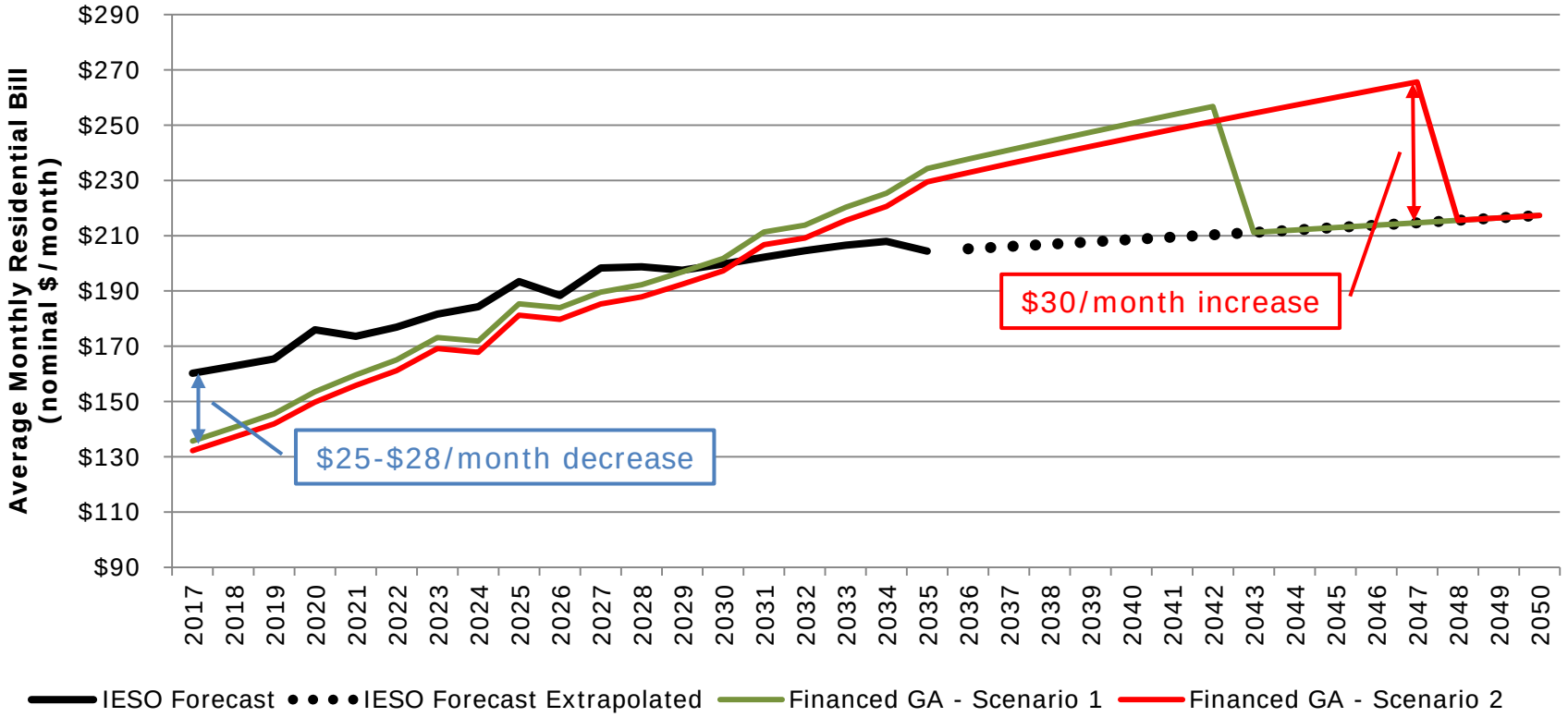
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered as much as possible and is increased at inflation in subsequent years – subject to a cap of no more than $2 billion above the true cost of GA in any given year – such that the borrowed money is paid back in 25 years (green line) and 30 years (red line) respectively.




- By **borrowing up to $23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $17-$19/month** at the cost of **a long-term increase over 17-22 years of up to $11/month** above the true cost of electricity production.

# 4. Maximized Short-term Cost Reduction, no limits – Residential Impacts

- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered as much as possible and is increased at inflation in subsequent years such that the borrowed money is paid back in 25 years (green line) and 30 years (red line) respectively. No limit is placed on the ratepayer GA over-payments in later years.




- By **borrowing up to $66 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $25-$28/month** at the cost of **a long-term increase over 12-17 years of up to $25-$30/month** above the true cost of electricity production.

Ontario

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# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

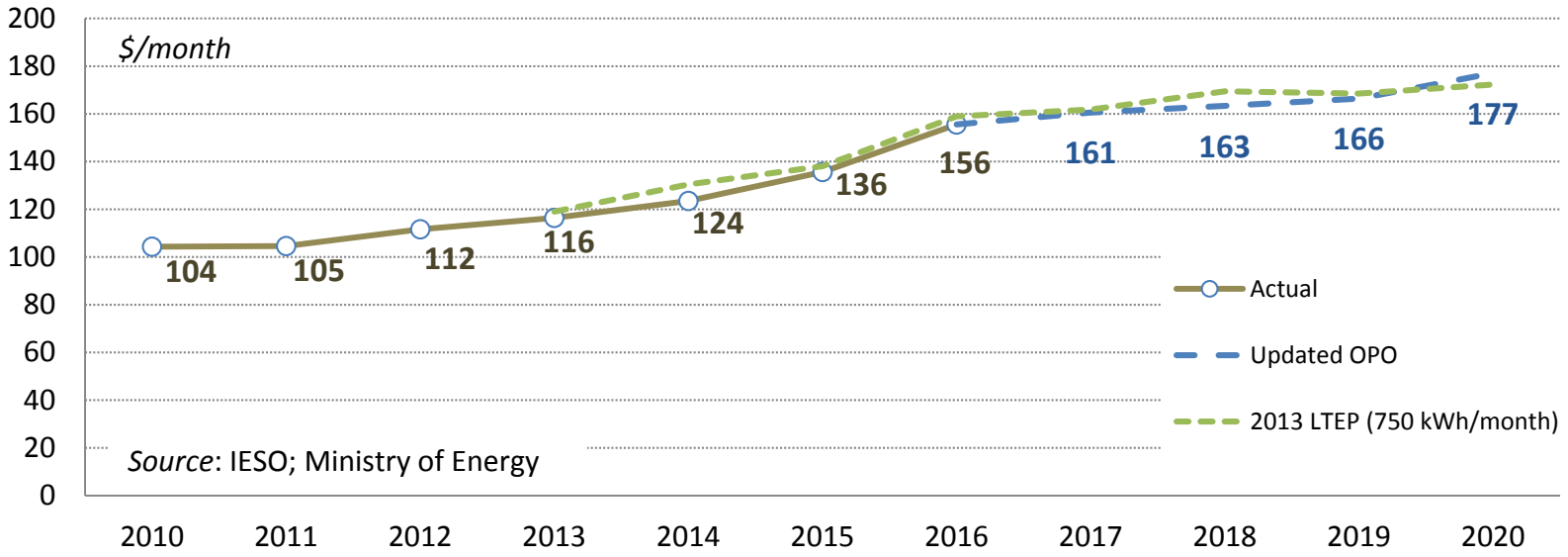
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast*




**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Broad Policy Themes / Rationale

- Support the continued reduction in the differential across distribution rates (as charged by Local Distribution Companies) across the Province through the potential enhancement of Rural or Remote Electricity Rate Protection, (RRRP). In order to not increase regulatory costs to customers as a result, this program can be moved to the tax-base.
- Provide a greater focus and support on lower income Ontarians by funding the Ontario Electricity Support Program (OESP) through the tax-base, as well as enhancing the support available through the program.
- Amortize electricity conservation and demand management (DM) programs over 15-years to provide lower costs for electricity consumers.
  - Alternatively, pay for conservation/DM programs through the tax-base and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties and expansion of natural gas to underserved areas (i.e., rural and remote communities), etc.
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" an alternative rate plan, based on a flat electricity rate, as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time. Also give consumer greater transparency with respect to electricity costs by providing more details regarding the Global Adjustment (GA).
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers, a benefit of $7/MWh.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 1.53 | 1.58 | 1.61 | 1.66 | 1.70 | 1.74 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.57 | 0.79 | 0.98 | 1.13 | 1.29 | 1.44 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC Efficiencies/Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.71 | 0.89 | 1.08 | 1.22 | 1.35 | 1.24 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. v Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 2.04 | 2.10 | 2.15 | 2.22 | 2.27 | 2.32 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.76 | 1.05 | 1.31 | 1.51 | 1.71 | 1.92 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC Efficiencies / Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.59 | 0.74 | 0.89 | 1.01 | 1.12 | 1.03 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Taxpayer Funded Electricity Price Mitigation

| *$M* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. Fund RRRP through the Tax-Base* | - | 666 | 684 | 700 | 719 |
| 2. Fund OESP through the Tax-Base | | | | | |
| a. Enhance OESP Benefit | | 162 | 226 | 279 | 322 |
| b. Expand OESP Eligibility | | TBD | TBD | TBD | TBD |
| 3. Conservation Funding Options | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | - | - | - | - | - |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | 100 | 390 | 390 | 390 | 390 |
| 5. Dedicate Departure Tax | 260 | 260 | 260 | 260 | 260 |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC Efficiencies / Rates | - | - | - | - | - |
| c. OPG – Operational Efficiencies | - | - | - | - | - |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers) | 110 | 450 | - | - | - |
| 9. Extend the Length of Existing Wind/Solar Contracts at Lower Prices | - | - | - | - | - |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| Fund Conservation Programs Through The Tax-Base | 154 | 632 | 649 | 567 | 568 |
| Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy
**Note:** *Assumes RRRP enhancement to reduce distribution rates to $30 for LDCs and **Assumes increase OESP credit by 50%.
Not included in chart is additional $18M/year to fund potential First Nations rate program through the Tax-Base.

# Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are aimed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

- Given that these programs focus on promoting equity between different areas of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.
  - These enhancements would also work in conjunction with the Ontario Energy Board's focus on reducing LDC costs outlined in option 6b.

# 1. Rural or Remote Rate Protection (RRRP) Expansion

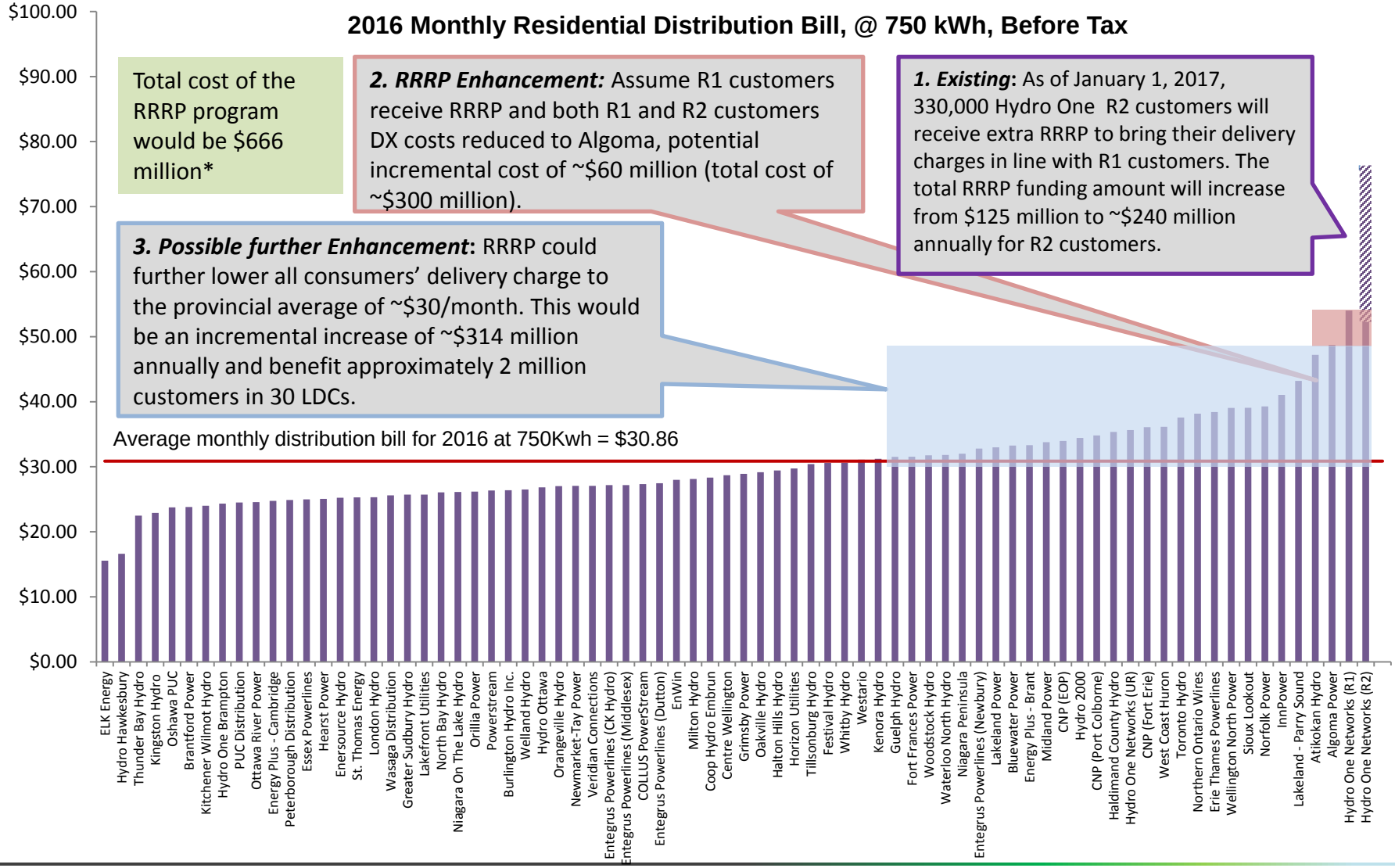
- The Rural or Remote Rate Protection (RRRP) program supports the most costly-to-serve distribution customers in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
  - Costs to these Hydro One customers are higher than average because of their relatively low density. The OEB mandates that they pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies.
  - To mitigate these costs, the RRRP was recently enhanced to help lower the bills of Hydro One's R2 customers to around those of its R1 (medium density) customers.
- Although other LDCs do not have medium- and high-density rates, there is a wide range of distribution costs between LDCs. The RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - Could be done on its own or as part of exploring an Ontario-wide uniform "postage stamp" delivery rate.

**Considerations**

- RRRP will be enhanced for R2 customers on January 1, 2017 to have their costs reduced to approximately R1 distribution costs levels. The RRRP could be further enhanced to include R1 customers, and have R2 and R1 customers reduce their costs down to Algoma (see next slide). This would cost $300 million in the first year (and would adjust year over year).
- If there was a desire to reduce costs for all LDCs, a simple average of distribution cost before tax, across all rate zones is $30.86 per month, for a residential customer consuming 750 kWh per month.** Bringing all delivery rates down to this average would cost approximately $500 million for the first year, with escalation in line with average distribution rate increases.
  - This assumes Hydro One R2 consume 1,200 kWh and H1 R1 customers consume 1,000 kWh per month.
- If all customers were brought down to the average costs (see the chart on the next slide for more detail):
  - It is assumed that residential customers with bills less than the provincial average see no change;
  - Majority of the enhanced benefit would go to Hydro One R1 and Toronto Hydro customers; and
  - Mechanism to ensure that LDCs continue to be motivated to achieve efficiencies would need to be designed (see section 4).
- Enhanced RRRP support may be best provided from the tax-base, because if funded from the rate-base, it would increase the costs for all customers who may argue that it is unfair that they are being asked to pay more to subsidize those in other LDCs.
- In conjunction with using the tax-base to reduce delivery charges to the provincial average, the OEB could be asked to explore moving to a province-wide "postage stamp" delivery rate that would be the same across the province to be implemented over time.
  - Could be "winners and losers" as delivery rates less than the average would go up in a postage stamp model;
  - A "postage stamp" model could help incent LDC consolidation.

**Note:** This is based on preliminary estimates and the amount will fluctuate on monthly consumption from customers and LDCs have different customer base with different consumption types.

# 1. Rural or Remote Rate Protection (RRRP) Expansion (cont'd)




*Note: this includes the ~$50M currently supporting Algoma Power and Hydro One Remotes.*

# 2a. Enhance Ontario Electricity Support Program (OESP) Benefit

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills. The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices and at launch, it was estimated ~560,000 families could be eligible and some 261,000 applications have been submitted.

- The OESP program benefits could be increased across the board by 50%, which would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).

- The OESP program could also be further enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).

**Considerations**

- If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible.
  - At the time of program design, advice was given that a 40-50% participation rate would be high for an application-based program delivered through electricity bills.
  - The province would need to work with LDCs if the rebate was to appear on electricity bills rather than be delivered via the income tax system (e.g., through the Trillium Benefit).

# 1 & 2a. Fiscal Impacts of RRRP, OESP and First Nation Rate

- Table below shows estimates of program costs up to 2022:

| Year | OESP ($M) | OESP + 50%($M) | RRRP($M) | RRRP Enhancement ($M) | First Nations Delivery Rate($M) | TOTAL RANGE ($M) (from status quo to OESP and RRRP enhancements) |
|---|---|---|---|---|---|---|
| 2017 | $108 | $162 | $292 | $374 | $18 | $418 to $846 |
| 2018 | $150 | $226 | $300 | $384 | $18 | $468 to $928 |
| 2019 | $186 | $279 | $306 | $394 | $18 | $510 to $997 |
| 2020 | $215 | $322 | $315 | $404 | $18 | $548 to $1,059 |
| 2021 | $243 | $365 | $322 | $415 | $18 | $583 to $1,120 |
| 2022 | $272 | $408 | $329 | $426 | $18 | $619 to $1,181 |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections above assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
   - The second column forecast also assumes the existing credit amounts increase by 50%.
     - Forecast assumes 10% administration costs
     - Forecast does not account for the approximately 142,000 low-income households that OEB estimated are not eligible because they do not directly receive an electricity bill.

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.
   - Expansion to cap distribution rates for other customers is based at $374M and assumes escalation of 2.6% (historical average dx rate increase). This is a conservative estimate, as Hydro One and Toronto Hydro increases could drive program costs beyond the average increase.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 2b. Expand OESP Eligibility

**Expanded Coverage**

- When OESP was being created, the OEB estimated that are 713,000 low-income households, of which 20% do not receive electricity bills. Thus, only 571,000 would potentially be eligible for OESP.
- If moved to the tax base, the OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity.

**Eligibility Categories**

- OESP has two credits amounts:
    1) Basic credit of $30-50 per month, based on the level of income and the number of residents.
    2) Enhanced credit of $45-75 per month for those with unique electricity needs:
        a) Electric heating,
        b) Indigenous customers, and
        c) Certain electrically intensive medical devices.
- The enhanced credit can be expanded to include additional eligibility categories of customers. For example, a new “Low Density Consumer” category could be introduced that provides Hydro One R2 customers (highest distribution rates) eligible for OESP the enhanced credit.

**Considerations**

- Potential costs for expanded coverage and new eligibility categories depend on updated estimates and changes to program design and delivery.
- There would be value in keeping the OESP as an income-tested program to distinguish it from other initiatives (e.g. RRRP, which is designed to address disparity between rural and urban distribution costs).

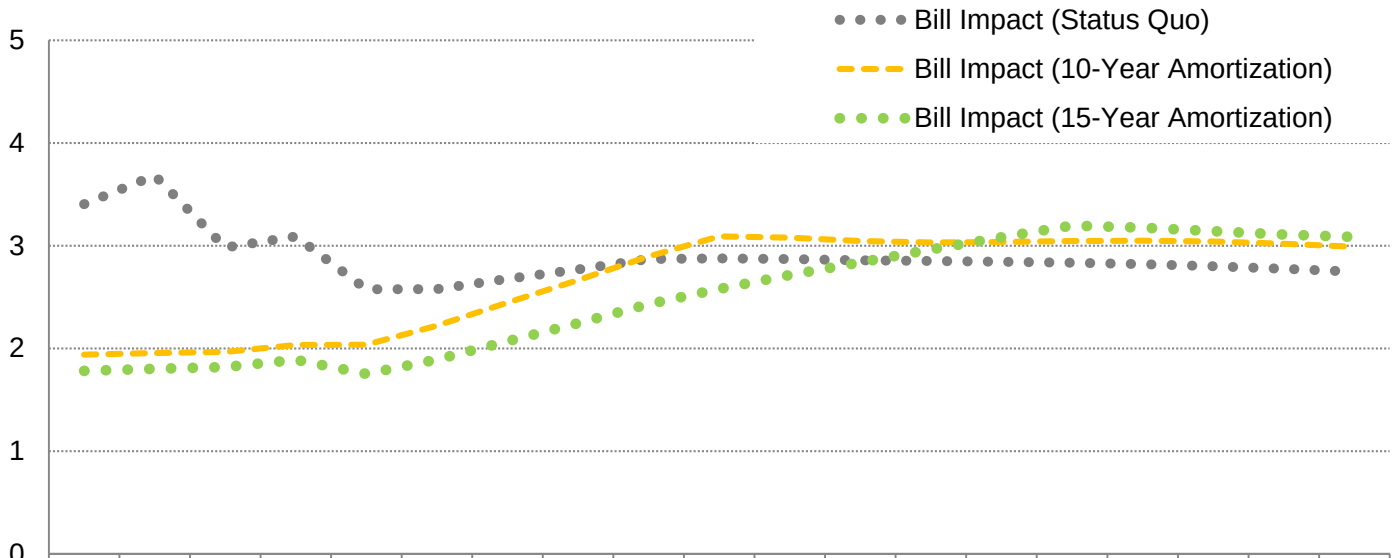
# 3a. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized. This would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs).
  - The time period over which costs could be amortized would be over the lifetime of funded CDM measures.
  - ENERGY is working with IESO to determine the appropriate lifetime period – the graph on the next slide, which illustrates residential bill impacts, presents two cases: **10-year and 15-year measure lifetimes**.
- In both cases, amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020. Over time the benefit would decrease and turn into a cost (higher electricity rates than would otherwise occur), as interest charges begin to grow. Estimated interest charges are as follows (a 3% interest rate is assumed; increases in interest rates could result in higher overall interest charges):
  - $712 million ($2016) – Amortizing eligible 2017-2035 CDM costs for 10-year period; and
  - $1.3 billion ($2016) – Amortizing eligible 2017-2035 CDM costs for 15-year period .
- Legislative changes would be needed to allow recovery of interest payments from ratepayers, or these costs could be recovered from the Consolidated Revenue Fund (CRF, or taxes).
- An alternative that could be explored would be to pay for CDM costs, or for a portion of these, from the tax-base (*see Appendix for more detail on tax funding option*).

# 3a. Amortize Conservation Program Costs (cont'd)

## Conservation Residential Bill Impact – Status Quo, 10-Year and 15-Year Amortization

***CDM Bill Impact ($/month)***




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bill Impact (Status Quo) | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | 2.68 | 2.77 | 2.87 | 2.88 | 2.87 | 2.86 | 2.85 | 2.84 | 2.83 | 2.82 | 2.80 | 2.78 | 2.75 |
| Bill Impact (10-Year Amortization) | 1.94 | 1.95 | 1.97 | 2.03 | 2.04 | 2.22 | 2.45 | 2.67 | 2.90 | 3.09 | 3.08 | 3.05 | 3.03 | 3.04 | 3.04 | 3.05 | 3.04 | 3.02 | 2.99 |
| Bill Impact (15-Year Amortization) | 1.78 | 1.80 | 1.82 | 1.89 | 1.75 | 1.89 | 2.07 | 2.25 | 2.43 | 2.58 | 2.71 | 2.84 | 2.96 | 3.08 | 3.20 | 3.18 | 3.14 | 3.11 | 3.09 |

Source: IESO; Ministry of Energy

**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10 of 15-year borrowing rate of 3.0%.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.
- Legislative amendments would be needed to allow recovery of loan interest charges from GA.
- ENERGY staff have developed a note to seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
- ENERGY is working with IESO to seek an opinion on the proposal from IESO's external auditor.
- ENERGY would then send the IESO external auditor's opinion along with ENERGY's explanatory note to the Ontario Provincial Controller (OPC) to seek a formal opinion on whether CDM costs could be amortized according to rate-regulated accounting standards.
- Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 3b. Rate Smoothing of Conservation Program Costs

- "Rate smoothing" could achieve the same rate reduction effect as amortization.
- Instead of taking out a loan to amortize conservation costs, a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Each year, IESO would defer recovery of a portion of annual conservation costs. Financing would also be required, such as from the OFA, to pay the interest on the deferral account. Interest would accrue on the deferred amounts, likely at the same rates as for the amortization option.
- Deferred costs could be recovered over any time period. If a 10 or 15 year-period was chosen, the rate impacts would be the same as in the amortization option.

**Considerations**

- Option would **not** require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open the Ministry to criticism by the Controller and/or Auditor General since the rate impact is the same.
- The Ministry would have more control under this option to change deferred amounts each year, as opposed to the terms set by a loan agreement under the amortization example.
- There is precedence to this approach for nuclear investments, which otherwise would result in volatile increases and decreases for Ontario ratepayers over the investment period. In 2015, the Ministry amended a regulation that requires the Ontario Energy Board (OEB) to set "smoothed" nuclear rates for OPG's Darlington and Pickering nuclear stations over a 20-year period.
  - The regulation allows OPG to defer recovery in rates of a portion of its nuclear revenue during the Darlington refurbishment (expected to be complete in 2026) and recover these deferred costs over the remaining ten years.
  - OPG will establish a "deferral account" to record the deferred amounts each year up to 2026 plus accumulated interest on the balance to reflect OPG's financing costs as a result of rate smoothing. The deferral account is then drawn down on a straight-line basis between 2026 and 2036.
- At minimum, new regulation would be required. However, further analysis is needed to determine the relevant regulation or legislation, to be amended for IESO (e.g., OEB regulation of IESO costs and fees, GA regulation for how IESO recovers its conservation costs from ratepayers).

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure

- Fund investments in specific energy infrastructure projects through the tax-base. **Note:** This could include the provincial portion of funding for the Remote First Nation Connection Project, a fund to support projects that improve adequacy and reliability in areas where new transmission would unlock economic growth and expansion of natural gas service to underserved communities.

**Considerations**

- Tax-base funding would allow for energy infrastructure to be built without impacting electricity and natural gas rates.

*Remote Connection Project:*

- Ontario ratepayers currently support costs of remote electricity service through RRRP on the order of $28 million/year
- Connecting 21 remote communities to the Ontario grid is supported by a positive business case due to diesel cost savings over time. If RRRP is funded through the tax base as proposed above, this project represents an opportunity to reduce impacts from RRRP.
- Direct investment in Ontario's portion of the capital costs of the project through a provincial fund (e.g., Trillium Trust) could also be considered along with mechanisms for cost recovery through transmission rates to refresh the fund as industry benefits from the transmission investment.
- The amount of investment and long-term savings depend on a federal contribution to the project and ENERGY is currently in discussions with Canada with the goal of concluding a cost-sharing agreement by spring 2017.
- A move to tax-based funding may have implications for cost oversight, since the OEB's mandate is to have oversight of ratepayer impacts. Alternative methods to review cost prudence of tax-based funding may be needed.

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (cont'd)

**Considerations (cont'd)**

*Transmission Projects to Enhance Economic Growth:*

- A tax-based fund could target investments in projects that have been identified in IESO regional plans and that would stimulate economic growth but are not proceeding due to cost barriers under the OEB's beneficiary pays principle. Investments could also target areas where the existing system poses challenges for delivering reliable service such as in parts of Northern Ontario with long single circuits.
- Potential opportunities for investment could include a transmission reinforcement in the **Greenstone area**, upgrades south of **Red Lake** and others TBD based on program design.
- This approach would allow a potion of project costs to be socialized to advance key projects without impacting rates or OEB's principles of cost allocation. Scope and scale of fund would be refined through program design.

*Natural Gas Expansion to Underserved Communities:*

- The Government has currently committed to expanding natural gas access to more communities in Ontario (i.e., $200 million Natural Gas Access Loan and $30 million Natural Gas Economic Development Grant).
  - Natural gas is an affordable heating source in Ontario. Its continues to be less expensive than alternative sources such as electric baseboards, heating oil and propane. For example, switching from oil to natural gas can save an average consumer an estimated $1,500 annually.
  - Increasing access to other energy sources such as natural gas, provides Ontarians with more options to meet their needs, reduce their energy costs and improve their quality of life.
  - Expansion of natural gas delivery infrastructure is widely supported in underserved communities (i.e., a recurring theme at ROMA) as a means to provide consumers and businesses in underserved communities with more affordable energy choices, attract new industry to Ontario and benefit agricultural producers.
- A grant program complements the Ontario Energy Board's recent decision enabling greater rate-based expansion to unserved areas, including rural and remote communities.
  - Applying Trillium Trust funding would make it possible to enhance the Grant Program and service more communities.

# 5. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.
- If the Province were to transfer $2.6 billion in economic benefits to the rate base over 10 years suggest the following impacts (assuming 140TWh per year):
  - Residential Ratepayer Impact (if spread over 10 years): up to $1.39 per month on a typical bill; and
  - Industrial Ratepayer Impact (if spread over 10 years): up to $1.86 / MWh

**Considerations**

- Cost savings to ratepayers and associated fiscal impacts would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- The departure tax was effectively a true-up for lower PILs payments from Hydro One in previous years – it was not a one-time windfall for the Province. In other words, it ensures that Hydro One paid all its tax obligations under the PILs regime before moving into the normal corporate tax regime.
- The related ~$2.4 billion fiscal benefit to the Province (from the deferred tax benefit) has already been credited to the Trillium Trust to be used to build infrastructure under Moving Ontario Forward.
- Repurposing funds paid to OEFC may have an impact on the defeasance of electricity stranded debt.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).

# 6a. Empower Energy Agencies – IESO / Market Renewal

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 6b. LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
  - Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
    - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.

**Considerations**

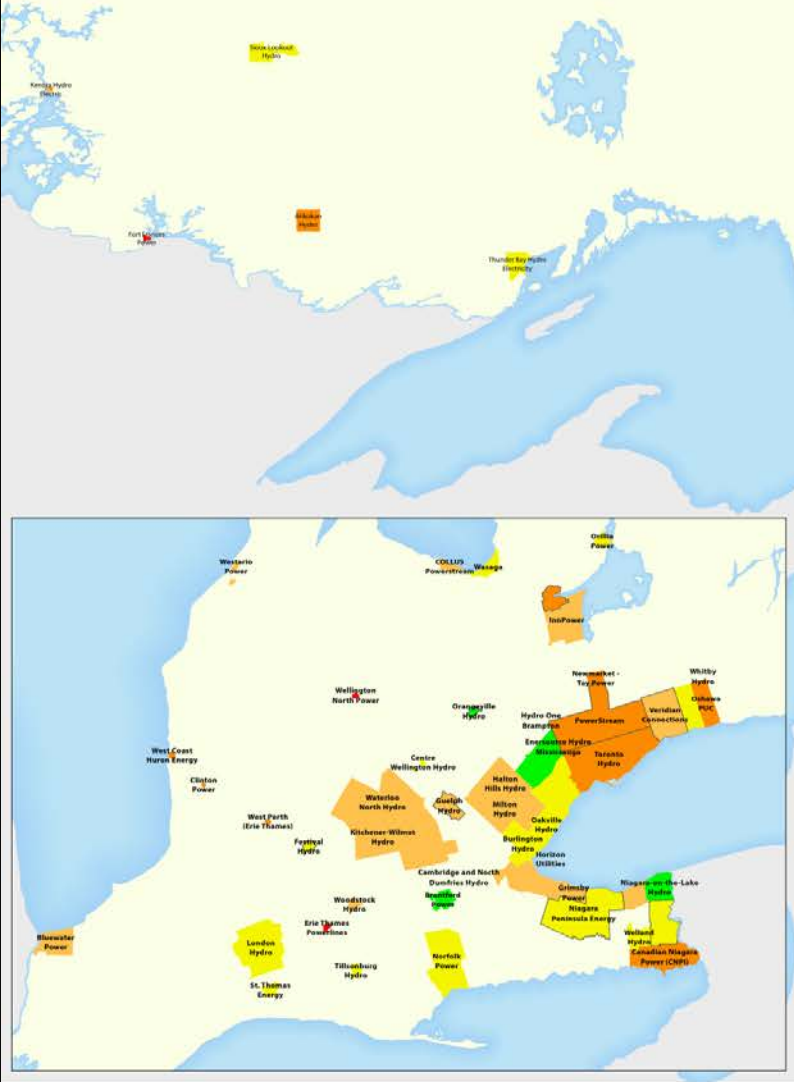
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.

- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
  - To further help address the costs associated with the Delivery line of the electricity bill, program such as the RRRP (previous slide) could be expanded to include other customers that may face higher costs.

- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.

- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation. Further changes to the tax incentives and/or revisiting legislated consolidation could be considered.

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

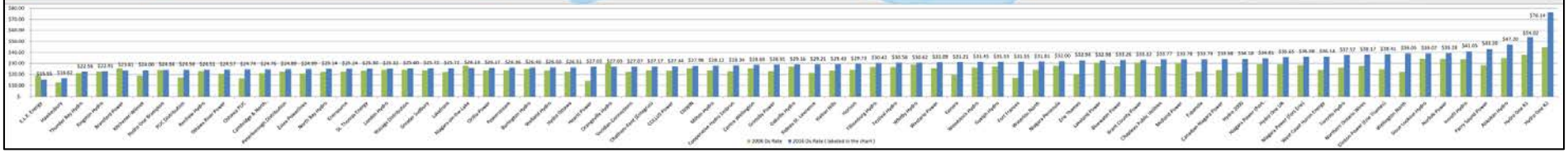
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# 6c. Empower Energy Agencies – OPG / Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

**Considerations**

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.
- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available, providing customers with pricing choice.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- Would provide consumers with electricity pricing choice.
- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro- November 2016 rates)

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7b. Give Consumers More Rate Choices and Greater Transparency – Detailed Global Adjustment

- Provide electricity consumers greater transparency with respect to electricity generation costs by providing more details regarding the Global Adjustment (e.g., adding a line on hydro bills, quarterly energy reports, etc).

**Considerations**

- As electricity bills have increased, many consumers have complained about a lack of transparency on the drivers of electricity costs. In particular, consumers and legislative officers have singled out the GA.

- Providing consumers with additional information on the cost components and amounts recovered through the GA would help consumers understand how the different forms of electricity generation in Ontario contribute to consumers costs.

- Providing additional information to consumers on electricity commodity cost drivers without sufficient context or background could simply lead to increased complaints about particular generating technologies that make up large shares of costs (e.g., nuclear).

- Adding a breakout of the amount of GA on residential electricity bills could lead to further confusion due to the existing breakout of multiple time-of-use buckets.

- Alternatively, the existing quarterly Ontario Energy Report, which provides various energy sector data, could be leveraged to show a breakout of quarterly GA costs by fuel type. A link on electricity bills could point to this information.

# 8. Help Small Business Manage Their Electricity Cost – End DRC Early for Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the proponents agreeing to a lower price in the near term.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period ; discussions/consultation may be required in advance of this potential option moving forward.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- Since the Minister of Energy is not a party, IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms would also reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.

- Projects over 500 kW would offer the most savings potential as they represent the majority of installed renewables capacity and are spread across fewer contracts.

- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.

- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh;
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
  - **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 million | $582 million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - For example, the New contract is $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 million | $632 million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# 10. Tax Relief for Solar and Wind Contracts

- In 2010 and 2011 Ontario procured large scale projects (>500 kW) through the FIT program at standard offer pricing.

- The FIT program was the centerpiece of the GEA which established the economic and social goals of growing the green economy, including establishing a local renewable energy manufacturing base, supporting the development of green energy jobs, and providing incentives for Indigenous participation.

- To help achieve these economic and social goals, the FIT program offered pricing at above competitive procurement rates, and provided Indigenous and Community participation adders, which resulted in economic benefits to all Ontarians, but resulted in additional costs borne by Ontario's electricity ratepayers.

- Ontario could fund the added cost of some or all of these economic and social incentives by shifting their costs from the rate-base to the tax-base.
    1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
    2. The tax base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT.

**Considerations**

- If applied to projects in commercial operation the benefit to the ratepayer would be immediate.
- Comparing FIT pricing to competitive procurement pricing could provide a reasonable representation of energy procurement without the added cost of economic and social incentives.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
   - For example, from 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
   - The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
   - If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
   - The $3.3 billion difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.
   - This represents estimated average ratepayer savings of $1.50/ month relative to OPO forecasts.
   - The same approach could be considered for solar projects however, prior to LRP I in 2016, Ontario had not procured solar capacity competitively and international cost comparisons are challenging given differences in regional development costs.
   - This example does not include the value of participation price adders available for community and indigenous participation.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

2. The tax-base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT 1 solar and wind projects.

   - For example, 17 large FIT 1 wind and solar projects have Indigenous and/or Community participation making them eligible for a price adder in addition to their base contract price.

   - The estimated value of these price adders is approximately $17.1 million (NPV 2017) over the expected remaining term of their contracts.

   - This represents estimated ratepayer savings of approximately $0.01/month relative to OPO forecasts.

# FIT 1 and GEIA Wind Projects in Commercial Operation
(source: IESO Active Contracts List, October 31, 2016)

| Count | Program | MW | COD |
|---|---|---|---|
| 1 | FIT 1 | 0.8 | Oct-10 |
| 2 | FIT 1 | 18 | Jul-15 |
| 3 | FIT 1 | 23 | Aug-15 |
| 4 | FIT 1 | 40 | Jan-15 |
| 5 | FIT 1 | 10 | Sep-14 |
| 6 | FIT 1 | 10 | Sep-14 |
| 7 | FIT 1 | 10 | Jun-14 |
| 8 | FIT 1 | 99 | May-13 |
| 9 | FIT 1 | 100 | Oct-15 |
| 10 | FIT 1 | 4 | Sep-12 |
| 11 | FIT 1 | 100 | Apr-16 |
| 12 | FIT 1 | 15 | Jun-15 |
| 13 | FIT 1 | 18 | Mar-12 |
| 14 | FIT 1 | 104.4 | Nov-13 |
| 15 | FIT 1 | 40 | Dec-15 |
| 16 | FIT 1 | 60 | May-14 |

| Count | Program | MW | COD |
|---|---|---|---|
| 17 | FIT 1 | 125 | Aug-13 |
| 18 | FIT 1 | 73.5 | Aug-14 |
| 19 | FIT 1 | 102 | Jan-15 |
| 20 | FIT 1 | 9 | Jan-12 |
| 21 | FIT 1 | 4.1 | Dec-15 |
| 22 | FIT 1 | 0.5 | Oct-13 |
| 23 | FIT 1 | 82.8 | Nov-11 |
| 24 | FIT 1 | 18.45 | Sep-16 |
| 25 | FIT 1 | 60 | Jul-14 |
| 26 | FIT 1 | 10 | Oct-16 |
| 27 | FIT 1 | 6.15 | Nov-14 |
| 28 | FIT 1 | 2.3 | Aug-15 |
| 29 | FIT 1 | 10 | Feb-16 |
| 30 | FIT 1 | 8.2 | Nov-14 |
| 31 | FIT 1 | 150 | Nov-14 |
| 32 | FIT 1 | 91.39 | Dec-14 |

| Count | Contract | MW | COD |
|---|---|---|---|
| 33 | FIT 1 | 25 | May-15 |
| 34 | FIT 1 | 82.8 | Nov-11 |
| 35 | FIT 1 | 30 | Mar-14 |
| 36 | FIT 1 | 17.6 | May-16 |
| 37 | FIT 1 | 23 | Dec-12 |
| 38 | FIT 1 | 99 | May-13 |
| 39 | FIT 1 | 48.6 | Dec-11 |
| 40 | FIT 1 | 19.44 | Aug-15 |
| 41 | FIT 1 | 10.8 | Mar-12 |
| 42 | FIT 1 | 38.88 | Sep-15 |
| 43 | FIT 1 | 60 | Aug-14 |
| 44 | GEIA | 270 | Mar-14 |
| 45 | GEIA | 180 | Dec-15 |
| 46 | GEIA | 148.6 | Dec-14 |
| 47 | GEIA | 270 | May-15 |

# Key Outcomes / Next Steps

- The proposed initiatives provide the following opportunities to:
  - Provide a greater focus on vulnerable consumers by funding electricity support programs through the tax-base.
    - Enhance existing and new support programs targeted at the most vulnerable consumers (i.e., OESP and RRRP); and
    - Better harmonize delivery rates across the province.
  - Re-set how energy infrastructure is funded by shifting costs to the tax-base from the rate-base.
  - Provide electricity consumers with greater choices and transparency (e.g., alternative rate plan based on a flat electricity rate, unpacking the Global Adjustment costs, etc);
  - Provide system benefits (e.g., market renewal);
  - Increase cost effectiveness and improve efficiency; and
  - Lower the cost of electricity for all consumers.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require legislative and/or regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

A. Rural or Remote Rate Protection (RRRP) – Overview and Enhancements
B. Fund Conservation Programs Through the Tax-Base
C. Eliminate the Industrial Conservation Initiative (ICI)
D. Cancel Large Renewable Procurement I (LRP I)

# A. RRRP Overview and Enhancements

- The Delivery line of the electricity bill is composed of Distribution and Transmission Costs. While transmission costs are uniform across the province, LDC costs vary by distributor and account for about 20% of the total bill for the electricity customers.
  - See slide X for a map of delivery rate increases between 2006 and 2016.
- The Rural or Remote Rate Protection (RRRP) framework was put in place in 2001 to help offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations.
- RRRP is available to: residential Hydro One R2 customers (~350,000 customers), Algoma Power customers (~11,600 customers); H1 remote customers (~3,500 customers).
  - To date, R2 customers receive a fixed amount of $125 million a year distributed amongst the customers. Algoma and Remote customers have RRRP calculated by the OEB each year that fluctuates based on average provincial distribution increases.
- Because the amount had been fixed for over a decade, the Province recently increased funding of the RRRP program for Hydro One R2 customers from $125 million to $240 million. This will be effective as of January 1, 2017, and will bring their delivery charges in line with the next highest charges from Hydro One's R1 customer class.

# B. Fund Conservation Programs Through the Tax-Base

- Propose to fund 2017-2020 electricity conservation and demand management program costs* using tax dollars instead of ratepayer dollars.
  - Funds received through the Hydro One Departure Tax could potentially be repurposed towards this.
- Total remaining 2017-2020 electricity conservation program costs are expected to be ~$2.1 billion.
- Post 2020, this option could evolve to funding conservation programs through the Greenhouse Gas Reduction Account.

**Considerations**

- Electricity conservation programs provide a number of benefits to society, however, Ontario's ratepayers have been covering these costs:
  - Avoiding/deferring future energy infrastructure investments, reducing disruption in communities (e.g., avoiding the need to build new natural gas generation);
  - Environmental benefits (e.g., reduced natural gas peaking generation and GHG emissions); and
  - Social and economic benefits (e.g., job creation and assistance managing electricity bills).
- There is precedence for using tax dollars to fund conservation programs.
  - Between 2007 and 2011, Ontario funded the Home Energy Savings retrofit program using tax dollars.
- Funding conservation programs though the tax-base is expected to result in a benefit of $3.40/month for residential electricity consumers in 2017. This could provide immediate short term relief to consumers while other rate mitigation initiatives are developed (e.g., market renewal, LDC efficiencies).

*** Note:** This includes costs towards the Conservation First Framework, Industrial Accelerator Program, Demand Response and the Conservation Fund)

# C. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

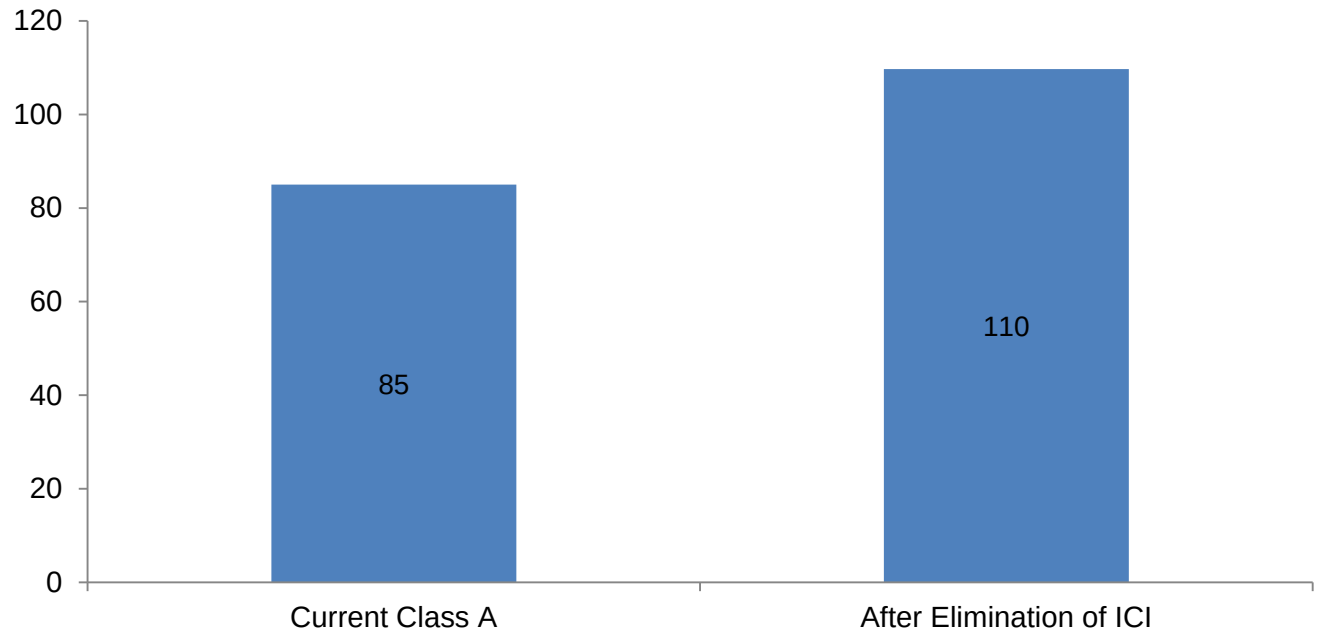
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# C. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# D. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period.
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g. rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

*Cancel/Adjust Announced Procurements:*

- Amendments to existing directions to IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

*Cancel Existing LRP I Contracts:*

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

**Legal Analysis**

- Any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements.
  - An amendment to an existing direction would not require Cabinet approval, however, further analysis is required to determine if direction to cancel LRP I contracts could be considered as amending existing direction.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights. This reasoning would likely apply equally to any direction to IESO to cancel LRP I contracts. Previous advice has also flagged a risk that the Province could be liable for damages in tort for inducing a breach of contract (or other claims).
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | "Shajee Kathirgamanathan" |
| **Cc:** | "Gavin He" |
| **Subject:** | FW: Rate Mitigation |
| **Date:** | Saturday, January 14, 2017 2:18:47 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx<br>Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy_SIFBEFBmarkup.pptx |

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Hi Shajee,

I have a more urgent request.....could you review these versus the next email I will send?

Gavin is working on the GA financing piece so if you could take a look at this, that'd be great.

Thanks,

John.

-----Original Message-----
From: Gavin He
Sent: Saturday, January 14, 2017 12:28 PM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: RE: Rate Mitigation

Hi Directors,

FYI - In case you don't have it, please attached the note that was shared with DMO back in December. In addition, I have attached the "Proposed Initiatives to Transform Ontario's Electricity Sector" deck with edits from your Branch last month.

Regards,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge
>
>
> Sent from my iPad

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its deck.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

Energy's proposals generally involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value, including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |
| **E**nd the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

<u>OESP & RRRP (Total of about $0.4 to 0.45 Billion/year</u>):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

<u>Fund Conservation Programs through the Tax-Base</u>:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**December 12, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8%  per cent rebate ($11/month savings), updating RRRP ($45/month savings, combined with the 8% rebate), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured,  the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP),  which provides an opportunity to consider a range of policy changes to  how the Ontario energy sector operates.

# Broad Policy Themes / Rationale

- No longer use rate-base to pay for social programs [despite the system benefit rationale] by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.
- Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.
- Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" beyond the Moving Ontario Forward initiative to make certain investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties ~~and expansion of natural gas to rural areas~~, etc. (note that expanding access to natural gas is already included under Moving Ontario Forward.)
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" a single rate plan as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time.
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.16 | 2.31 | 2.41 | 2.49 | 2.54 | 2.58 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.13 | 0.13 | 0.14 | 0.14 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.88 | 3.08 | 3.21 | 3.33 | 3.39 | 3.44 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 2.82 | 3.05 | 2.47 | 2.56 | 2.13 | 2.14 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.10 | 0.10 | 0.11 | 0.11 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Taxpayer Funded Electricity Price Mitigation

| *($M)* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | | 398 | 419 | 433 | 447 |
| 2. Expand the OESP (i.e., 50% increase) | TBD | TBD | TBD | TBD | TBD |
| 3. Fund Conservation Programs Through The Tax-Base | 110 | 450 | 450 | 450 | 450 |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC efficiencies | - | - | - | - | - |
| c. OPG – Borrowing | - | - | - | - | - |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | 110 | 450 | - | - | - |
| 8. Cancel / Adjust FIT | - | - | - | - | - |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| 2. Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy

# Considerations / Outcomes

- The proposed initiatives provide the following opportunities to:
  - Lower the cost of electricity for all consumers;
  - Re-set how electricity programs and energy infrastructure is funded (i.e., shifting costs to the tax-base from rate-base);
  - Provide electricity consumers with greater choices (i.e., signal rate plan);
  - Provide system benefits (e.g., market renewal); and
  - Increase cost effectiveness and improve efficiency.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan; Adam Prokop |
| **Cc:** | Gavin He; Salman Qadir |
| **Subject:** | FW: Rate Mitigation - Draft MP Deck |
| **Date:** | Thursday, January 19, 2017 5:25:45 AM |
| **Attachments:** | Rate Mitigation Plan Options 20170118 v2_ MP.pptx<br>ATT00001.htm |

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**From:** Ronald Kwan
**Sent:** Wednesday, January 18, 2017 8:48 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Rate Mitigation - Draft MP Deck

Hi,

Please review.

Thanks,
Ron

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **To:** "Gadi Mayman" <Gadi.Mayman@ofina.on.ca>, "Ronald Kwan" <Ronald.Kwan@ofina.on.ca>, "Gavin He" <Gavin.He@ofina.on.ca>, "Lynsey Wynberg" <Lynsey.Wynberg@ofina.on.ca>, "Marianne Nguyen (MCYS)" <Marianne.Nguyen@ontario.ca>, "Elizabeth Mendes (MOF)" <Elizabeth.Mendes@ontario.ca>, "Ghiassi, Ali (MOF)" <Ali.Ghiassi@ontario.ca>
> **Subject: Fw: Rate Mitigation - Draft MP Deck**
>
> FYI. Attached are the rate mitigation materials for MPC tomorrow. PW to follow.
>
> Sent from my BlackBerry 10 smartphone on the Rogers network.
>
> _____
> From: Imbrogno, Serge (ENERGY)
> Sent: Wednesday, January 18, 2017 8:01:35 PM (UTC-05:00) Eastern Time (US & Canada)
> To: Orsini, Steve (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF); Angus, Helen (TBS)
> Cc: Bromm, William (CAB)
> Subject: Rate Mitigation - Draft MP Deck
>
> Hi,

Attached is the rate mitigation deck for tomorrow's MP meeting.  I'll send you the pw in a separate email.

Serge

Ontario

MINISTRY OF
ENERGY

# Rate Mitigation Plan Options

## Working Draft

January 2017

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity costs for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants) and suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings).

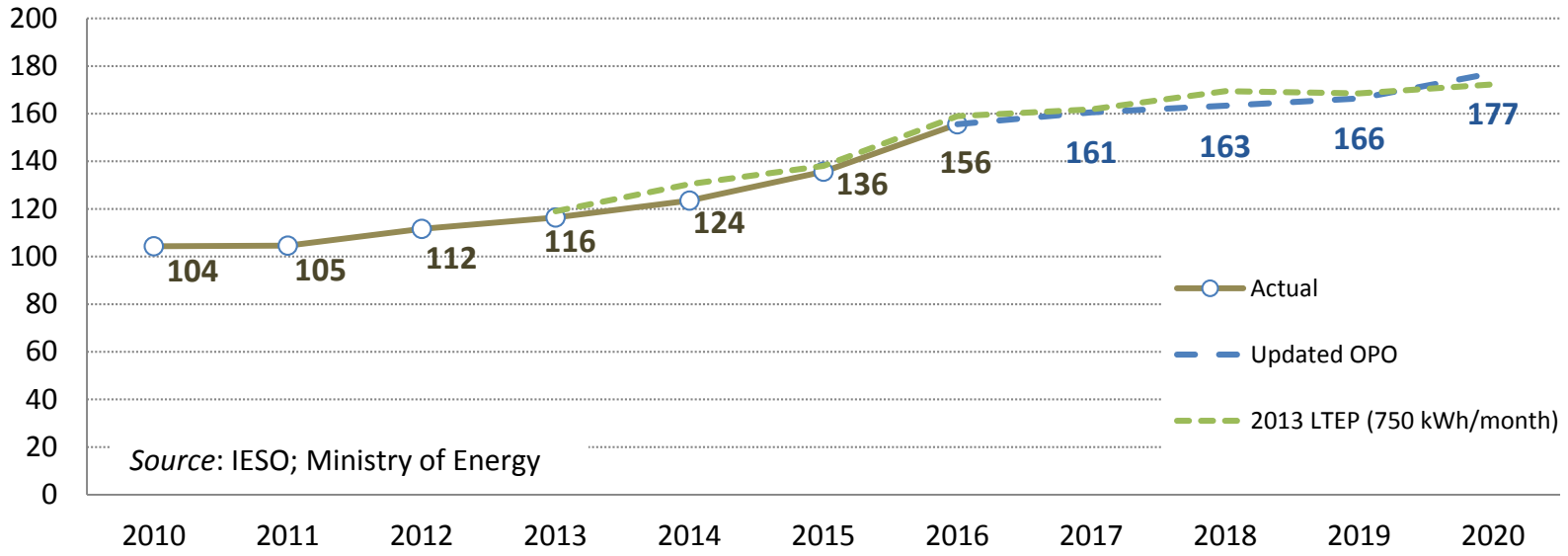
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Context – Residential Electricity Prices

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast in $/month*

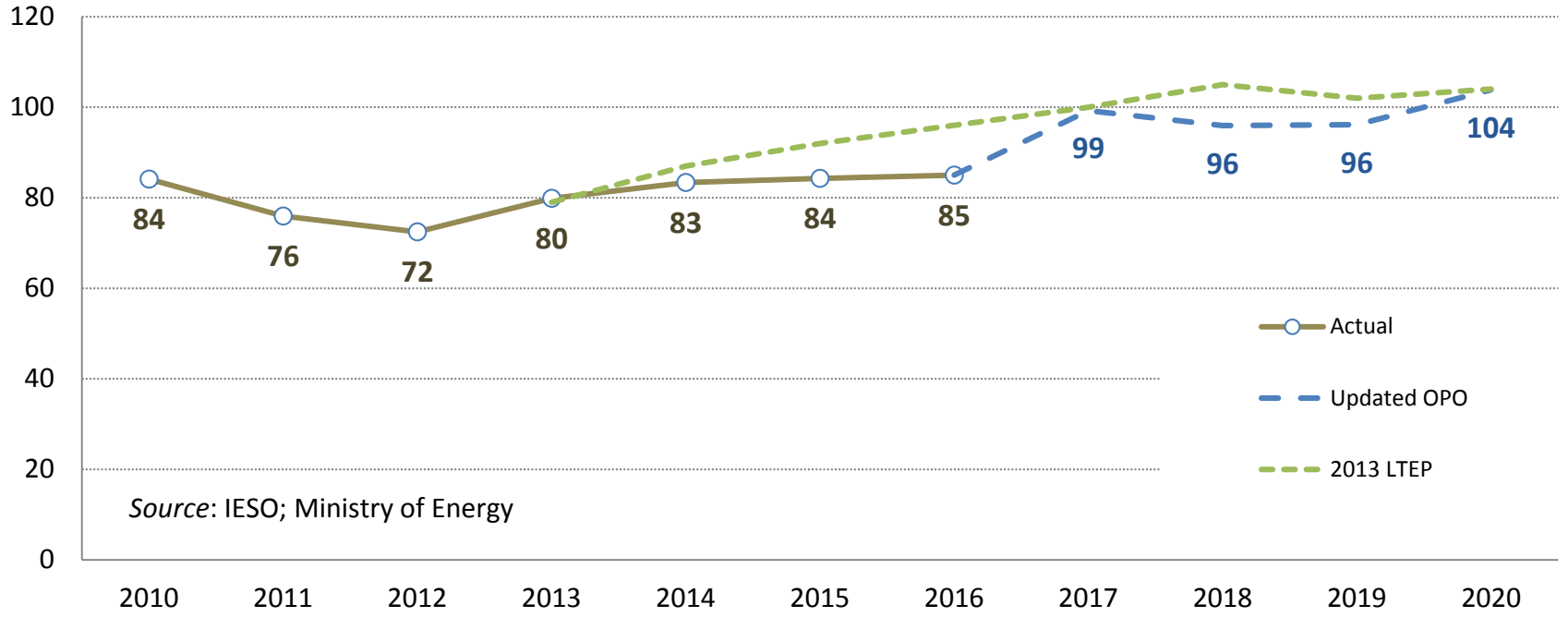



**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Context – Large Industrial Electricity Prices

- Industrial electricity prices continue to be a concern for many businesses.
  - **Note:** The typical industrial electricity price is currently below the 2013 LTEP forecast.

**Typical Class A Electricity Prices**
*Historical and Forecast in $/MWh*




**Note**: The 2013 LTEP forecast for industrial reflects a transmission connected Class A electricity consumer. The updated OPO forecast above includes ICI expansion and RRRP expansion.

# Broad Policy Themes / Rationale

- In recognition of the costs borne by ratepayers related to the to decarbonizing and modernizing the province's electricity sector:
  1. Provide significant and immediate rate relief through cost deferral of the global adjustment (GA).

  2. Provide a greater focus on vulnerable consumers by funding electricity support programs, such as the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Protection, (RRRP) through the tax-base. In addition, provide greater support for lower income Ontarians by enhancing the OESP, etc.

  3. Empower energy agencies to increase cost effectiveness and improve efficiency by having – Independent Electricity System Operator (IESO) modernize Ontario's electricity market through electricity market renewal initiatives, the Ontario Energy Board (OEB) identify opportunities for future LDC cost reductions/efficiencies and work with Ontario Power Generation (OPG) to find further efficiencies in operations and pass on savings to ratepayers.

  4. Enhance the existing 8% rebate that went into effect January 1, 2017.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|---|
| 1. Global Adjustment (GA) Financing (Moderate) | - | 17.49 | 15.01 | 12.49 | 14.91 | 6.32 | 4.03 | Immediate |
| 2. Fund Electricity Support Programs Through the Tax-Base | | | | | | | | |
| a. Rural or Remote Rate Protection (RRRP) | - | 1.58 | 1.62 | 1.66 | 1.70 | 1.75 | 1.79 | Immediate |
| b. Ontario Electricity Support Program (OESP)* | - | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | Immediate |
| c. Low-Income Conservation | - | - | - | - | - | - | - | |
| d. First Nations Rate | - | - | - | - | - | - | - | |
| 3. Empowering Energy Agencies To Increase Cost Effectiveness and Improve Efficiency | | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC Efficiencies/Rates* | - | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | - | 0.71 | 0.89 | 1.08 | 1.22 | 1.35 | 1.24 | Immediate |
| 4. Enhanced Tax-based RPP Rebate (5%) | - | 7.04 | 7.17 | 7.31 | 7.77 | 7.61 | 7.83 | Immediate |

***Note**: Savings based on currently approved OESP rate set by OEB.
**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|---|
| 1. Global Adjustment (GA) Financing (Moderate) | - | 14.49 | 12.43 | 10.33 | 12.35 | 5.23 | 3.33 | Immediate |
| 2. Fund Electricity Support Programs Through the Tax-Base | | | | | | | | |
| a. RRRP | - | 2.10 | 2.15 | 2.21 | 2.26 | 2.32 | 2.38 | Immediate |
| b. OESP* | - | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | Immediate |
| c. Low-Income Conservation | - | - | - | - | - | - | - | |
| d. First Nations Rate | - | - | - | - | - | - | - | |
| 3. Empowering Energy Agencies To Increase Cost Effectiveness and Improve Efficiency | | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC Efficiencies / Rates* | - | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | - | 0.59 | 0.74 | 0.89 | 1.01 | 1.12 | 1.03 | Immediate |
| 4. Enhanced Tax-based RPP Rebate (5%) | - | - | - | - | - | - | - | Immediate |

***Note:** Savings based on current OESP charge as set by OEB.

# Fiscal Impacts

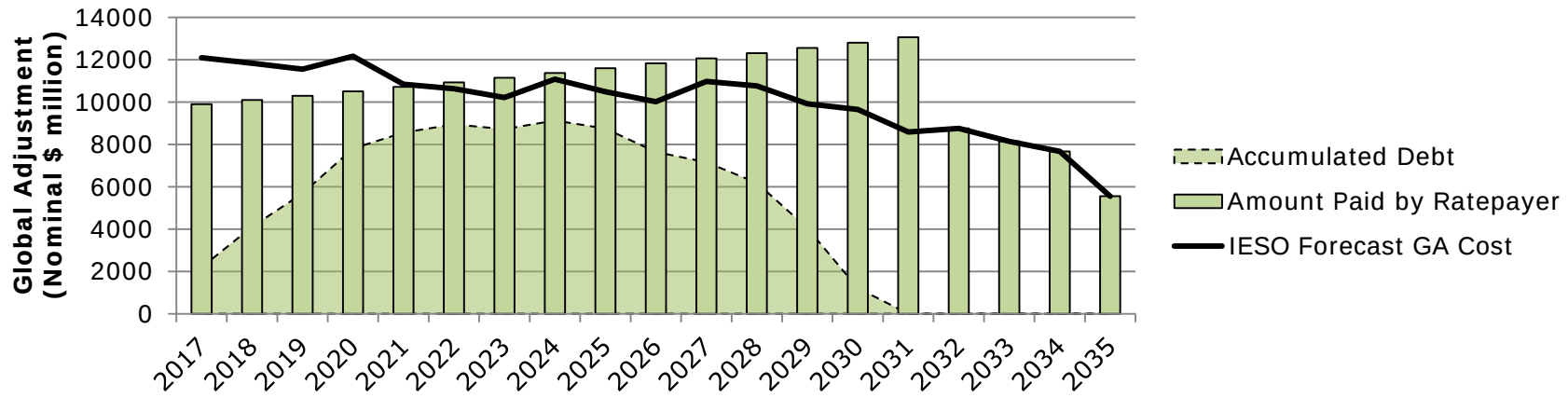
| *$M* | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| 1. Global Adjustment (GA) Financing (Moderate) | TBC | TBC | TBC | TBC | TBC |
| 2. Fund Electricity Support Programs Through the Tax-Base* | | | | | |
| a. RRRP | - | $457 | $469 | $479 | $493 |
| b. OESP | - | 162 | 225 | 279 | 323 |
| c. Low-Income Conservation | - | 60 | 60 | 60 | 60 |
| d. First Nations Rate | - | 18 | 18 | 18 | 18 |
| 3. Empowering Energy Agencies To Increase Cost Effectiveness and Improve Efficiency | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC Efficiencies / Rates | - | - | - | - | - |
| c. OPG – Operational Efficiencies** | - | - | - | - | - |
| 4. Enhanced Tax-based RPP Rebate (5%) | 169 | 699 | 679 | 732 | 724 |

***Note:** Includes costs of program expansion and various assumptions as detailed on relevant slides.
**** Note:** Risk to fiscal plan of up to $240 million annually (foregone net income) if OPG is unable to reach more aggressive operational efficiency targets.

**Source:** Ministry of Finance, Energy

# 1. Global Adjustment (GA) Financing

- It is proposed that the amount of global adjustment (GA) paid by ratepayers in each year over the forecast period is set at a fixed amount and money is borrowed to make up the remainder of the GA cost in each year.
- Starting on January 1, 2017, the amount of GA paid by ratepayers is set at a value lower than the true cost of GA in 2017 and is increased according to a pre-defined schedule until the debt has been paid off.
- GA costs will be "smoothed" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected actual cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- All analysis is based on forecasts from Independent Electricity System Operator (IESO), assumes a 5% annual borrowing interest rate and an inflation rate of 2% per year.




**Sample financing**: Ratepayers pay less than the cost of GA in early years, borrowing up to $9 billion that is fully paid off in 2031 by charging ratepayers more than the cost of GA in later years.

# 1. GA Financing – Options

1a. Moderate / GA Financing

- The amount of GA paid by ratepayers in 2017 is lowered by $3.2 and $3.4 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively.
- Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

1b. Moderate / GA Financing with Delayed Increase

- The starting GA payment from all ratepayers in 2017 is lowered by $1.1 billion, ratepayer payments *decrease* in the short term to keep residential bills relatively flat, then increases at 3% each year – up to a maximum of $2 billion above the true cost of GA – until the borrowed money is paid back over a 25 and 30 year financing period respectively.

Low / GA Financing (see in Appendix)

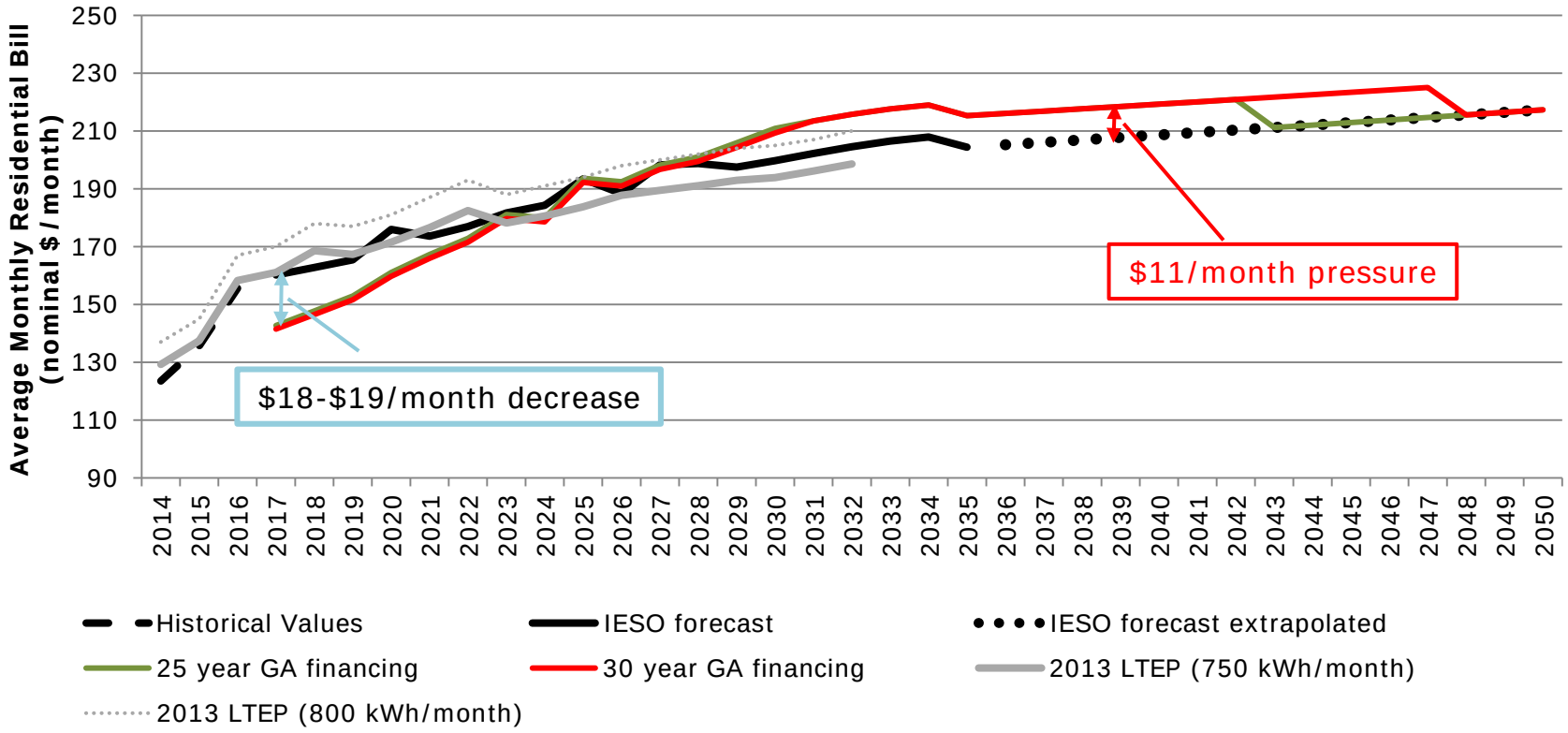
- The amount of GA paid by ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off.
- Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

High / GA Financing (see in Appendix)

- The amount of GA paid by ratepayers in 2017 is lowered by $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively.
- No limit is placed on the amount charged to ratepayers above the true cost of GA.

# 1a. Moderate / GA Financing – Impact on Residential Electricity Bills

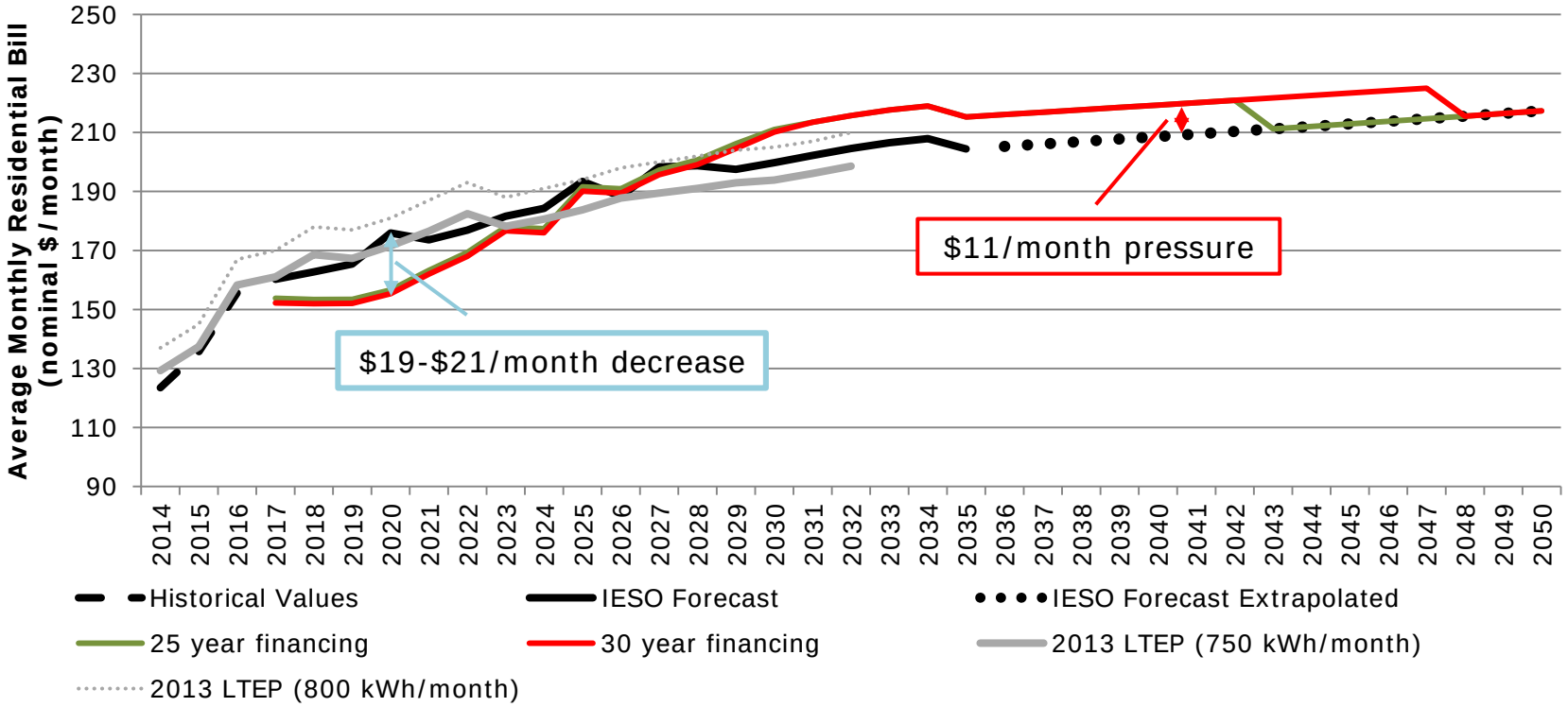
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered by $3.1 billion (green line) and $3.3 billion (red line) and increases at 2% each year – up to a cap of no more than $2 billion more than the true cost of GA in any year – until the borrowed money is paid back in 25 and 30 years respectively.




- By **borrowing up to $23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $17-$19/month** at the cost of **increased future electricity bills over 14-19 years of up to $11/month** above the true cost of electricity production.

# 1b. Moderate / GA Financing with Delayed Increase in Payments – Impact on Residential Electricity Bills

- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $1.1 billion, ratepayer payments *decrease* in the short term to keep residential bills relatively flat, then increases at 3% each year – up to a maximum of $2 billion above the true cost of GA – until the borrowed money is paid back over a 25 and 30 year financing period respectively.

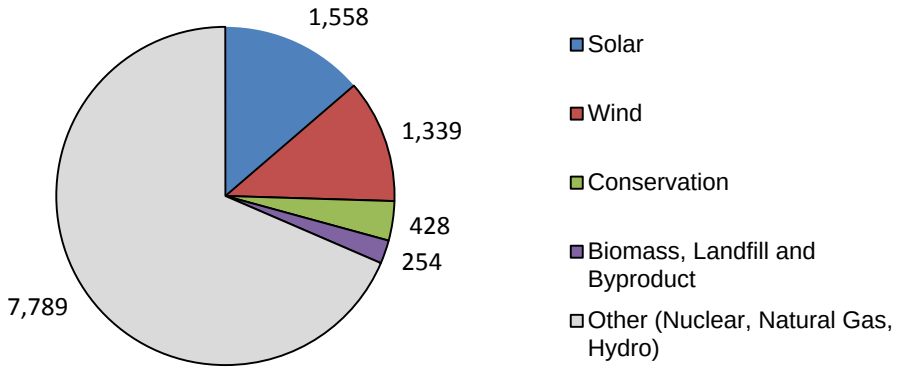



- By **borrowing up to $23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $19-$21/month** at the cost of **increased future electricity bills over 14-19 years of up to $11/month** above the true cost of electricity production.

# 1. GA Financing – Cost Breakout

- The allocation of GA costs for most of 2016 are as follows:

GA costs year-to-date November 2016 ($ million)




- This cost breakdown will evolve over time as 2,181 MW of contracted generation comes online in the coming years.
- The proportion of GA costs is compared with the proportion of generation in the table below:

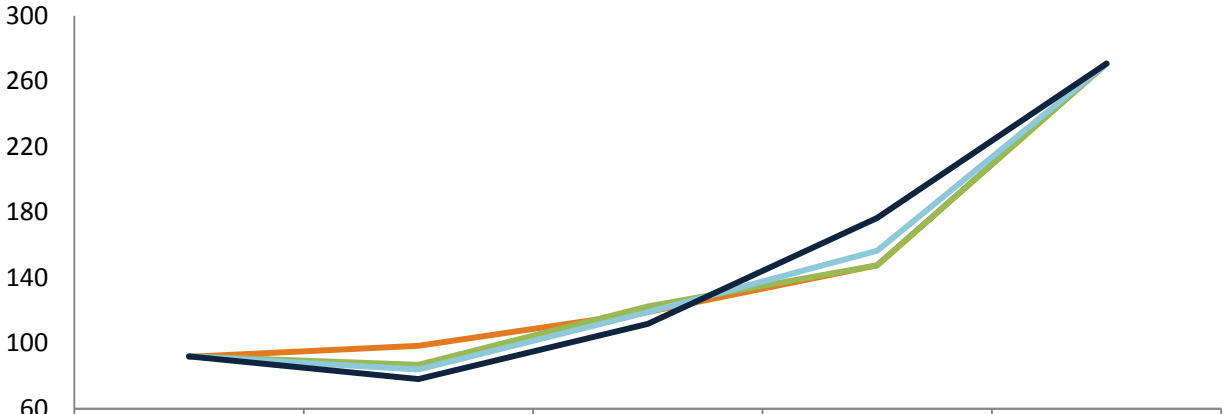
| | Fraction of GA Cost | Fraction of Generation* |
|---|---|---|
| **Solar** | 14% | 0.3% |
| **Wind** | 12% | 6.0% |
| **Biomass, Landfill and Byproduct** | 2% | 0.3% |
| **Conservation** | 4% | 0.0% |
| **Other (Nuclear, Natural Gas, Hydro)** | 69% | 93.4% |

***Note:** Only includes generation directly connected to the transmission system. Most solar generation, for example, is connected to the distribution system and is not represented in the generation column.

# 1. GA Financing – Impact of the Level of Financing on Large Industrial Electricity Consumers

- Below graph illustrates the estimated impact of the level of GA financing for an average Class A electricity consumer over a 25 year amortization period.

**Estimated All-In Electricity Price**
*for Average Class A in $/MWh*




| | 2016 | 2017 | 2027 | 2037 | 2047 |
|---|---|---|---|---|---|
| Status Quo | 92 | 98 | 119 | 148 | 271 |
| Low Financing | | 87 | 122 | 148 | 271 |
| Moderate Financing | - | 84 | 119 | 157 | 271 |
| High Financing | | 78 | 112 | 177 | 271 |

**Note:** Assumes that demand by industrial sector continues at average 2011-2015 levels. Please see the Appendix or more information on the estimated impact on large industrial electricity consumers.

# 1. GA Financing – Considerations

**Considerations**

*Ratepayer:*

- Borrowing money to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves borrowing large amounts of money over a long period of time (16-30 years, depending on the scenario) to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on electricity rates. A long-term interest rate of 5% is assumed for this analysis.

- GA and HOEP provide a natural hedge against each other – when one goes up, the other goes down – keeping total electricity costs relatively stable and predictable. Smoothing only the GA would lead to greater price volatility for consumers unless the schedule and amount of ratepayer payments was defined relative to the actual cost of GA.

- Some Class A consumers pay limited Global Adjustment and would receive little benefit under the financing proposal. These consumers also currently pay very low rates.

- Should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumption, further increasing future costs for individual ratepayers.

- In recognition that Class B electricity consumers pay the majority of GA costs, could limit GA cost reductions through financing to Class B consumers only.

# 1. GA Financing – Considerations (cont'd)

**Considerations**

*Fiscal / Accounting:*

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.
  - It is unclear whether legislation could determine the manner in which this initiative is accounted for. Further work is required.

- Historically electricity sector financing has been conducted by the Ontario Financing Authority (i.e., managing OEFC's stranded debt and borrowing on behalf of IESO). Further consultation with the OFA will be required to determine the appropriate vehicle for additional borrowing.

- The significant amount of additional Provincial borrowing needed to finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating and overall borrowing capacity. Further analysis is required and would suggest early engagement with the OFA through which money will be borrowed.

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" in the sector. **Note:** the Debt Retirement Charge (DRC) was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

# 1. GA Financing – Guiding Principles (cont'd)

- Based on preliminary discussions with KPMG, the following key steps have been identified:
  - Create an "asset" (and confirm that it meets accounting requirements);
  - Identify who will hold the asset(s), this could include:
    - Province (e.g., OEFC, etc);
    - IESO; or
    - LDCs.
  - Determine the source of the financing (e.g., OFA, IO, etc)

- ENERGY is working with LSB, IESO, MOF, TBS and external accountants to identify legislative, regulatory and accounting requirements associated with GA financing option.

# 1. GA Financing – Considerations (cont'd)

**Considerations**

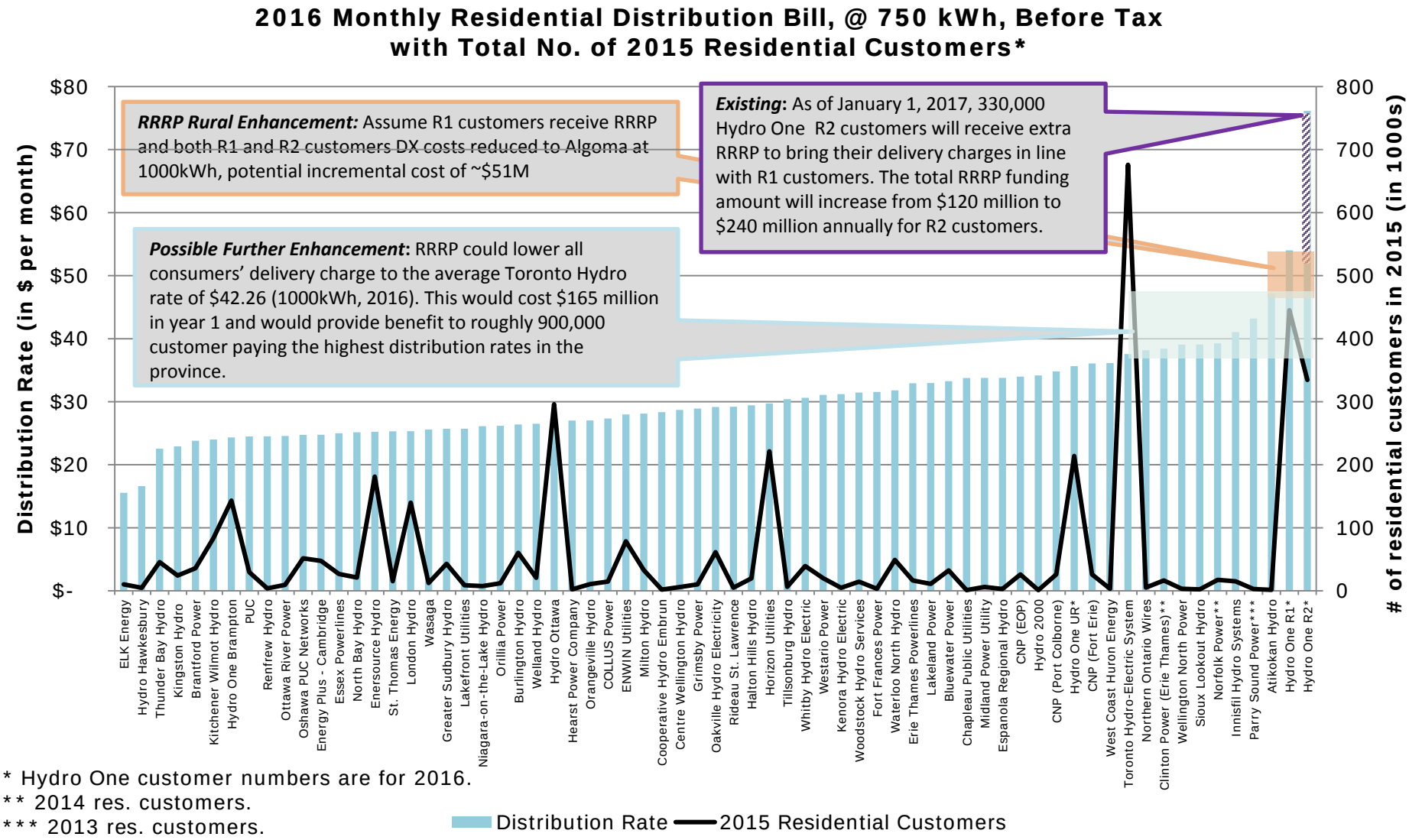
*Legal:*

- Legislation would be required to authorize the financing proposal.
  - Amendments to the *Electricity Act, 1998* (EA) could authorize the financing of certain costs within or part of the GA. However, whether any other legislation requires amendment is not known at this time.
  - The GA regime currently provides that "true costs" represent the true costs of making payments to generators or counter parties to contracts, not the incurring of discretionary financing or interest costs.
  - Considerations such as the need to analyze legal risks or the need to address costs retroactively (if the proposal requires a January 1, 2017 start) could add to the legal and drafting complexity. Further legal analysis is required.

# 2a. Fund Electricity Support Programs Through the Tax-Base – Rural or Remote Rate Protection (RRRP)

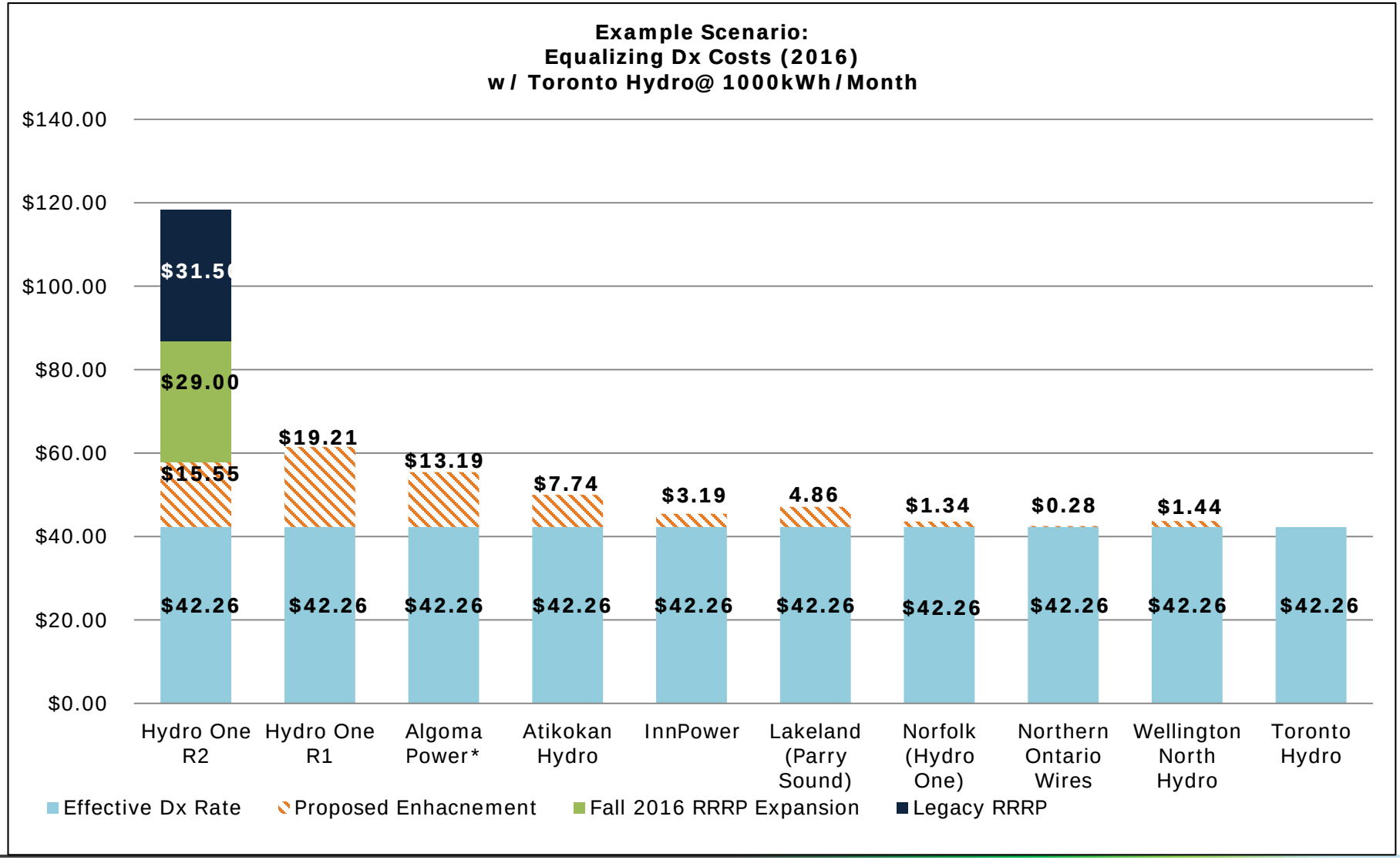
- RRRP supports the most costly-to-serve distributors in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
- The objective of the program is to reduce extreme distribution costs experienced in low density communities, and bring rates closer to those paid by other customers across the Province.
  - The OEB mandates that low density consumers pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies. RRRP is thus the mechanism by which these costs can be partly subsidized by all provincial ratepayers.
- Effective January 1, 2017, Ontario has enhanced program funding to further reduce Hydro One R2 distribution rates. As a result, a typical Hydro One R2 customer now pays roughly the same as a Hydro One R1 (medium density) customers, the next highest distribution rate.
- There is opportunity to continue the mitigation of delivery costs for the most costly-to-serve Ontario consumers by revising the program to either:
  - Bring other density based rural costs down by providing benefits to Hydro One R1 customers and ensuring that all RRRP recipients would pay roughly the same delivery costs; or
  - Expanding the program to other distributors that are costly to serve for reasons beyond density (e.g. to bring their distribution rates down to levels currently paid by customers of Toronto Hydro).
- An expansion of the program would result in a cost for all other ratepayers as the RRRP regulatory charge would need to be increased. In order to avoid this and not place an additional burden on consumers, the RRRP program could be transferred to the taxbase.
  - If left on the ratebase, program costs to consumers could rise from an average of $1.58/month to roughly $3.15/month.

# 2a. RRRP Expansion (cont'd)




* Hydro One customer numbers are for 2016.
** 2014 res. customers.
*** 2013 res. customers.

# 2a. RRRP Expansion – Ratepayer Impacts




***Note:** Algoma Power also receives $13.5 million (2017) to support operational costs.

# 2a. RRRP Expansion – Fiscal Impacts

- Table below shows estimate of program costs up to 2022

| Year | RRRP Status Quo($M) | RRRP Enhancement Phase 1 ($M) | RRRP Enhancement Phase 2 ($M) | TOTAL RANGE ($M) |
|---|---|---|---|---|
| 2017 | $292 | $51 | $114 | **$343 - $457** |
| 2018 | $300 | $52 | $117 | **$352 - $469** |
| 2019 | $306 | $54 | $119 | **$360 - $479** |
| 2020 | $315 | $55 | $123 | **$370 - $493** |
| 2021 | $322 | $56 | $127 | **$378 - $505** |
| 2022 | $329 | $58 | $129 | **$387 - $516** |

- Baseline cost of $292M includes all existing funding for Hydro One R2 (including recent $116 million expansion), Hydro One Remotes, and Algoma Power. Providing the enhanced support would cost an additional $165 million (Phase 1 – $51 million + Phase 2 – $114 million) in year 1.
- For forecast purposes, fiscal impacts are escalated at 2.6%/year. This reflects an estimate of the average yearly distribution rate increase.
  - The current RRRP program includes an adjustment mechanism to increase program funding by the same percentage as the average yearly distribution rate increase.
  - The continuation and appropriateness of this mechanism (and in fact all program design characteristics) would be considered in moving the program to the tax base.

# 2a. RRRP Expansion – Considerations

**Considerations**

- **Framework:** New legislation would be required to establish and define the parameters of a tax based RRRP. This may reveal additional considerations.
- **Policy Rationale:** Historically, RRRP has supported costs of LDCs that meet a density threshold. Expanding funding to additional LDCs that do not represent a density threshold (and selecting a specific LDC rate to serve as a cost cap) results in a fundamental change in the program. Program objectives must be considered if expansion is limited to specific LDCs.
- **Program Design:** Program specifics will affect eligible customers, credit amounts, and fiscal impact widely. Issues such as how eligibility is determined and if benefits are equal for all customers within an eligible LDC need to be examined. Financial flow-through mechanisms would need to be considered in consultation with IESO and LDCs. Likely to be modeled after processes used for the Ontario Rebate for Electricity Consumers (OREC).
- **Continuing Support:** There are multiple options and mechanisms available to adjust funding year-over-year depending on desired objective (continuously peg to Toronto, cover annual rate increases, provide inflationary support, amend as needed, etc…). Selection will impact fiscal projections.
- **Fiscal Risk:** As LDC rates change year-over-year, LDCs eligible for tax-based support will change and can cause significant fluctuation in fiscal projects and impacts. For example, if Toronto Hydro meets eligibility criteria in any given year, over 700,000 customers could become newly entitled to taxbase support.
- **Legal Risk:** The OEB is the energy sector's independent regulator and has sole authority to set rates. Ministry-OEB authority must be considered when prescribing cost levels.
- **Hydro One:** Providing tax-based support for Hydro One may be controversial following the broadening of ownership. Hydro One is also transitioning seasonal customers to its R2 and R1 classes; program eligibility will need to be considered.

# 2b. Ontario Electricity Support Program (OESP) Expansion

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills.
- The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices.
- OESP funding is collected from a charge levied on all electricity ratepayers. Based on current level of program up-take and funding collection, OESP program benefits could be increased across the board by 50%. This would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year);
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year); and
  - Indigenous and Métis consumers would also see benefit increases at the same level as those with electric heat and medical devices.
    - The Ministry is also considering options to support a “Delivery” line credit for Indigenous consumers. This would cost ~$18 million/year (Option 2d on slide 8) and would save Indigenous consumers between $75 and $100/month.
- Greater focus and support can be placed on lower income Ontarians by funding OESP through the tax base. This would also reduce costs for all consumers as a result of eliminating the OESP charge.
  - Average residential customer savings: $0.83/month; and
  - Average industrial customer savings: $1.10/MWh.

# 2b. OESP Expansion – Fiscal Impacts

- Table below shows estimate of program costs up to 2022:

| Year | OESP Status Quo($M) | +50%($M) | TOTAL ($M) |
|---|---|---|---|
| 2017 | $108 | $54 | **$162** |
| 2018 | $150 | $75 | **$225** |
| 2019 | $186 | $93 | **$279** |
| 2020 | $215 | $108 | **$323** |
| 2021 | $243 | $122 | **$365** |
| 2022 | $272 | $136 | **$408** |

- 2017 program costs are based at current program sign-up rate – 30% of eligible consumers. Cost projections assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
- At the time of program design, it was estimated that 40-50% participation would be high for an application-based program delivered through electricity bills. However OESP can be enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).
- OEB is currently exploring options for simplifying the OESP process, including exploring options with MCSS on auto-enrollment options, discussing options to eliminate wet signature consent forms with the federal government, and working with partners to do open houses to better reach vulnerable consumers.

# 2b. OESP Expansion – Considerations

- **Framework:** New legislation would be required to establish and define the parameters of a tax-based OESP. This may reveal additional considerations, including possible assessment as a tax credit.
- **Implementation:** Financial flow-through mechanisms would need to be considered in consultation with IESO and LDCs. Likely to be modeled after processes used for the Ontario Rebate for Electricity Consumers (OREC).
- **Alternative Delivery:** If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible, and could expand coverage to the ~142,000 low-income households that do not receive an electricity bill.
- **Transition to Social Assistance:** Moving OESP to the taxbase can be a transitional step in folding this program into a reform of social and disability assistance programs and enhancement of MCSS' Social Assistance Management System moving forward.
- **Additional Enhancements:** The enhanced credit could be expanded to include additional eligibility categories of customers. For example, a new "Low Density Consumer" category could be introduced that provides Hydro One R2 and/or R1 customers (highest distribution rates) who are already OESP eligible with the enhanced credit.
- **Variance Account:** The OEB has been collecting program funding in excess of program costs and has accrued a positive balance. This balance must be addressed when moving to the tax base.

# 2c. Low Income Conservation Benefit Program

- Existing low income programs delivered by LDCs and IESO help qualified homeowners and social and/or assisted housing providers improve the energy efficiency of their homes.
  - Programs include the Home Assistance Program and the Retrofit Program (Social Housing Stream).
- A new Low Income Conservation Benefit Program would build on existing programs.
  - Participants could receive incentives for conservation measures not currently covered (e.g. air conditioning, heat pumps (electric heated homes)).
  - Increased incentive amounts (e.g., under the existing Retrofit Program, incentives cover approx. 60% of the total cost of the energy efficiency upgrade).
  - Targeted education and awareness initiatives.
- The new program would be delivered through LDCs and/or IESO.
- The new program would coordinate with CCAP initiatives.
- The budget estimate below is illustrative and assumes annual program budgets three times the 2015 spending for the Home Assistance Program.

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| Proposed Budget ($ Million) | $60 | $60 | $60 | $60 | $60 | $60 |

- Further analysis is required on costing and implementation details, including alignment with the Conservation First Framework.

# 3a. IESO – Market Renewal

- Continue to move forward with Independent Electricity System Operator's (IESO) Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 3b. OEB – LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
- Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
  - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.
- Over the same time period, distribution sector productivity and cost efficiency have decreased. This trend raises concern that customers are not realizing a net benefit from sector cost increases, as customers receive less value from the distribution portion of their bill.
  - OM&A costs per customer have increased on average from $235 in 2006 to $319 in 2015.
  - For the period 2002-2012, sector productivity has decreased by an annual average of -0.93% when including Hydro One and Toronto Hydro, the worst performers.
- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentive for consolidation \further changes to the tax incentives and/or revisiting legislated consolidation could be considered.
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- ENERGY could help promote or accelerate these efforts by asking the OEB – through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and/or the 2017 Mandate Letter and other agency business planning processes – to consider opportunities to further drive these efficiency, productivity, and performance improvements.

# 3b. OEB – LDC Efficiencies and Rates – Potential LDC Cost Reduction Measures (cont'd)

| Option | Description | Potential Cost Impacts* | Timeline** | Notes |
|---|---|---|---|---|
| **Performance Standards with Rewards & Penalties** | Strengthen LDC scorecard by connecting to LDC financial performance through earnings sharing or penalties paid to consumers.<br>Ex: SAIDI/SAIFI; OM&A per customer | • 1-2% of revenue requirement could be recycled back to customers.<br>• Performance penalties would be real, periodic on-bill $ reductions.<br>• Cost reduction would only occur if standards are not met. | 1 year | UK Regulator Ofgem requires utilities to pay consumers up to £50 if reliability standards are not met. |
| **Enhanced Economic Regulation** | Revise rate-setting to reflect tightening productivity requirements and capital cost avoidance. | • <1% reduction in rates annually, with additional capital investment avoidance.<br>• Methods include stronger productivity factors, broader peer comparisons, and elimination of ICM. | 1-3 years | Incents innovation by requiring LDCs to provide equal or better service on less inflation-adjusted revenue annually. |
| **LDC Collaboration Incentives** | Create regulatory incentives for LDCs to pursue efficiencies and service sharing agreements. | • Potential to avoid individual LDC capital investments of up to six figures, plus additional OM&A tightening.<br>• Actual level of rate reduction dependent on specific LDC proposals. | 1 year for new guidelines, savings to be realized through LDC planning process. | LDCs have already indicated an interest in pursuing such arrangements but have expressed concern on regulatory barriers and costs. |
| **Line Loss Accountability** | Create appropriate benefit-sharing mechanism so LDCs are incented to pursue line loss reductions. | • Potential for 1-3% reduction in commodity charges associated with losses.<br>• Requirements dependent on business cases so costs don't outweigh benefits. | 1-2 years | Potential linkages with related proposal for in-front of the meter conservation. |



***Note:** Dependent on implementation specifics as determined by OEB



****Note:** Timelines begin from Ministry approval of OEB LTEP Implementation Plan

# 3b. OEB – LDC Efficiencies and Rates – Considerations

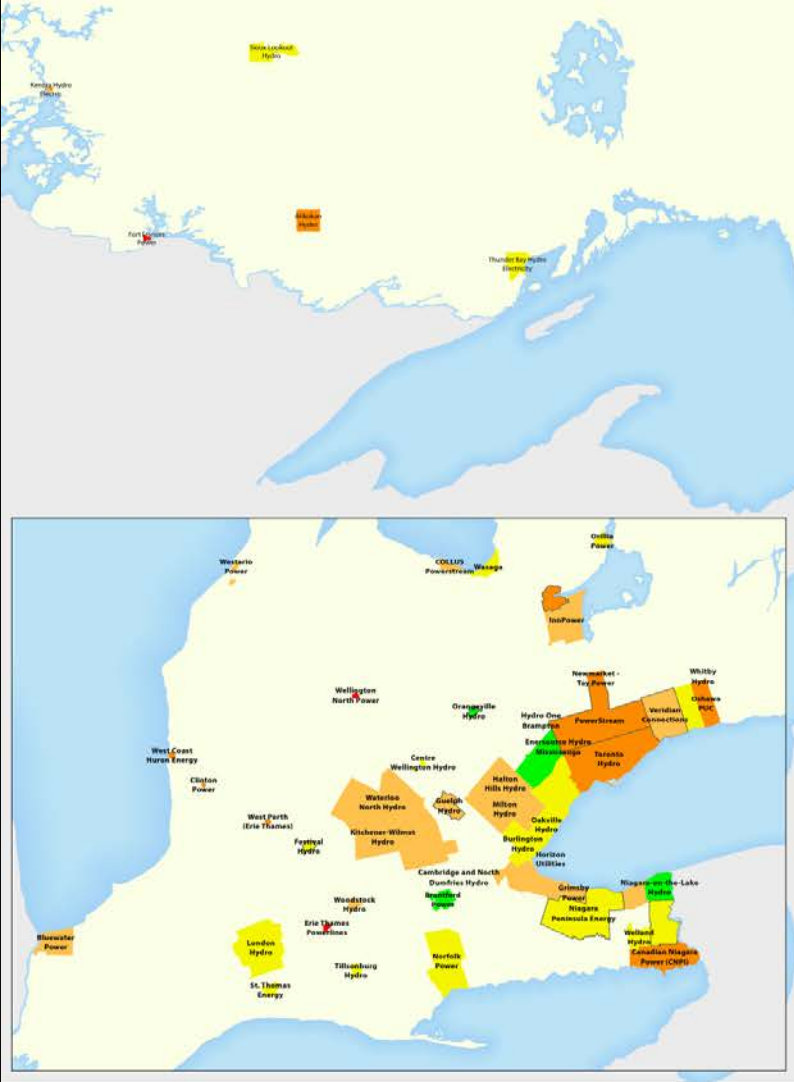
***Sector:***

- Exact bill reduction levels are unknown, but real OM&A and some capital cost avoidance can reasonably be expected.
- Could indirectly incent consolidation if LDCs feel they are unable to adequately manage their assets in light of tightening requirements.
- Any initiatives that have a direct impact on LDC profitability could affect the value of Hydro One.
- There is a tension between requiring productivity enhancements and creating firm performance standards. LDCs have to invest to maintain system levels, but also finding cost efficiencies, which is an incentive for innovation. The Ministry and the OEB may have to also explore reducing regulatory burden/barriers on LDCs so they have the tools available to satisfy new performance expectations.

***Regulatory:***

- The OEB is the electricity distribution sector's independent regulator and as such is responsible for establishing rate-setting mechanisms in line with its statutory objectives.
  - The Ministry would engage with OEB to align on approach, and provide only high-level direction so as to respect OEB's role in determining implementation specifics.
  - The OEB would likely need to conduct policy hearings and stakeholder consultations on these initiatives, though Ministry could request new rules be in place for next major LDC rate cycle.
- LDCs are resistant to peer comparison for a variety of historical and service territory issues. OEB econometric analysis has generally supported limiting peer comparisons. As comparisons would be an important component of benchmarking performance standards, the Ministry may experience sector pushback.
- Updating rate-setting mechanisms and regulatory processes could create regulatory uncertainty and limit LDC activity. The OEB has revised its processes multiple times over the past 15 years.

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

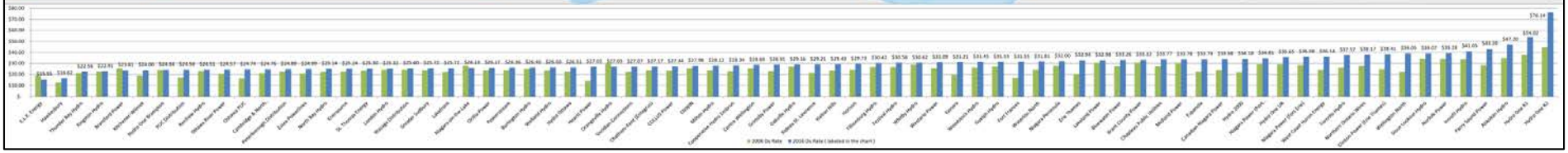
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# 3c. OPG – Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

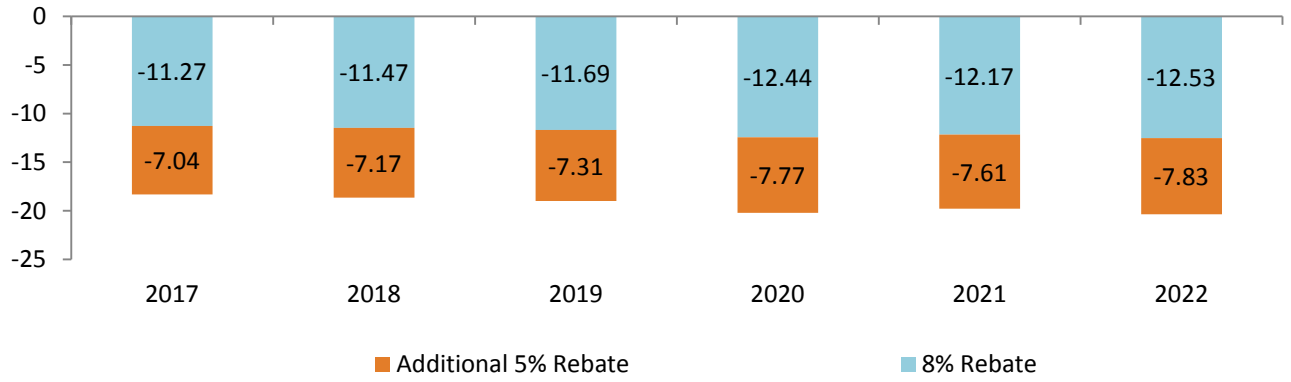
**Considerations**

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

# 4. Enhanced Tax-Base RPP Rebate (5%)

- Enhancing the rebate by a further 5% on the amount before tax provides an average savings of about $7 each month or $84 annually for a typical residential electricity consumer.
- As of January 1, 2017, electricity consumers eligible for the Regulated Price Plan (RPP) receive an 8% rebate equivalent to the provincial portion of HST on their pre-tax bill.
- The eligibility criteria for the 8% rebate is as follows:
  - Consumers with a demand of 50 kW or less;
  - Consumers with a demand of 250,000 kWh/year or less;
  - Farms;
  - Multi-unit residential buildings and other facilities used as residential rental units;
  - Dwellings;
  - Condominiums; and
  - Co-operatives with housing units.

**Benefit for a Typical Residential RPP Consumer**
*in $/750-kWh month*



# 4. Enhanced Tax-Base RPP Rebate (5%) (cont'd)

**Considerations**

- Amendments would be required related to the *Ontario Rebate for Electricity Consumers Act, 2016.*
- The Act authorizes the making of regulations to reimburse electricity vendors for amounts credited to consumers' accounts under the Act. The Act authorizes the making of other regulations to put in place mechanisms needed to implement the financial assistance.
- The rebate could be made retroactive to January 1, 2017. Similar to the current 8% rebate, electricity consumers would receive a retroactive payment once the local distributor begins issuing the rebates if the distributor needs more time to adjust its billing systems.

**Fiscal Cost of an Enhanced Rebate**
*in $millions*

| Cost ($M) | 2016-2017 | 2017-2018 | 2018-2019 | 2019-2020 | 2020-2021 | 2021-2022 |
|---|---|---|---|---|---|---|
| **Cost of 8% rebate** | 271 | 1,119 | 1,086 | 1,171 | 1,159 | 1,208 |
| **Cost of 13% rebate** | 440 | 1,818 | 1,764 | 1,903 | 1,884 | 1,963 |
| **Cost of incremental 5% rebate** | 169 | 699 | 679 | 732 | 724 | 755 |

# Appendix

# Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are ailed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

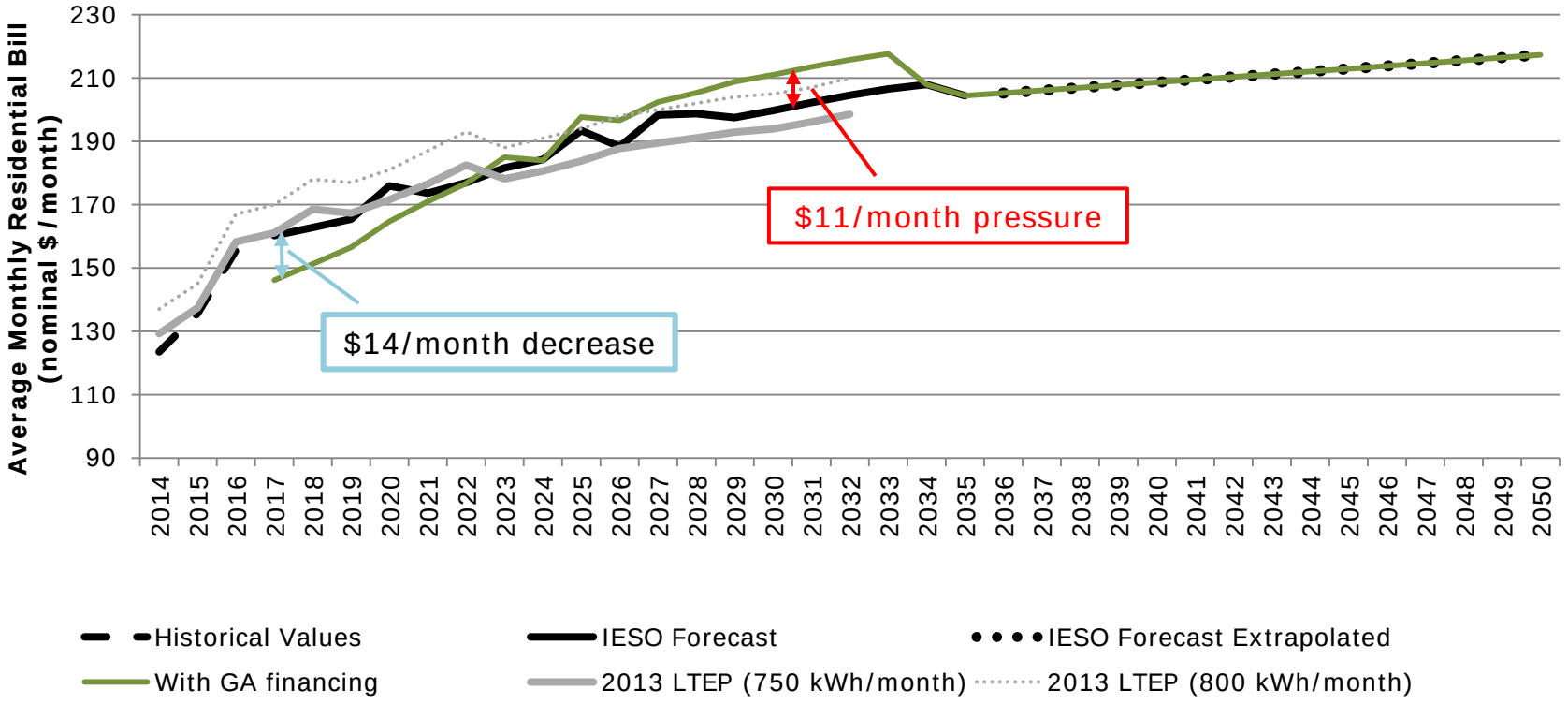
- Given that these programs focus on promoting equity between different area of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.

# Global Adjustment (GA) Financing

- The global adjustment (GA) is comprised of costs for regulated and contracted generation, as well as conservation.
- Some contracted generation assets are expected to have a useful life that extends beyond the term of their current financial contracts (typically 20-years).
- Similarly, conservation costs are recovered through the GA on an annual basis while conservation initiatives provide benefits to the electricity system over the course of many years.
- Since the GA only includes costs related to the contractual life of these assets, there may be an opportunity to recognize the longer-term benefit of these assets to the electricity system and “bring forward” that benefit for ratepayers today, while deferring some of the current costs.
- An indicative GA financing proposal is presented that lowers ratepayers costs over the short term by borrowing money but increases costs over the long term when GA costs are forecast to be lower.
- **Note:** Not all generating assets will continue operations at the end of their contract term. Regulatory constraints (i.e., nuclear licences) or low demand conditions (i.e., as experienced with current expiring NUGs) would mean that some generators will shutdown at the expiry of their contract. Future ratepayers would be paying for these assets that are no longer producing power.

# Low / GA Financing – Impact on Residential Electricity Bills

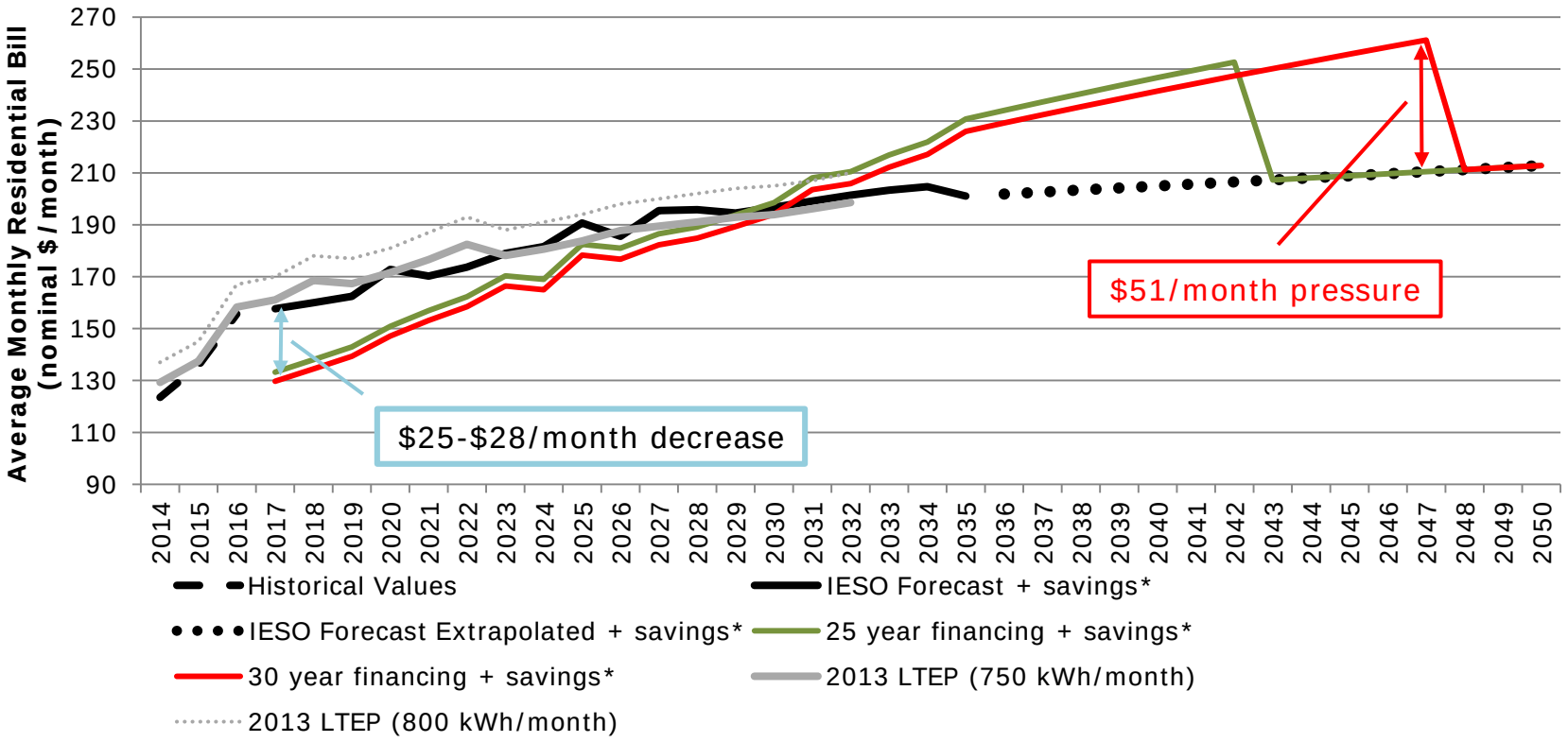
- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $2.5 billion and increases at 2% each year – up to a cap of no more than $2 billion more than the true cost of GA in any year – until the borrowed money is paid back in 2032.




- By **borrowing up to $9.3 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $14/month** at the cost of **increased future electricity bills over 10 years of up to $11/month** above the true cost of electricity production.

# High / GA Financing – Impact on Residential Electricity Bills

- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $4.4 and $5 billion and increases at 2% each year until the borrowed money is paid back over a 25 and 30 year financing period respectively.

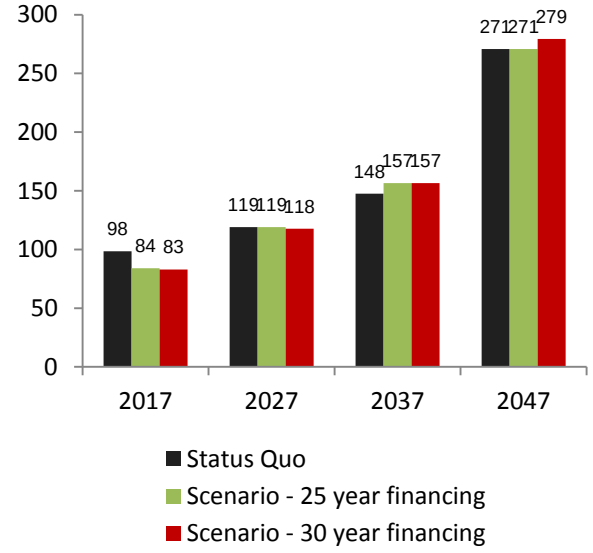



- By **borrowing up to $65 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $25-$28/month** at the cost of **increased future electricity bills over 12-17 years of up to $46-$51/month** above the true cost of electricity production.

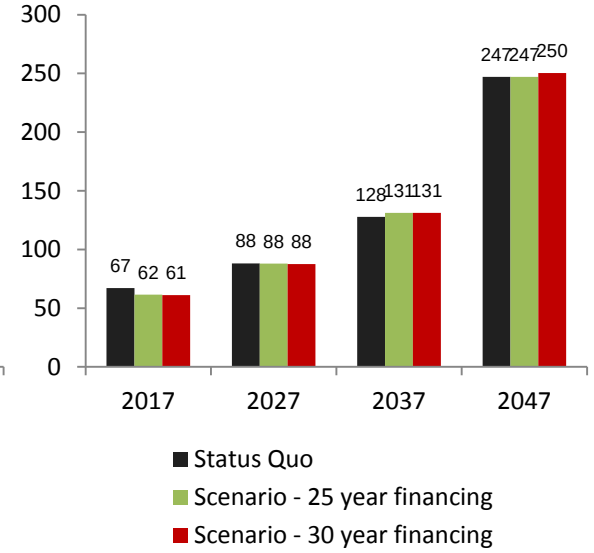
# GA Financing – Illustrative Impact for Large Industrial Electricity Consumers

- Below graphs illustrate the estimated impact under the moderate GA financing scenario for an average Class A electricity consumer, a consumer that pays low GA (i.e., pulp and paper) and high GA (i.e., refining and chemical manufacturing).

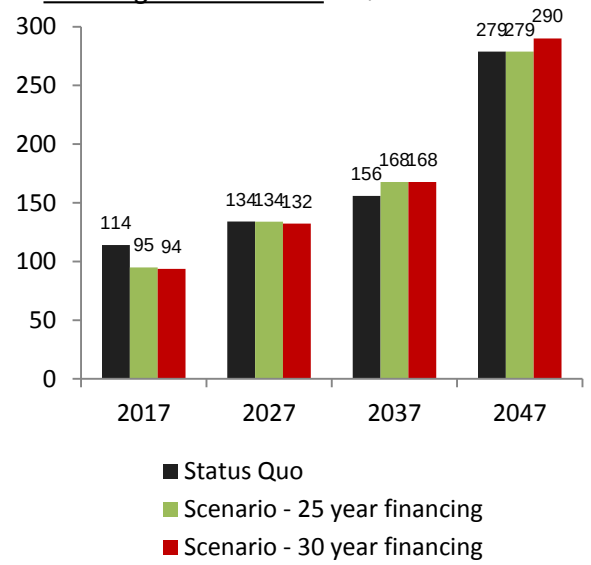
**Estimated All-In Electricity Price**
*for Average Class A in $/MWh*




**Estimated All-In Electricity Price**
*for Pulp & Paper in $/MWh*

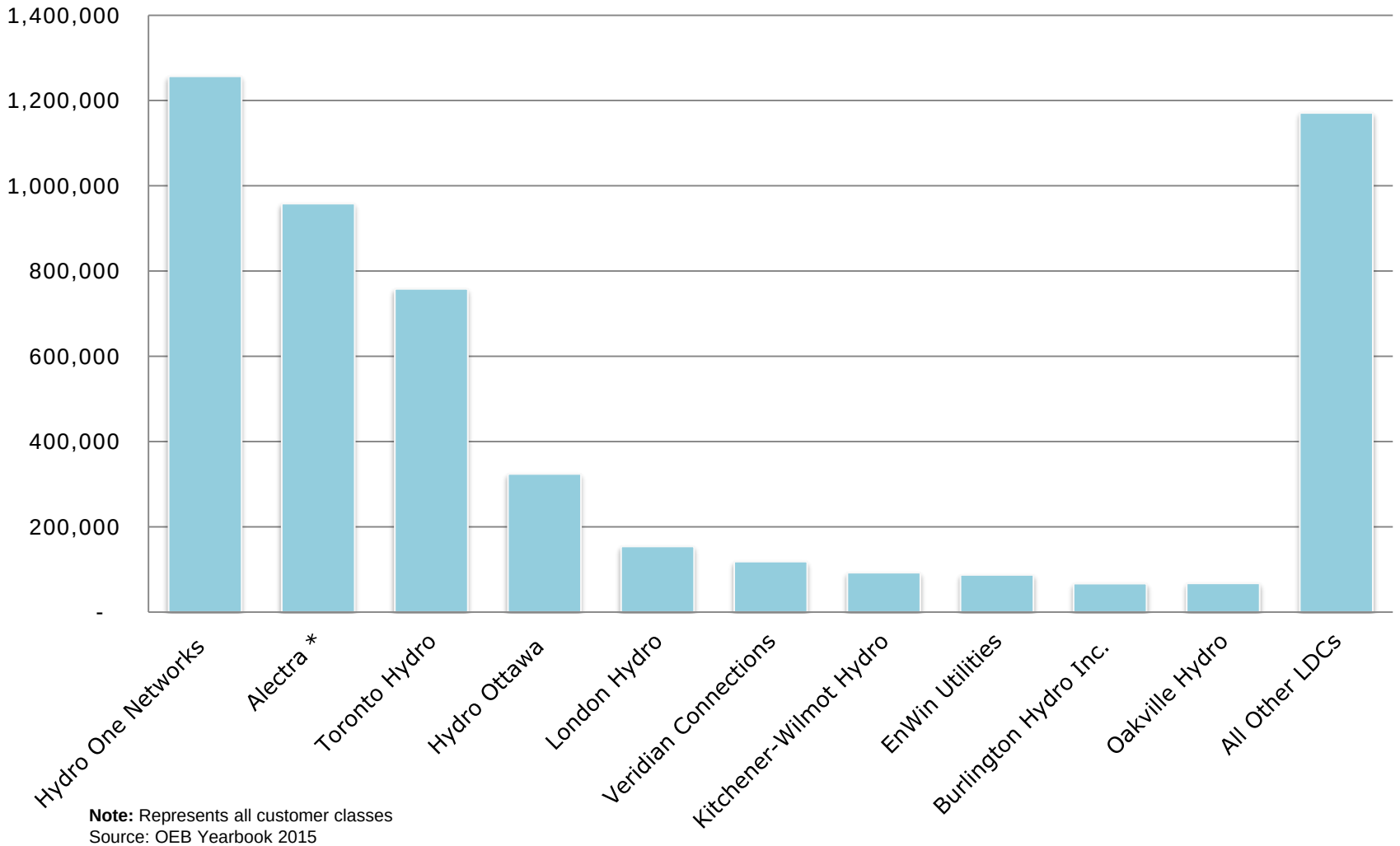



**Estimated All-In Electricity Price**
*for Refining & Chemicals in $/MWh*




**Note:** Assumes that demand by industrial sector continues at average 2011-2015 levels.

# Largest LDCs by Customer Base




**Note:** Represents all customer classes
Source: OEB Yearbook 2015
*Recently approved merger of Powerstream, Enersource, Horizon, and Hydro One Brampton

# Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the contract holders agreeing to a lower price in the near term.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period; discussions/consultation may be required in advance of this potential option moving forward.

# Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- The Province is not a party to the contracts and has never been involved in the negotiation of the contracts themselves. IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is also required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

- Extending contract terms would reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

# Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.
- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.
- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
- **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 Million | $582 Million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - **Illustrative Example:** New contract for 27 years at $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 Million | $632 Million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# Extend Length of Existing Wind / Solar Contracts (cont'd)

- Below are illustrative estimates of potential GA savings if all contracts for large FIT and GEIA wind and solar projects in commercial operation are renegotiated according to the approaches illustrated above.
- Estimates are for large (10 MW or greater) FIT 1 and GEIA wind and solar projects in commercial operation, totalling about 2,700 MW of wind and about 900 MW of solar capacity. A 10 year contract extension is assumed at a price of:
  - **For Wind:** LRP I low weighted wind price of $64.5/MWh
  - **For Solar:** LRP I low weighted solar price of $141.5/MWh

**Potential Approach 1:**

| | **Current Contracts*** | **New Extended Contracts** |
|---|---|---|
| Total Value (NPV 2017) | $22.9 Billion | $22.8 Billion |
| Average Annual Contract Value (First 5 Years) | $1.5 Billion | $1.3 Billion |
| *Figures assume projects remain operational after contract expiry at the LRP I low weighted price inflated to the year of contract expiry, as per OPO assumptions . | | |

**Potential Approach 2"**

| | **Current Contracts** | **New Extended Contracts** |
|---|---|---|
| Total Value (NPV 2017) | $ 22.9 Billion | $ 25.3 Billion |
| Average Annual Contract Value (First 5 Years) | 1.5 Billion | $1.0 Billion |

# Extend Length of Existing Wind / Solar Contracts (cont'd)

- Contract re-negotiations could be piloted with large wind and solar contract holders.
- For example, the top 5 contract holders by portfolio value (online projects 10 MW and larger) include:

| Contract Holder | Technology | # of Contracts | Capacity (MW) | Estimated Value (NPV 2017) |
|---|---|---|---|---|
| Samsung | Wind & Solar | 5 | 799 | $4.6 Billion |
| NextERA | Wind | 6 | 534 | $2.7 Billion |
| Pattern / Capital Power | Wind | 1 | 270 | $1.5 Billion |
| ENGIE | Wind | 4 | 265 | $1.2 Billion |
| Northland Power | Wind & Solar | 15 | 290 | $1.2 Billion |

# Other Options Considered – Typical Residential Electricity Consumer

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| b. Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |
| Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Options Considered – Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| b. Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |
| Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

**From:** Ronald Kwan
**To:** John Kim; Emily Kerr
**Cc:** Gavin He
**Subject:** FW: Rate Mitigation - Draft MP Deck
**Date:** Monday, January 23, 2017 9:54:24 AM

---

Hi,

Can we see what we can pull out of the charts in the various presentations on annual fiscal impacts, direct and indirect (IOD), as well as cumulative debt, each year.

Thanks,
Ron

---

**From:** Ronald Kwan
**Sent:** January-23-17 09:49
**To:** Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>
**Cc:** David McLean (MOF) <David.McLean@ontario.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Rate Mitigation - Draft MP Deck

Hi Chris,

We can see what we can glean from the apparent amounts to be financed annually and cumulatively, based on Energy's charts; however, Energy would have the underlying data to the options.

The fiscal impact will depend on the accounting treatment, which I think OPCD working with Energy, IESO and KPMG are better placed to comment on.

Ron

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**From:** Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
**Sent:** January-23-17 09:42
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Cc:** David McLean (MOF) <David.McLean@ontario.ca>
**Subject:** FW: Rate Mitigation - Draft MP Deck

Hi Ron,
See below. SoC asking for an analysis of the fiscal impact of the GA options assuming it has to be added to the fiscal plan. The request was routed through to OPCD and Karen Hughes' office as well, but not sure who is best placed to lead the analysis. Note the attached appears to be the same version as was circulated before last Thursday's trip to Major Projects.

CP

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**From:** MacIntyre, Kyle (TBS)
**Sent:** January 23, 2017 9:27 AM
**To:** Laughton, Patrick (TBS); Hosick, Sarah (TBS); McLean, David (MOF)
**Subject:** Fwd: Rate Mitigation - Draft MP Deck

For folks...

Begin forwarded message:

> **From:** "Bromm, William (CAB)" <William.Bromm2@ontario.ca>
> **To:** "MacIntyre, Kyle (TBS)" <Kyle.MacIntyre@ontario.ca>
> **Subject: Rate Mitigation - Draft MP Deck**
>
> SOC is interested in an analysis of fiscal impact of global adjustment options assuming it has to be added to fiscal plan (e.g., consolidation of debt). Would this be something your folks would do or should I go to MOF?
>
> Will send PW to doc
>
> W

**From:** Ronald Kwan
**To:** Francisco Chinchon; John Kim
**Cc:** Gavin He
**Subject:** FW: Rate Mitigation - H1 Options
**Date:** Friday, January 13, 2017 1:47:03 PM
**Attachments:** 2017 01 13 Rate Mitigation - H1 Options v02 1.pptx

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Hi,

Please review ASAP.

Thanks,
Ron

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**From:** Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
**Sent:** January-13-17 13:12
**To:** Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** Rate Mitigation - H1 Options

Hi Nancy, Ron,

The attached responds to a request from the SoC for options dealing with the Hydro One deferred tax benefit. This doesn't include a lot by way of pre-amble, as I think we have spent a fair bit of time discussing the issue. Ron, we attempted to take the key elements from your presentation, as well as the note that ENE prepared before the holidays. Please let me know if you have any edits / comments. Apologies for short notice, but I have been asked to share a draft with ENE DMO by EOD.

Thanks,
Scott

# Rate Mitigation Options
# Hydro One Options

# Purpose

- The following presentation considers the following three options in the context of electricity rate mitigation, and the Ontario Energy Board's upcoming transmission rate decision that will include treatment of Hydro One's Deferred Tax Benefit:

    1. Dedicate the Departure Tax to ratepayers
    2. Allocate Trillium Trust Funds to Energy Projects
    3. Await OEB Decision (Status Quo)

# Context: Tax Benefit and the Ontario Energy Board Review

- Hydro One paid a one time Departure Tax of $2.6 B to the Province prior to exiting the payments-in-lieu of tax regime and then recorded a Deferred Tax Benefit (DTB) of ~$2.8 B, as it entered the income tax regime, post-IPO
  - The Province recorded increased revenues of ~$2.4B due to the DTB, which it has allocated to the Trillium Trust
- The Ontario Energy Board (OEB) is currently reviewing Hydro One's 2017-18 transmission rate application to determine whether the DTB should be allocated to the benefit of ratepayers rather than shareholders
  - There is no clear precedent, as it is rare for the seller to benefit from tax collections
  - Hydro One believes it has a strong argument to keep the DTB, as Hydro One paid the departure tax, investors purchased shares on the basis that the value of the tax shield would flow to their benefit, and ratepayers are no worse off as a result of the transaction
    - This argument is complicated by the Province's equity injection of $2.6 B to Hydro One pre-IPO, which was done to mitigate the negative financial consequences arising from the Departure Tax payment
  - Hydro One and the IPO lead bookrunners reached out to regulatory experts in 2015 for an assessment and although outlined as a risk in the prospectus, this was viewed as an unlikely outcome at the time of the IPO
- In the event the OEB requires the benefit from the DTB to flow to ratepayers, the lead bookrunners calculated an earnings impact of ~$1 B on a present value basis (~$1.85 per share). Further impacts to share value could arise depending on whether analysts and investors reconsider regulatory risk
- OEB's transmission rate decision is expected in late winter / early spring 2017, and a similar decision on distribution rates is expected at the end of 2017

# Option 1: Dedicate Departure Tax to Ratepayers

- Dedicate the $2.6B Departure Tax to ratepayers over 5-10 years

- Prior to the OEB's decision on the Hydro One transmission rate application, the Province could commit to providing value equivalent to the tax payment to ratepayers
- This would reduce the likelihood that OEB would require providing the DTB to ratepayers

| | |
|---|---|
| **Ratepayer Impact** | • Typical Residential ratepayers would save $2.79/month if allocated over 5 years or $1.39/month if allocated over 10 years<br>• Relief would be temporary and could result in a spike in electricity bills following the conclusion of the mitigation initiative<br>• This benefit could apply to all Ontario ratepayers, or be conveyed as targeted relief |
| **Fiscal Impact** | • The tax payment did not result in a net fiscal benefit to the Province as it was offset upon consolidation by the tax expense on Hydro One's financial statements<br>• Dedicating the departure tax to ratepayers would have a negative fiscal impact as the Province would record an annual expense of $520M (5yrs) or $260M (10yrs)<br>• Reallocating the departure tax from OEFC to ratepayers would also cause an equivalent increase to the unfunded liability of OEFC (or "stranded debt") |
| **Other** | • Discussions with OEB would be required to ensure this tradeoff is acceptable. Otherwise, there may be additional fiscal risk pending an OEB decision on the treatment of the DTB<br>• This decision may lead to pressure for the Province to adopt a similar policy for future departure tax payments (e.g. municipal utility transactions)<br>• Implementation mechanisms require further consideration |

# Option 2: Allocate Trillium Trust Funds to Energy Projects

- Allocate a portion of the Trillium Trust to investments in electricity sector projects

- In advance of OEB's decision on Hydro One's rate application, the Province could expand the Trillium Trust by allocating a portion of the benefit that the Province received from the broadening of ownership of Hydro One, to electricity infrastructure projects
- In addition to mitigating the risk of an adverse regulatory decision, this would help defray the cost of investments that are made to modernize the province's electricity infrastructure (Potential projects could include transmission connection to remote communities and natural gas expansion)

| | |
|---|---|
| **Ratepayer Impact** | • The ratepayer impact may be small and/or deferred until projects are in-service<br>• Benefits may accrue to a select group of ratepayers depending on the projects that are funded |
| **Fiscal Impact** | • If invested in Provincially-owned assets, the cost would be spread over the life of the asset<br>• Incremental interest costs associated with funding any Moving Ontario Forward projects which had funding reallocated |
| **Other** | • Discussions with OEB would be required to ensure this trade-off is acceptable. Otherwise, there may be additional fiscal risk pending an OEB decision on the treatment of the DTB<br>• This represents a policy shift, as the asset optimisation amounts have been allocated to go to Moving Ontario Forward projects<br>• Depending on structuring, the Province may have expenses (upfront or over time) associated with electricity infrastructure spending without a mechanism for cost recovery<br>• Implementation mechanisms require further consideration |

# Option 3: Await OEB Decision (Status Quo)

- Take no action and let the OEB decide, as part of Hydro One's rate filing, whether the DTB should benefit ratepayers or shareholders

- The following table highlights considerations assuming the OEB rules in favour of ratepayers

| | |
|---|---|
| **Ratepayer Impact** | • Residential customers could benefit from a small reduction in rates (~8 cents/month for transmission customers), potentially continuing over several years<br>• Assuming a similar decision is applied to the distribution application, typical medium density Hydro One customers would experience a reduction of ~78 cents/month. However, this benefit would flow only to Hydro One customers |
| **Fiscal and Shareholder Impact** | • Share price could decline by ~$1.85 per share, due in part to the reduction in expected future earnings, and also because this surprise decision would affect perceived regulatory risk<br>• Hydro One may also write down the DTB, which could trigger a write down the Province's $2.4B portion of this benefit that has already credited to the Trillium Trust<br>• As a result of both the decline in share price, and write down of the tax benefit, the Province may have difficulty in reaching its objective of $4B in net gains from the broadening of ownership of Hydro One to be dedicated to the Trillium Trust |
| **Other** | • This option would allow for targeted benefits to flow to Hydro One customers, but the Province would not control the size or timing of those benefits<br>• The Province would not be credited for any rate mitigation resulting from this outcome, although the Province could emphasize the OEB's role in protecting consumers<br>• Some of the downside would be absorbed by private investors |

**From:** John Kim
**To:** Francisco Chinchon
**Subject:** FW: Rate Mitigation
**Date:** Saturday, January 14, 2017 11:48:43 PM
**Attachments:** Comments on Electricity Sector Transformation Proposals v6 (CEFD).docx

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Fyi, I just put down a few updates quickly so that maybe the effort could be combined later on. So is just a marker to start the effort.

I know you mentioned will focus on DT and TT and I'm totally flexible how to move this.

John.

-----Original Message-----
From: John Kim
Sent: Saturday, January 14, 2017 11:45 PM
To: Emily Kerr <Emily.Kerr@ofina.on.ca>
Subject: RE: Rate Mitigation

Hi Emily,

Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.

Thanks,

John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge
>
>
> Sent from my iPad

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

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## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility** | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| **Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time** | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value, including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates |

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| | |
|---|---|
| | • OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• ~~Provide more details regarding th Global Adjustment (GA)~~ |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal ~~impact/accounting treatment, or implementation~~<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |

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**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
    - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
    - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
    - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
    - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.

**Commented [JK1]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

- This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
- As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
- Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
  - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
  - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of options to delay recovery of part of the Global Adjustment (GA) by debt financing and recovering over a 25 to 30 year period.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1:
  - Option 2:
  - Option 3:

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**Commented [JK2]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

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- Option4:

- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

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[Check and Update]

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| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
~~**December 12**~~**January 15, 2016**

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Francisco Chinchon |
| **Subject:** | FW: Rate Mitigation |
| **Date:** | Thursday, January 12, 2017 1:52:31 PM |
| **Attachments:** | Debt-Financing GA - Sent to MO on 2017-01-10.pptx |

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**From:** Ronald Kwan
**Sent:** Thursday, January 12, 2017 11:42 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** FW: Rate Mitigation

Hi John, Emily,

Please review and let's discuss. Energy has asked to keep this tightly held and not discuss with, e.g., OPCD at this point.

Ron

---

**From:** Gadi Mayman
**Sent:** January-12-17 11:27
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
**Subject:** FW: Rate Mitigation

Here it is. I haven't looked at it, but wanted to send it to you right away

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**From:** Imbrogno, Serge (ENERGY) [mailto:Serge.Imbrogno@ontario.ca]
**Sent:** Thursday, January 12, 2017 11:26 AM
**To:** Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>
**Subject:** Rate Mitigation

Hi,

Attached is a rate mitigation idea we've been asked to work on related to financing the global adjustment. Ideally, it would provide immediate rate relief without having a fiscal impact. The amounts are scalable but we've provided some illustrative numbers.

Serge

Ontario

MINISTRY OF
ENERGY

# Debt Financing the Global Adjustment

January 10, 2017

*Working Draft for Discussion Purposes Only*

# Purpose

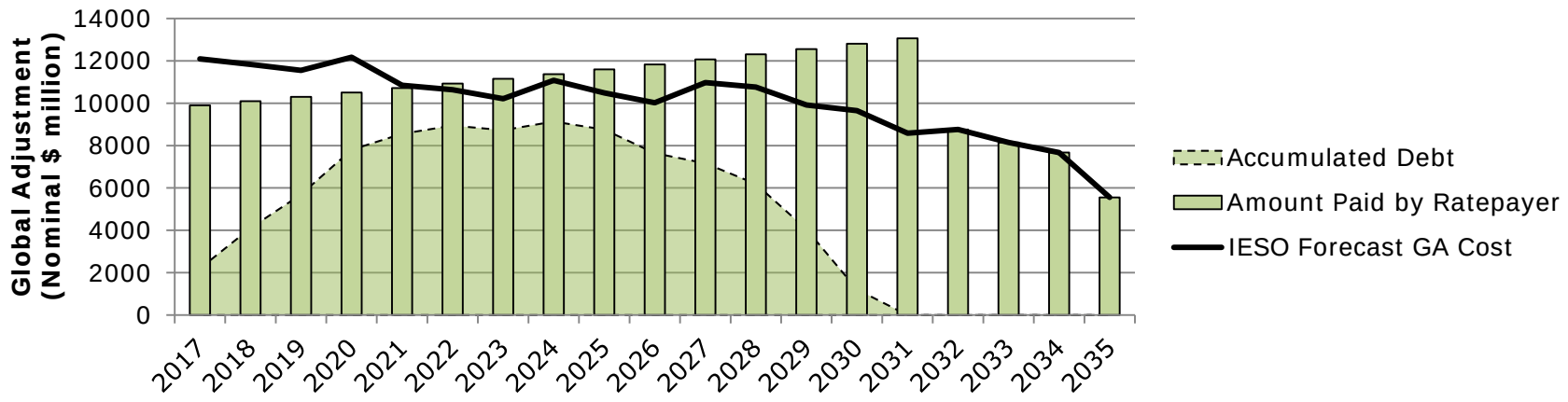
- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.

- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.

- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

# Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.




**Sample debt financing**: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

# Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

# Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

# GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

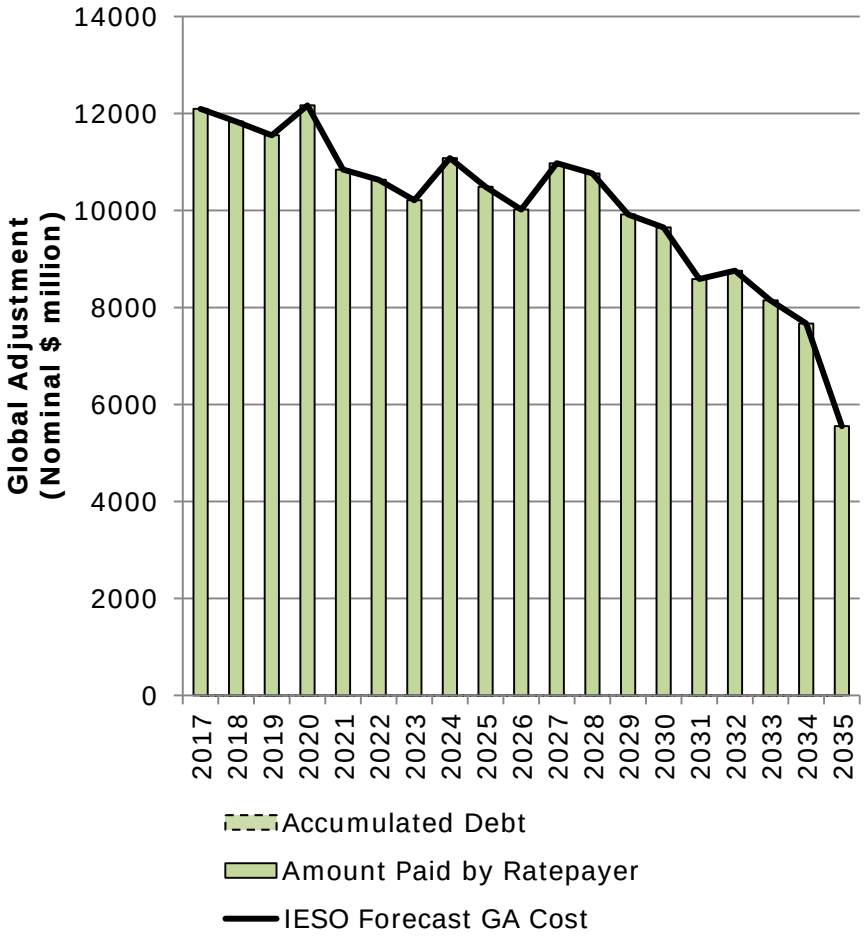
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

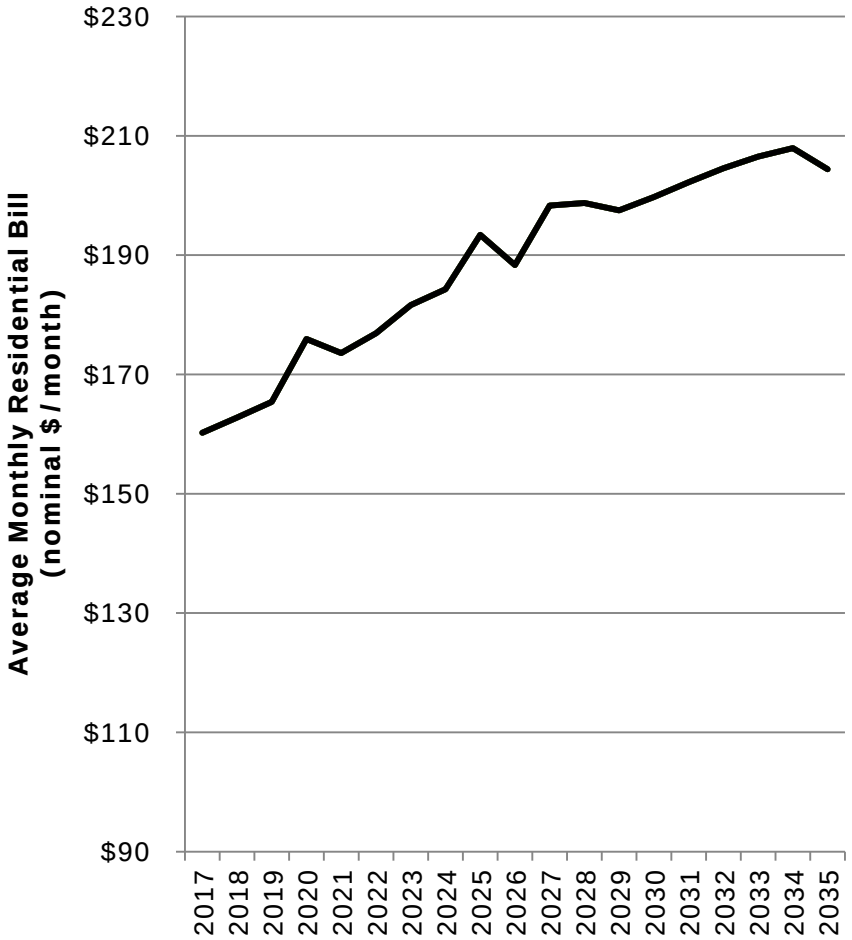
3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

# 1. Status Quo – Global and Residential Impacts

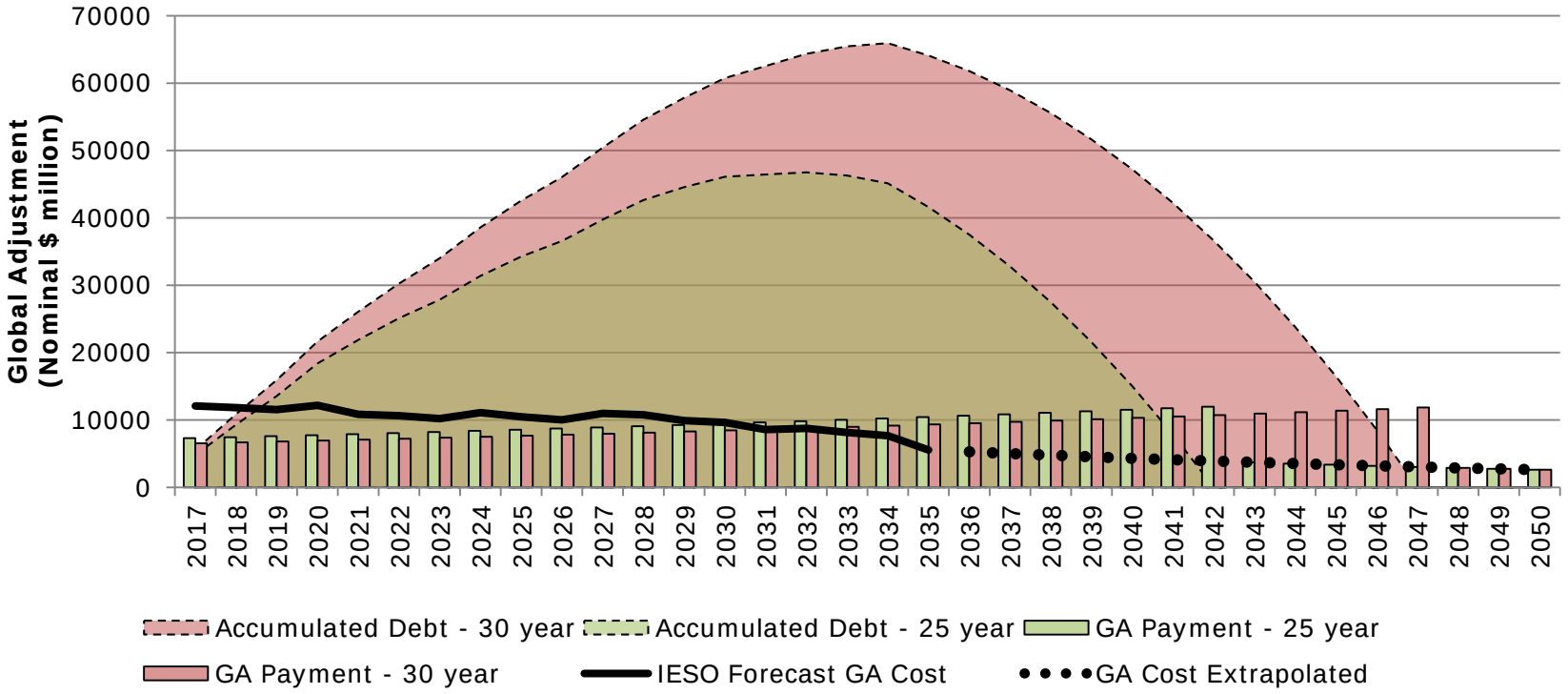
- Ratepayers continue paying the true cost of GA.



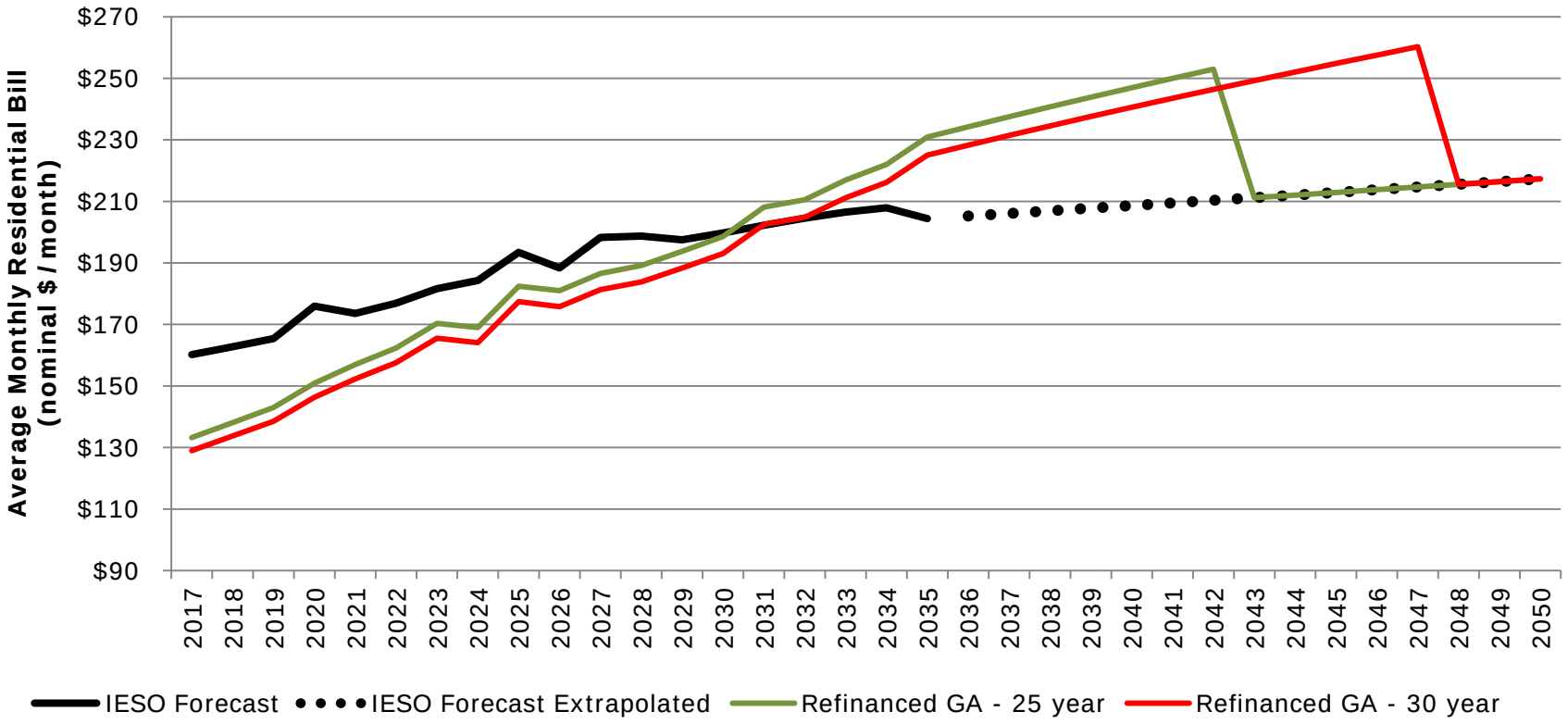
# 2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.




- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

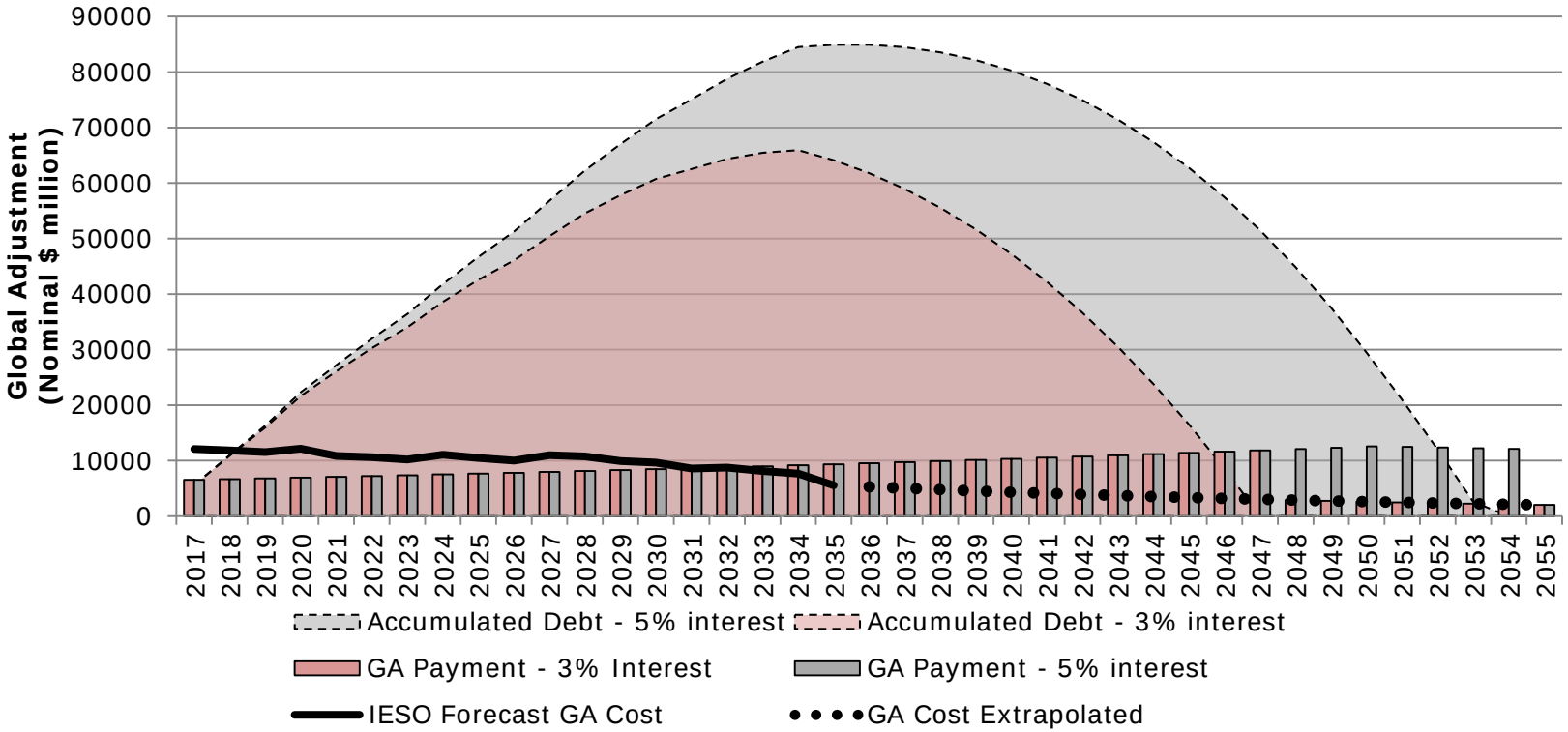
# 2. Maximize Short-term Cost Reduction – Residential Impacts




- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

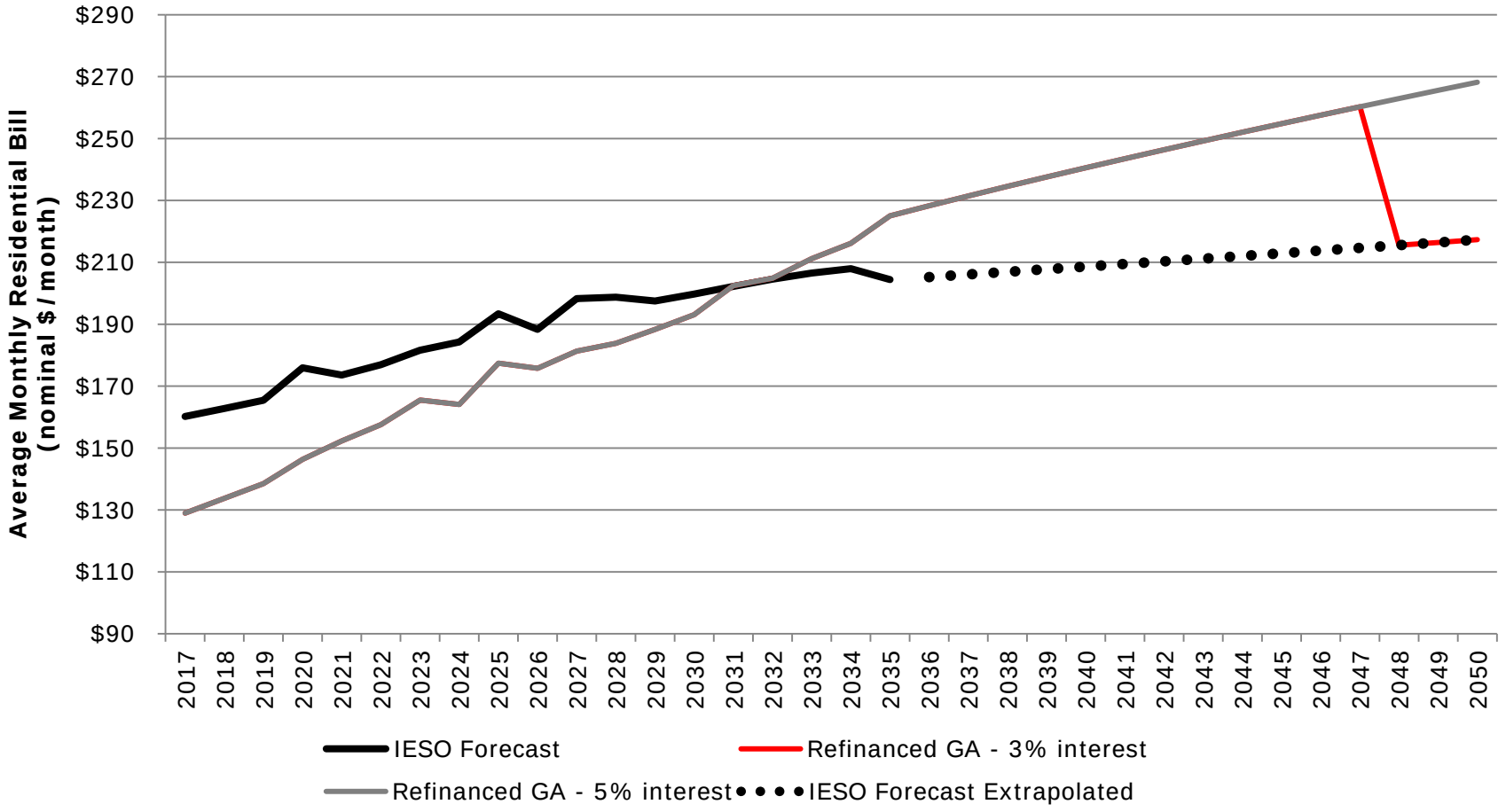
# 3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).




- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

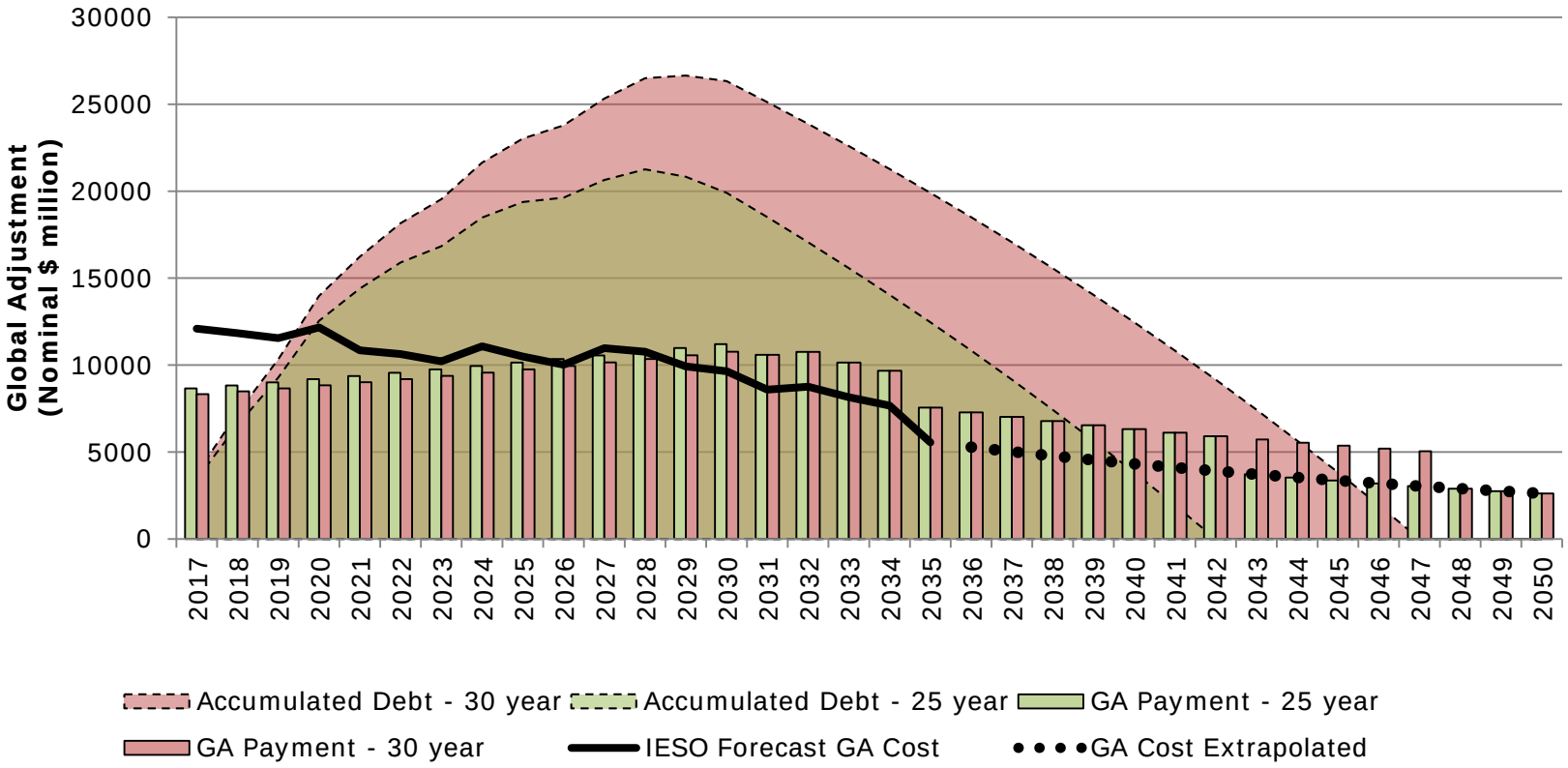
# 3. Interest Rate Risk – Residential Impacts




- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

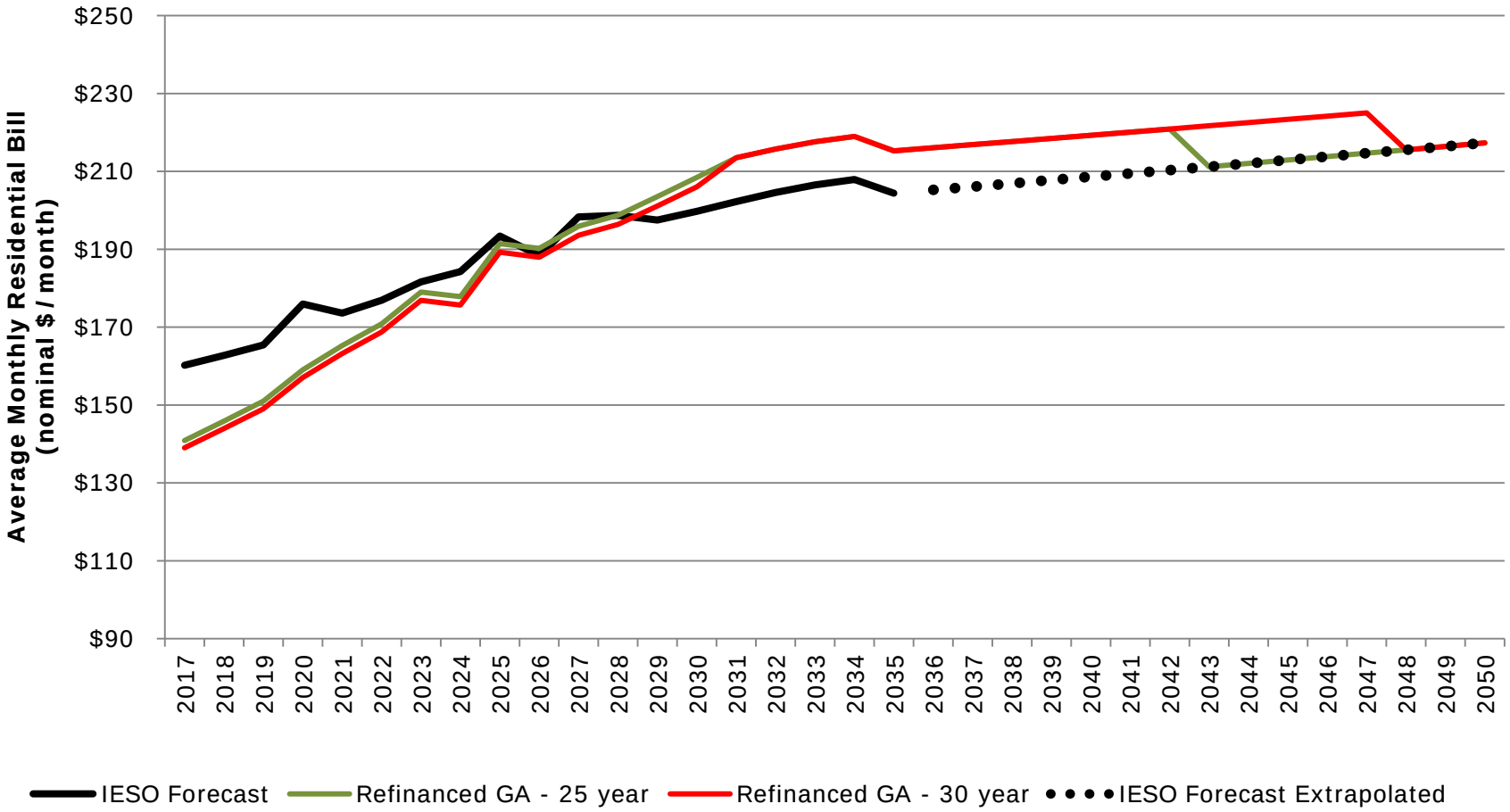
# 4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.




- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

# 4. Maximize Short-term Cost Reduction with Limits – Residential Impacts




- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan; Gavin He; Salman Qadir |
| **Cc:** | Adam Prokop |
| **Subject:** | FW: Rate Mitigation |
| **Date:** | Thursday, January 12, 2017 11:43:32 AM |
| **Attachments:** | Debt-Financing GA - Sent to MO on 2017-01-10.pptx |

Pls. have a look.

---

**From:** Ronald Kwan
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MINISTRY OF
ENERGY

# Debt Financing the Global Adjustment

January 10, 2017

*Working Draft for Discussion Purposes Only*

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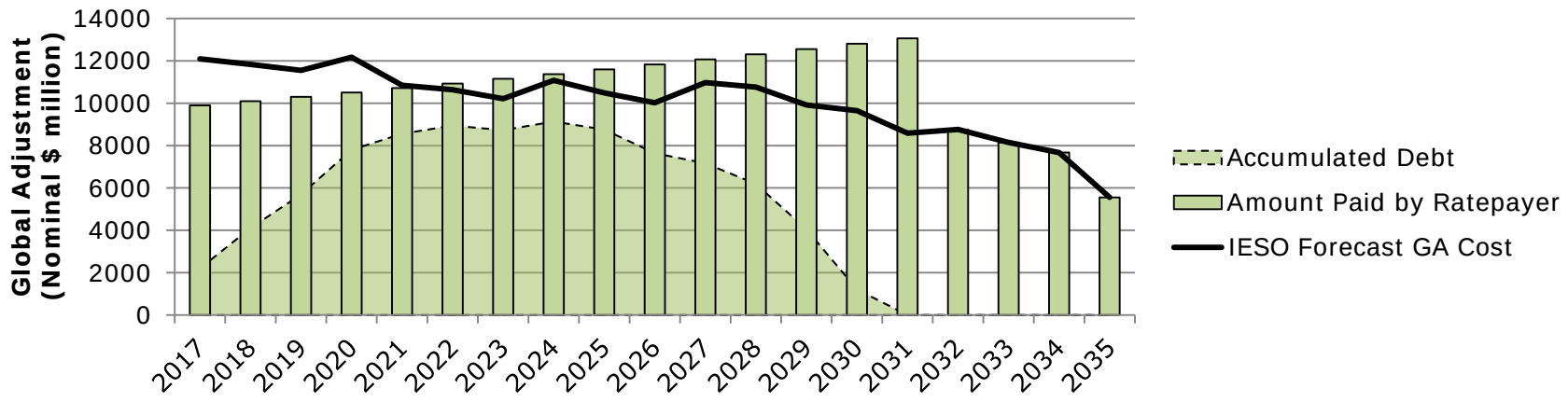


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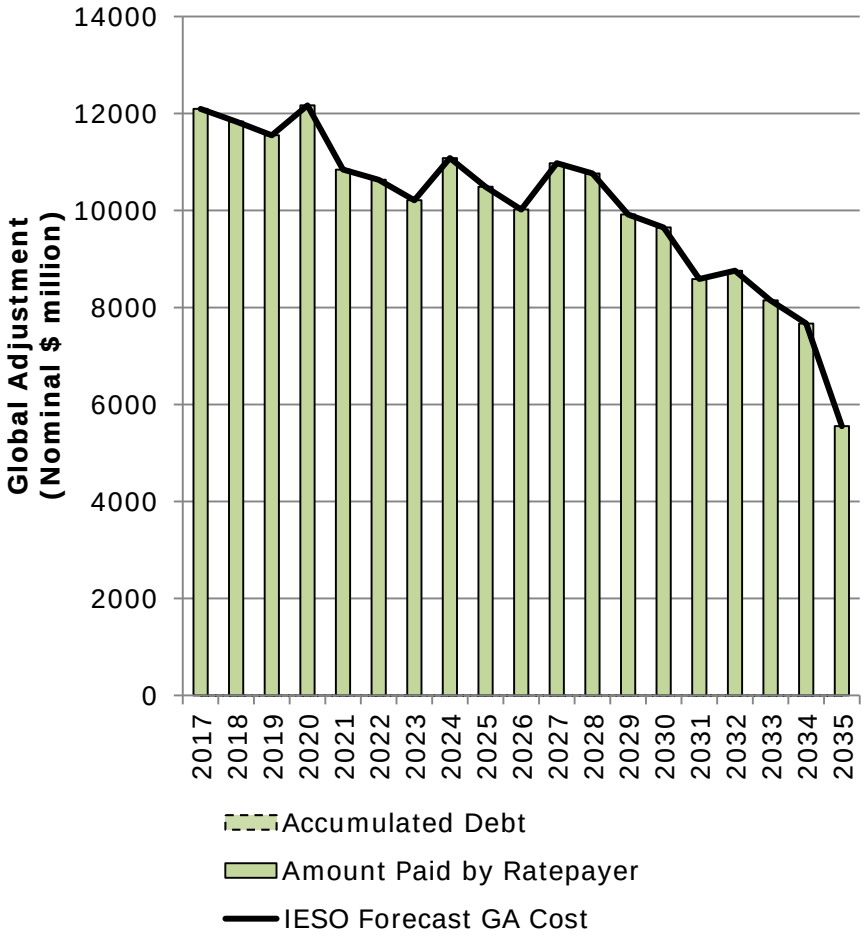


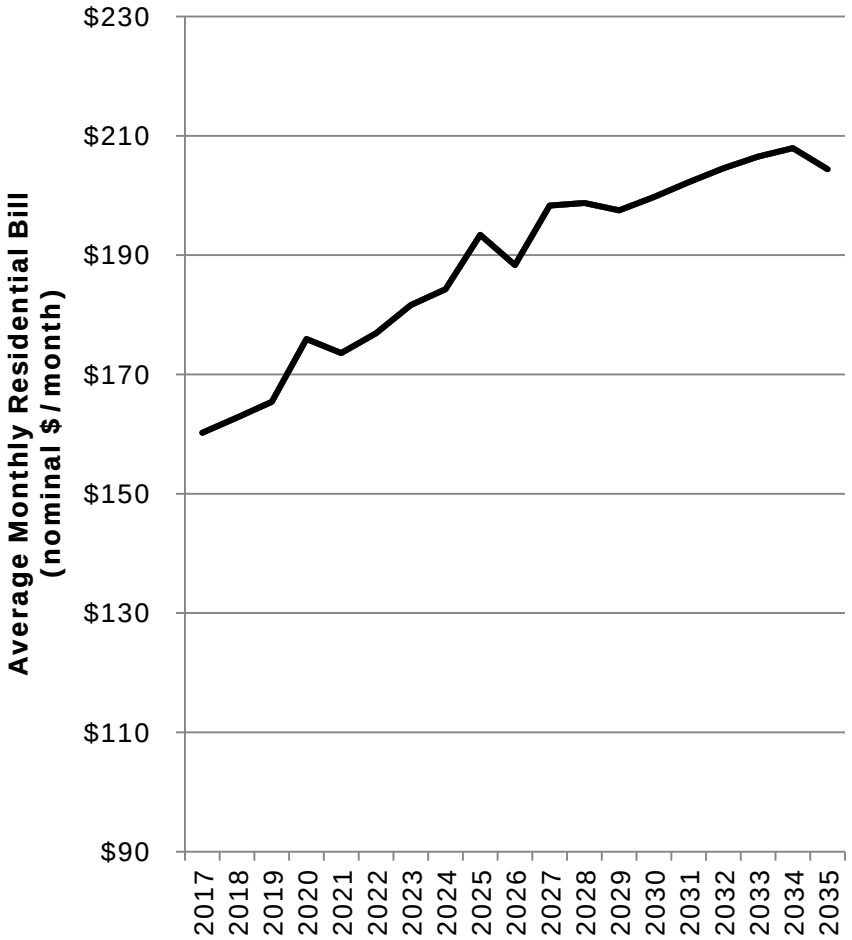

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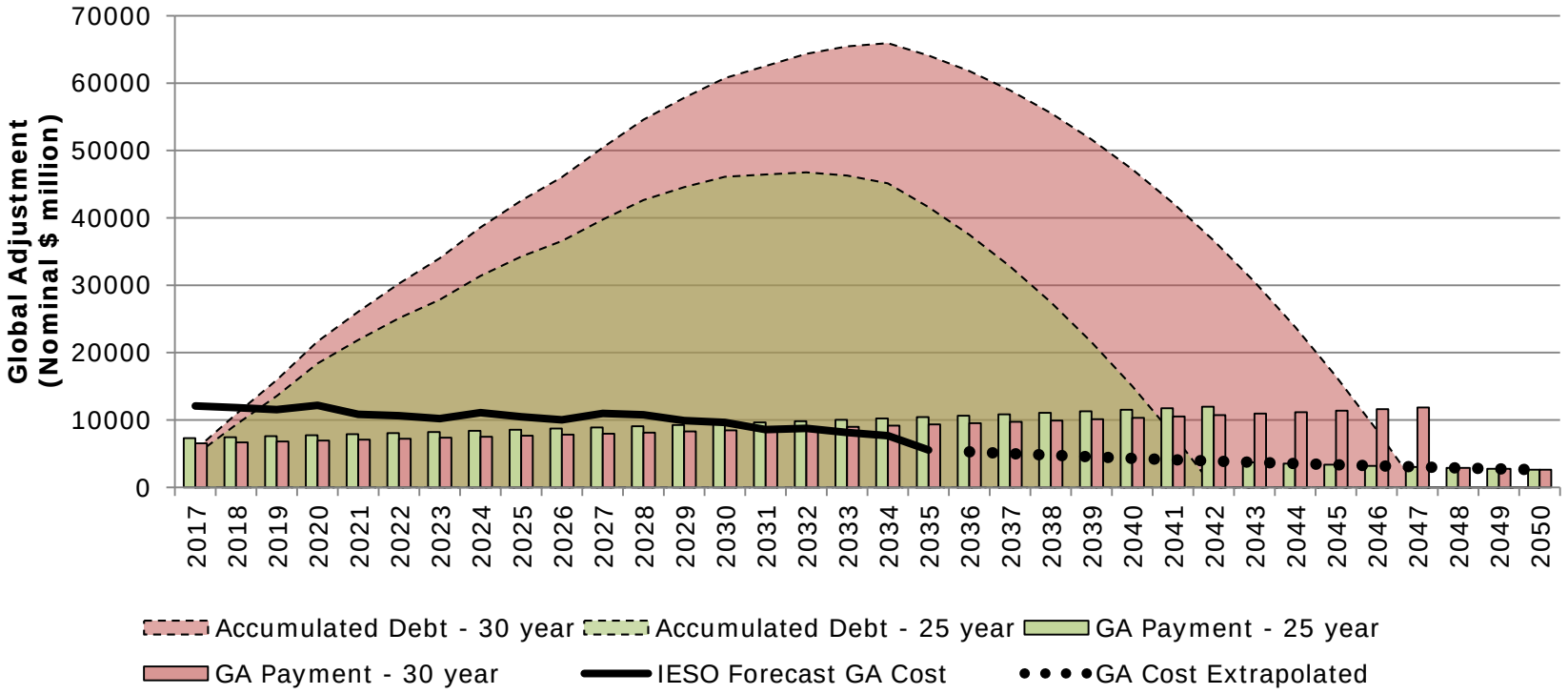


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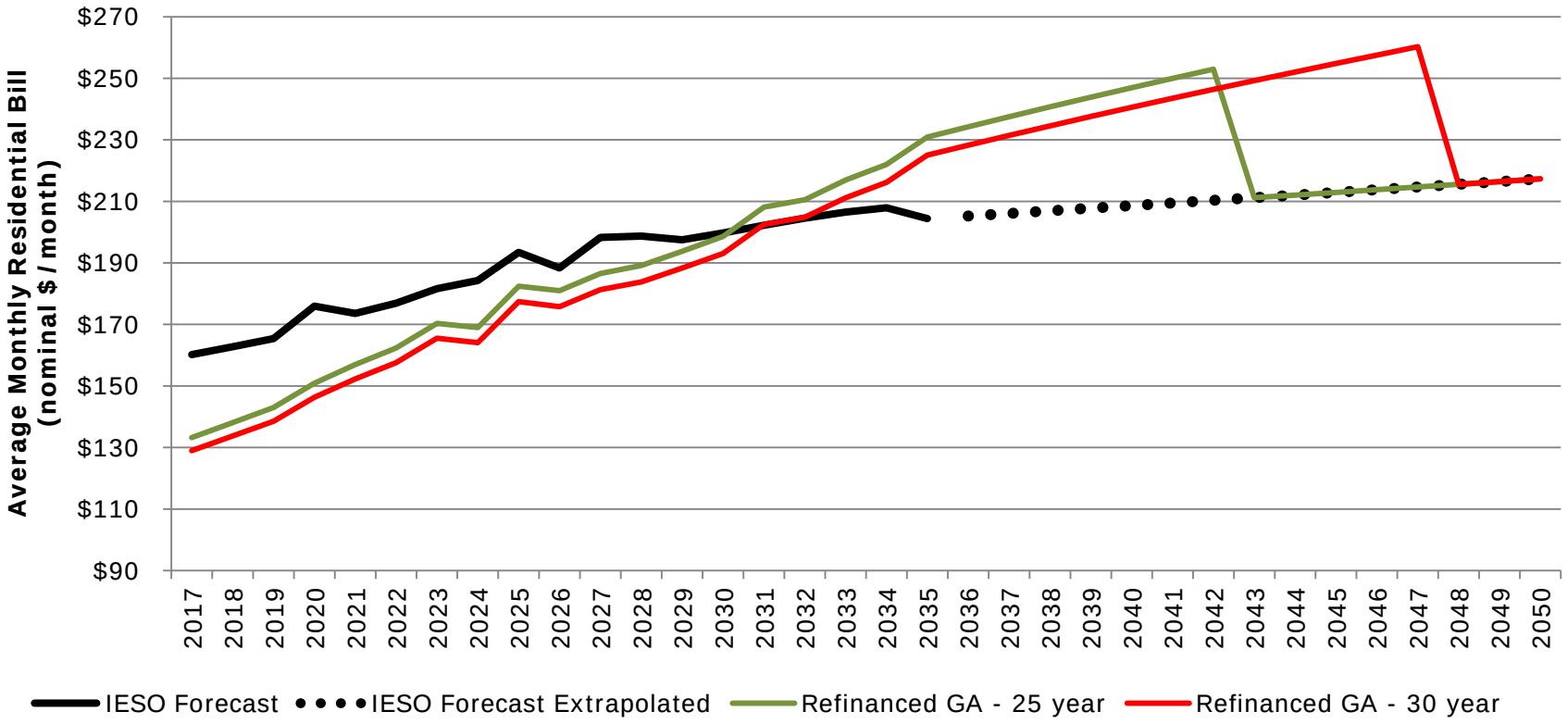


- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
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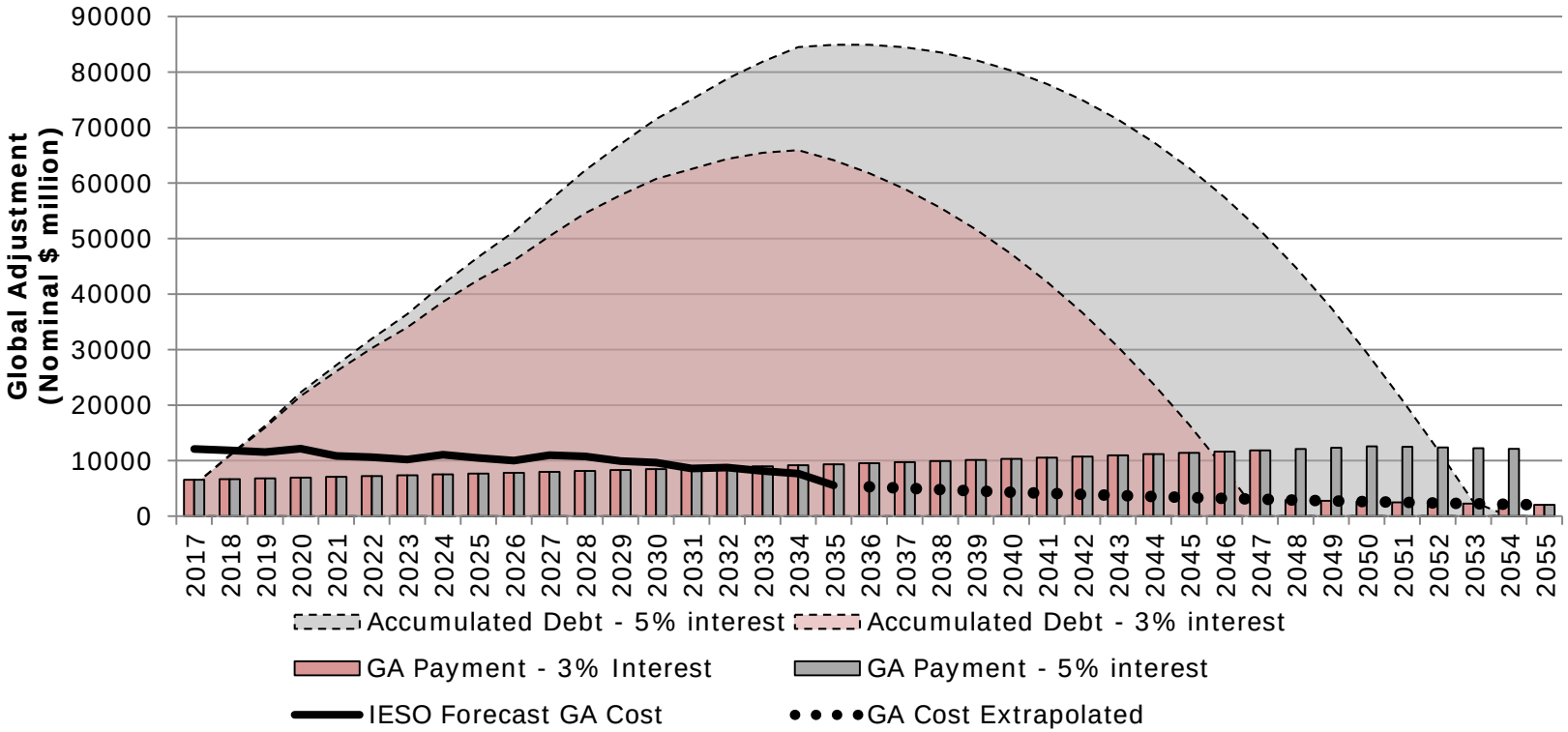
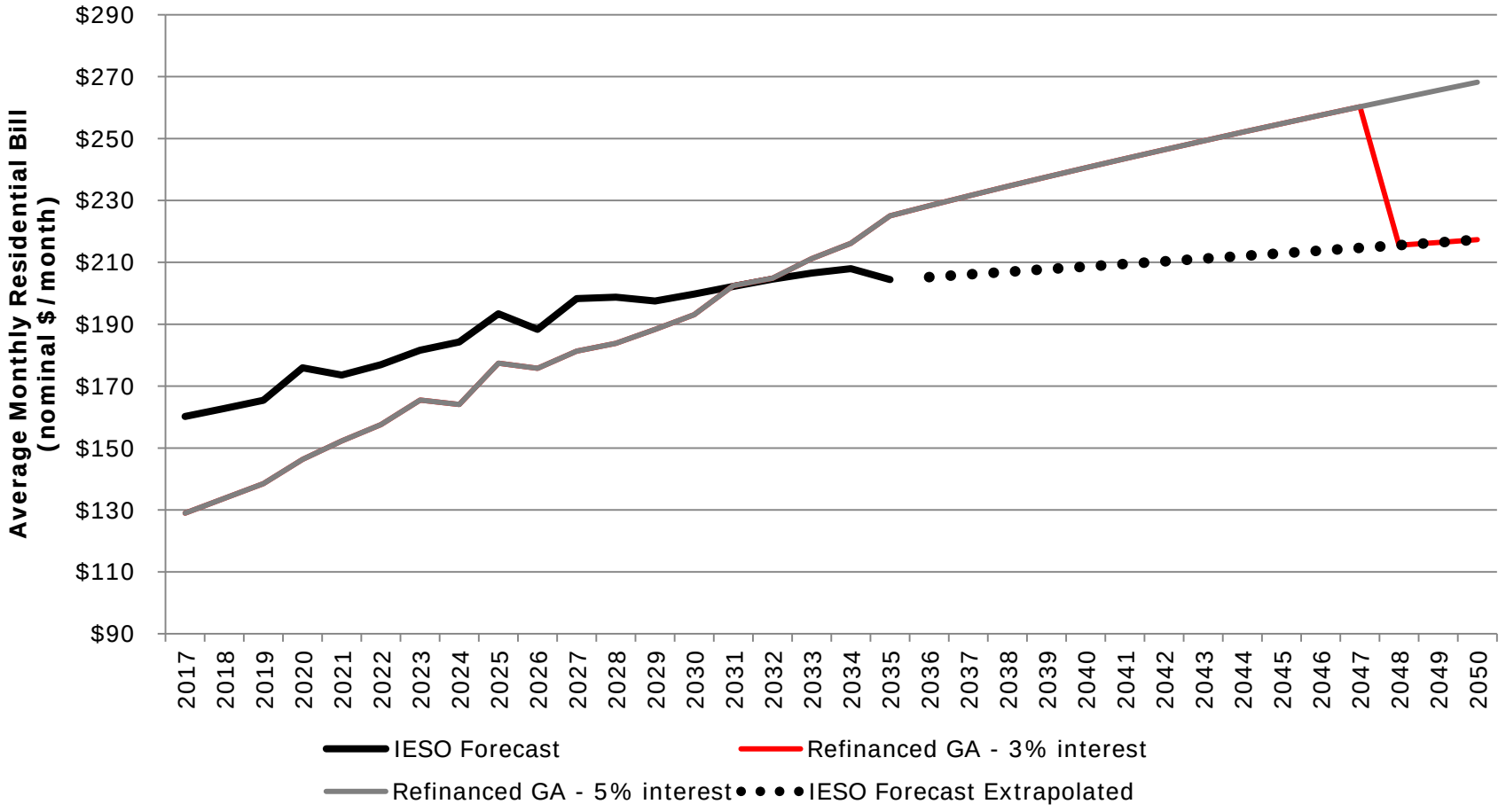
- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).




- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

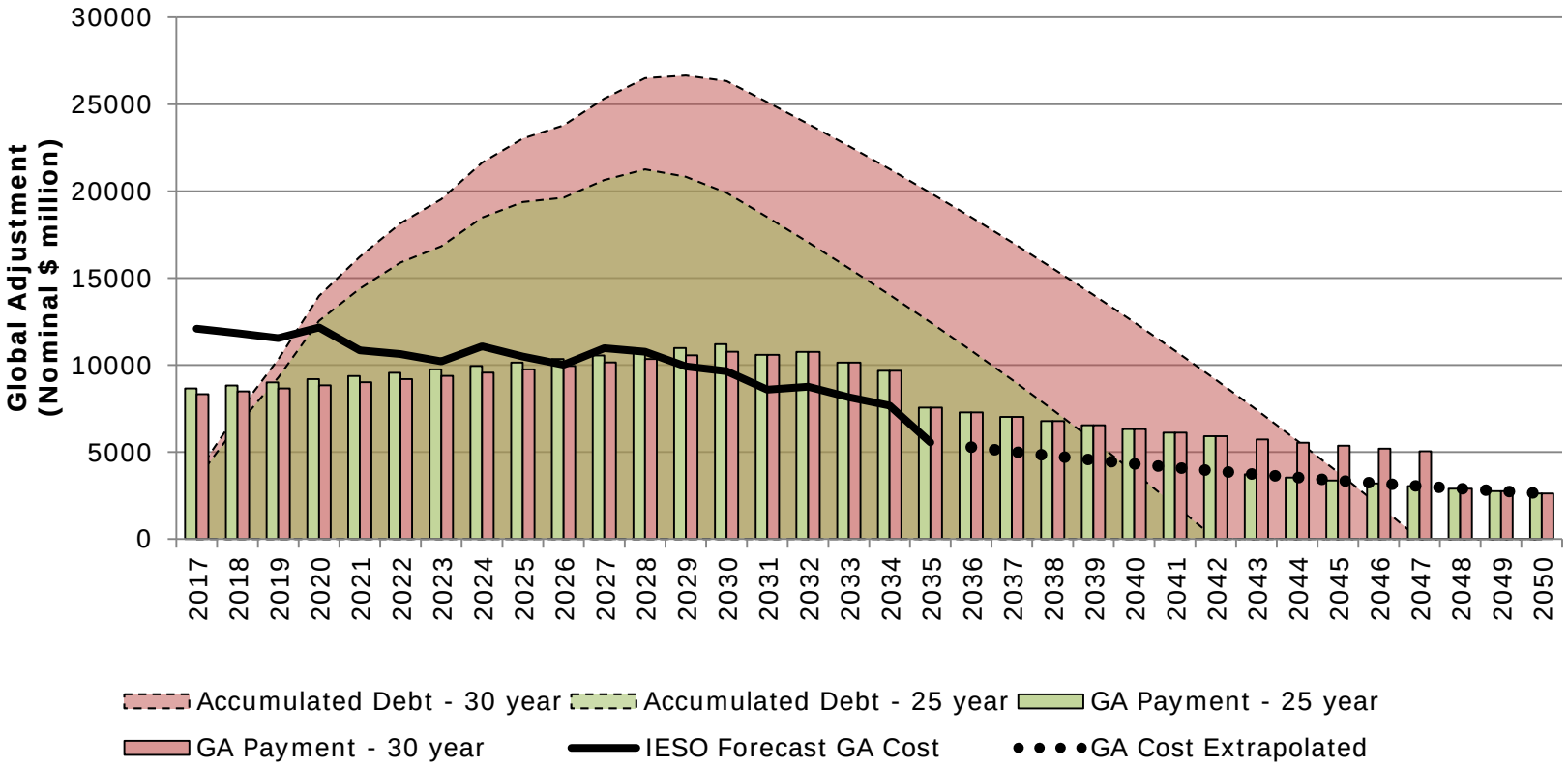
# 3. Interest Rate Risk – Residential Impacts




- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

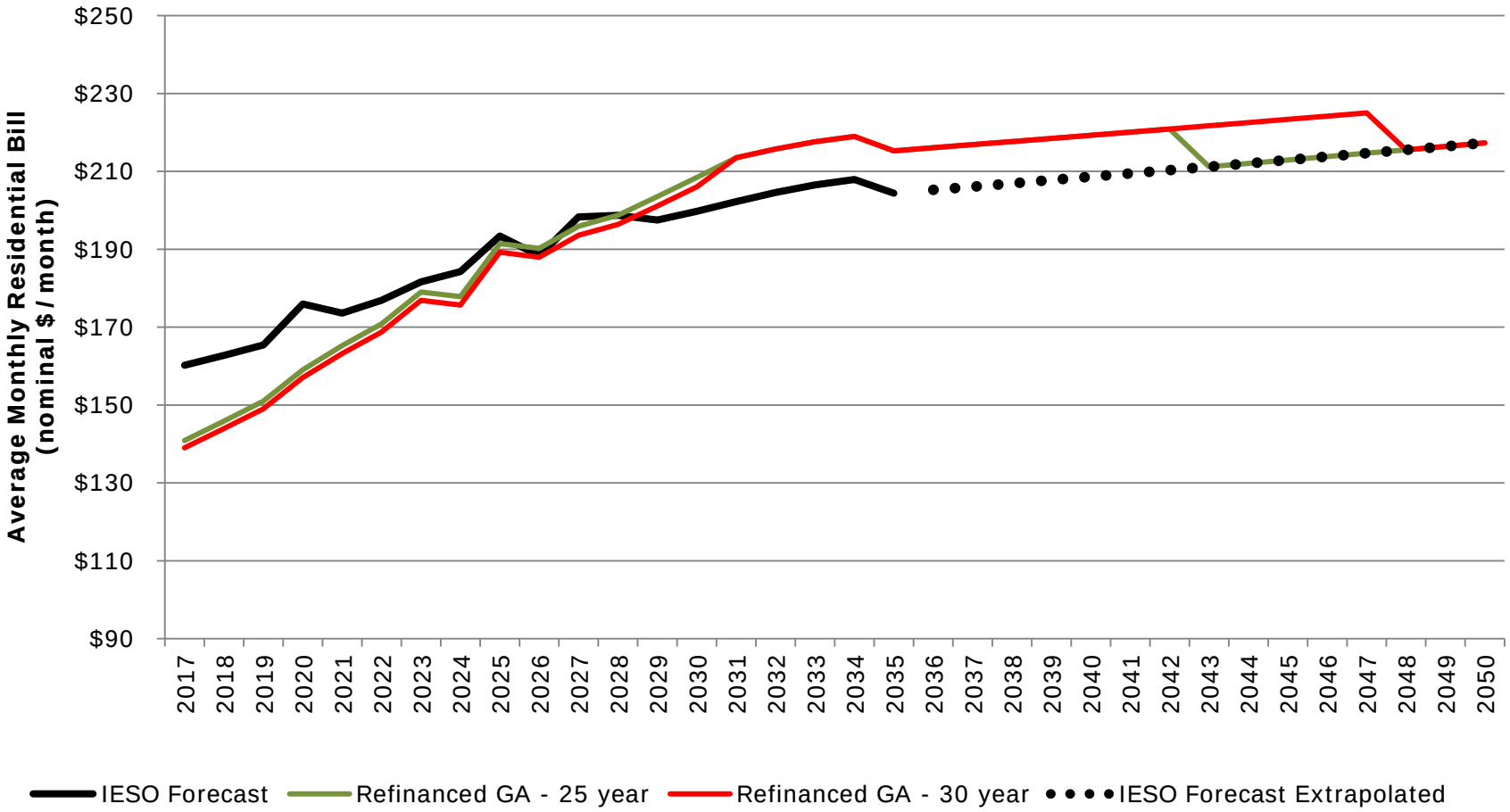
# 4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.




- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

# 4. Maximize Short-term Cost Reduction with Limits – Residential Impacts




- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | John Kim; Emily Kerr |
| **Subject:** | FW: Rate Mitigation |
| **Date:** | Thursday, January 12, 2017 11:42:22 AM |
| **Attachments:** | Debt-Financing GA - Sent to MO on 2017-01-10.pptx |

Hi John, Emily,

Please review and let's discuss. Energy has asked to keep this tightly held and not discuss with, e.g., OPCD at this point.

Ron

---

**From:** Gadi Mayman
**Sent:** January-12-17 11:27
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
**Subject:** FW: Rate Mitigation

Here it is. I haven't looked at it, but wanted to send it to you right away

---

**From:** Imbrogno, Serge (ENERGY) [mailto:Serge.Imbrogno@ontario.ca]
**Sent:** Thursday, January 12, 2017 11:26 AM
**To:** Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>
**Subject:** Rate Mitigation

Hi,

Attached is a rate mitigation idea we've been asked to work on related to financing the global adjustment. Ideally, it would provide immediate rate relief without having a fiscal impact. The amounts are scalable but we've provided some illustrative numbers.

Serge

Ontario

MINISTRY OF
ENERGY

# Debt Financing the Global Adjustment

January 10, 2017

*Working Draft for Discussion Purposes Only*

# Purpose

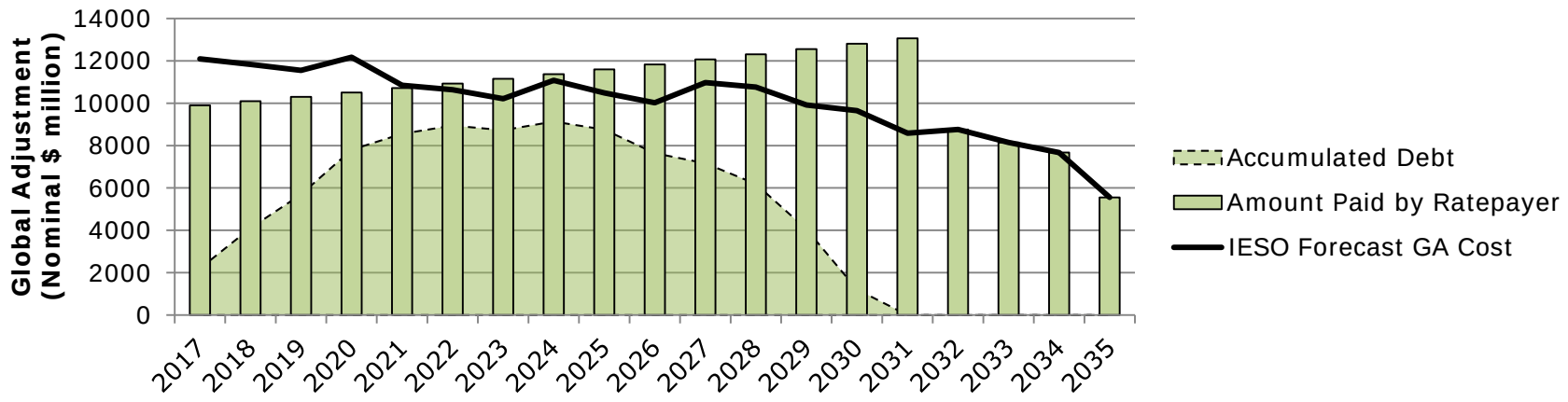
- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.

- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.

- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

# Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.




**Sample debt financing**: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

# Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

# Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

# GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

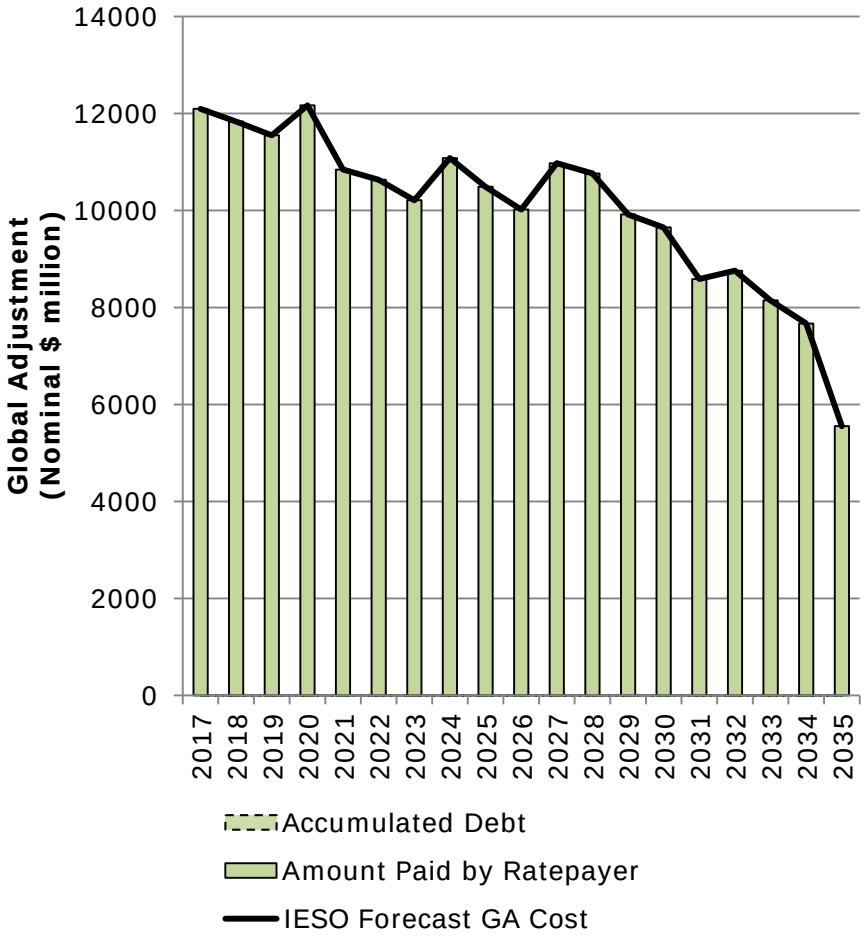
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

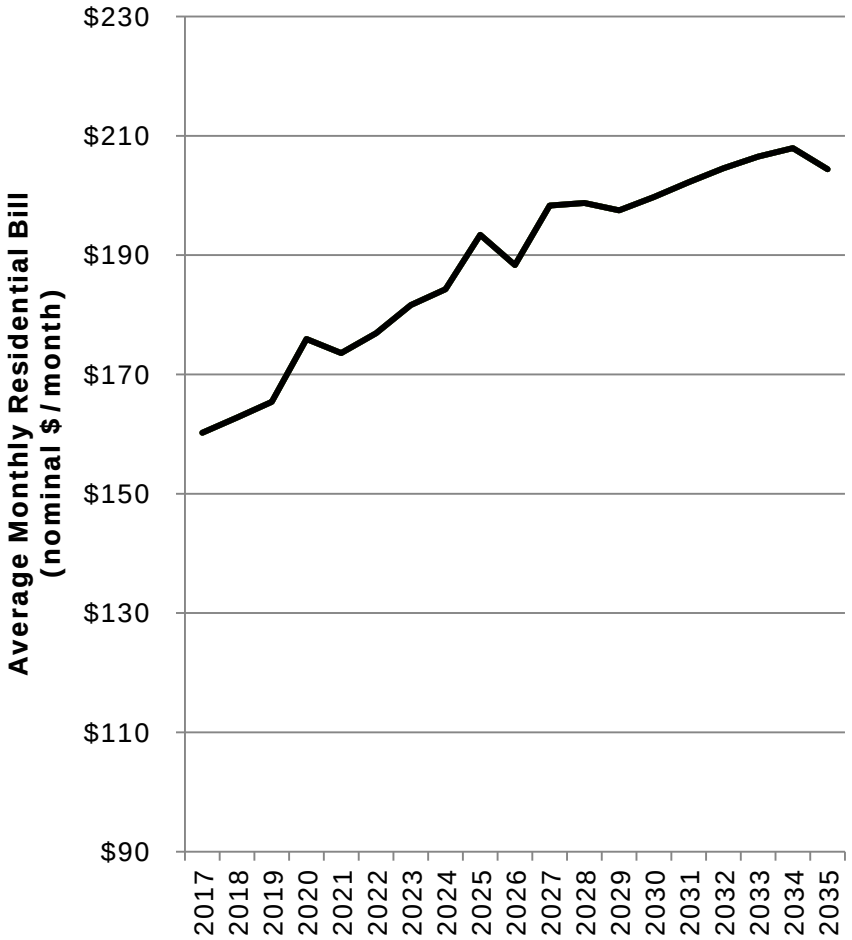
3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

# 1. Status Quo – Global and Residential Impacts

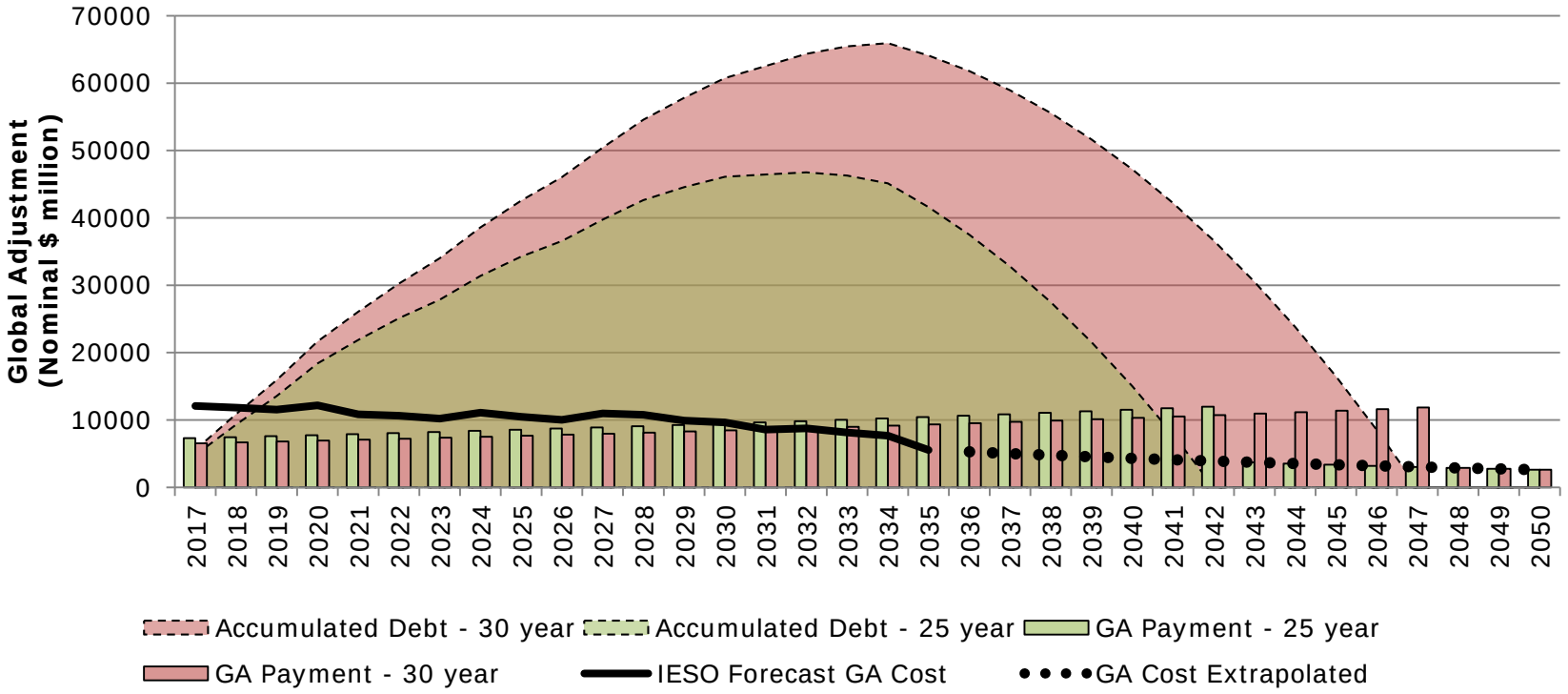
- Ratepayers continue paying the true cost of GA.



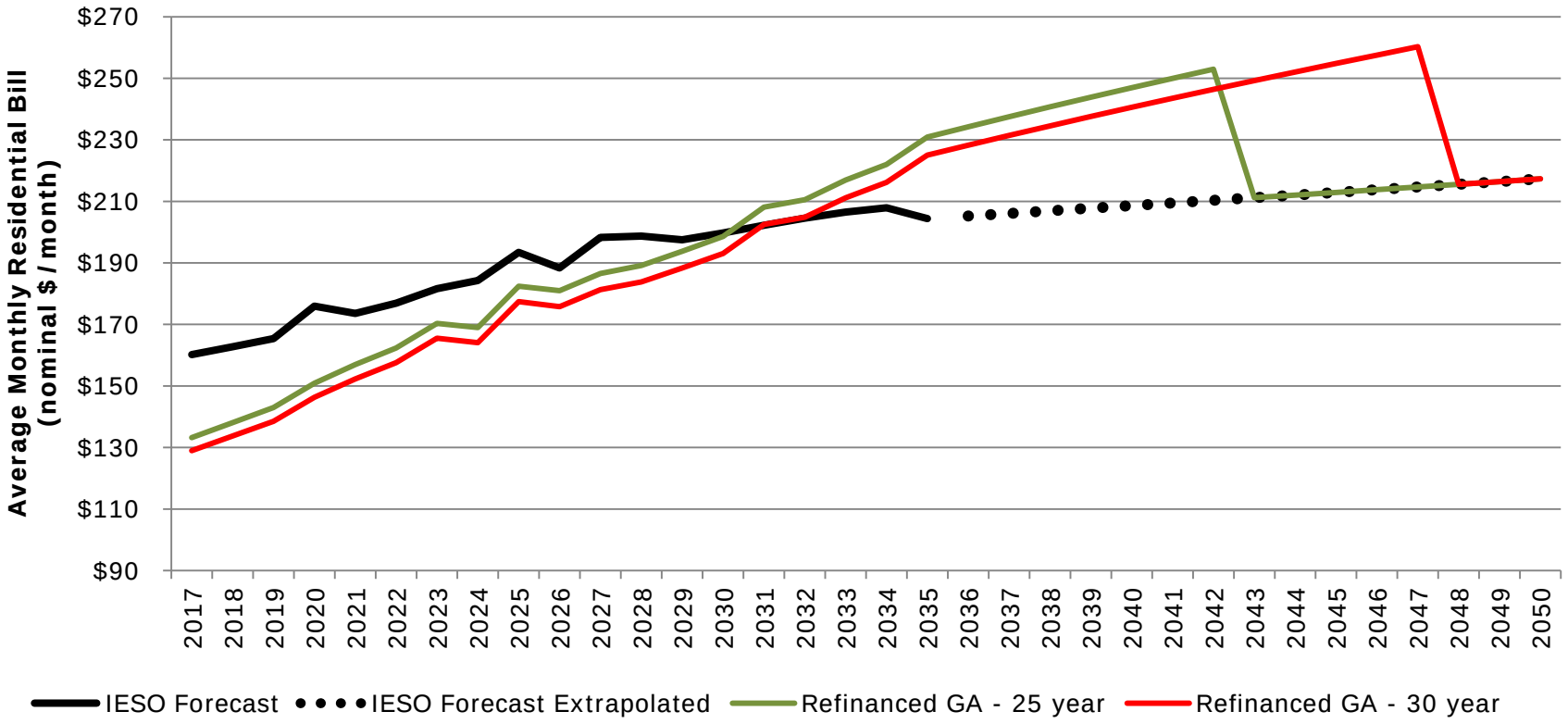
# 2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.




- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

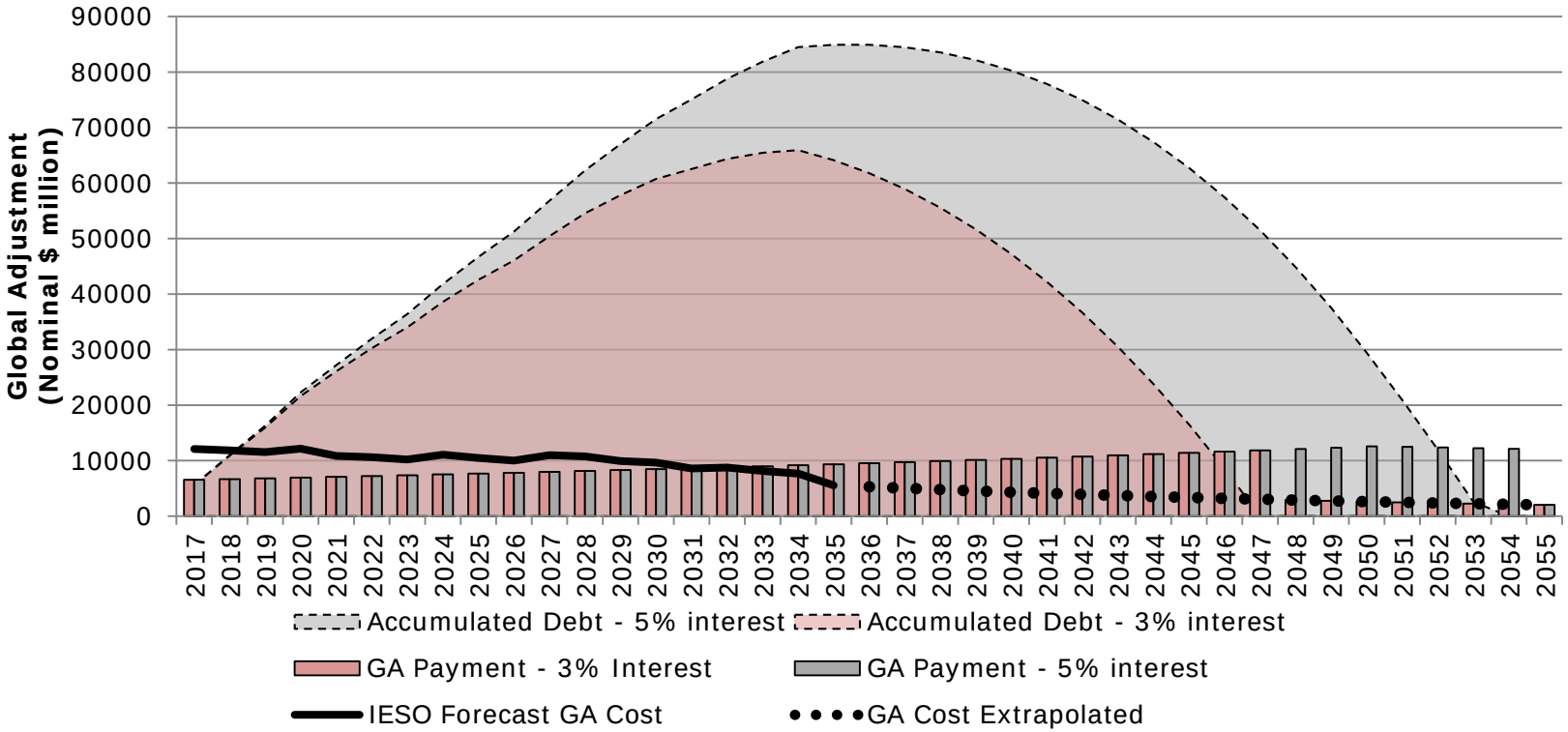
# 2. Maximize Short-term Cost Reduction – Residential Impacts




- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

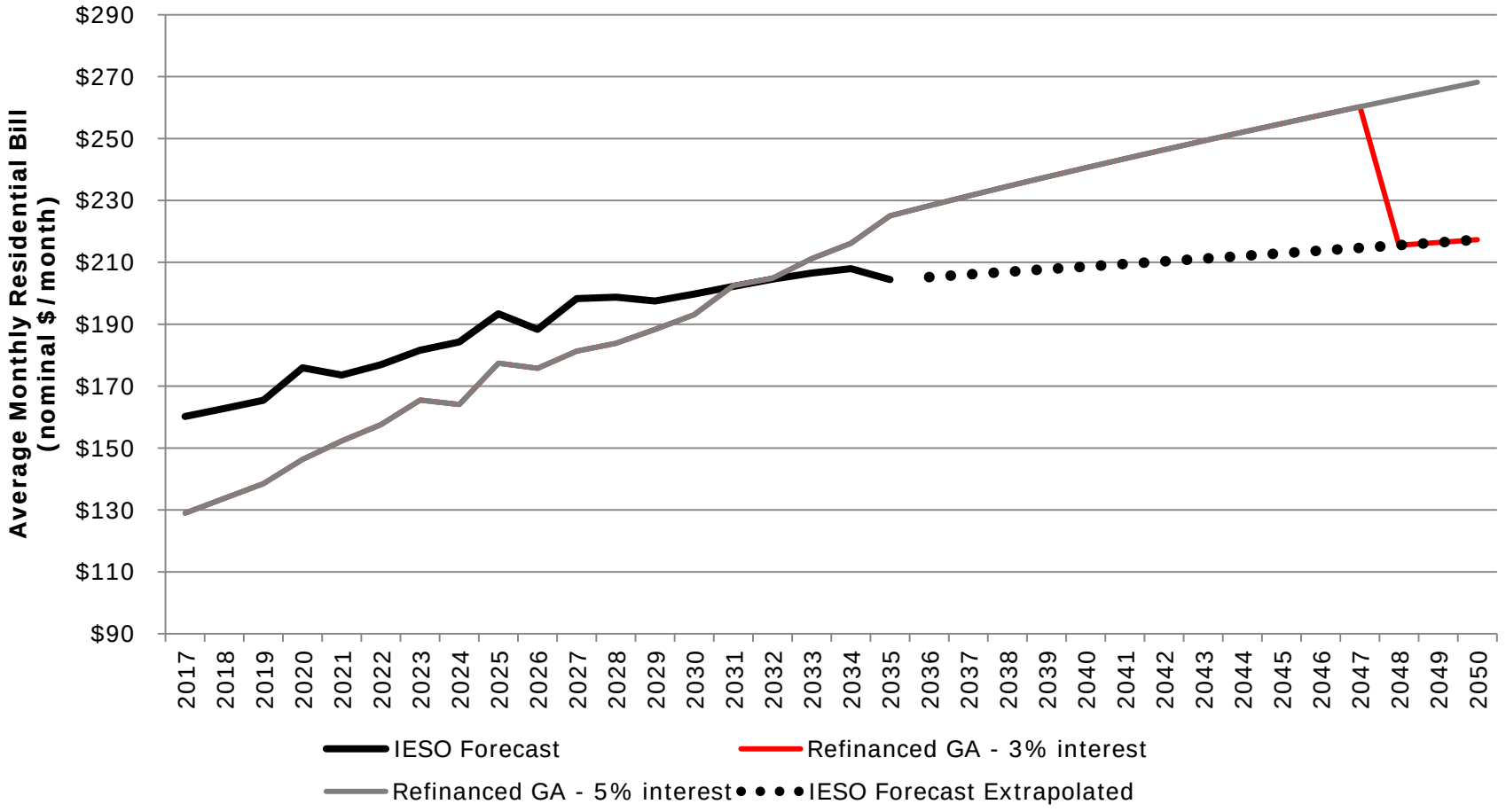
# 3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).




- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

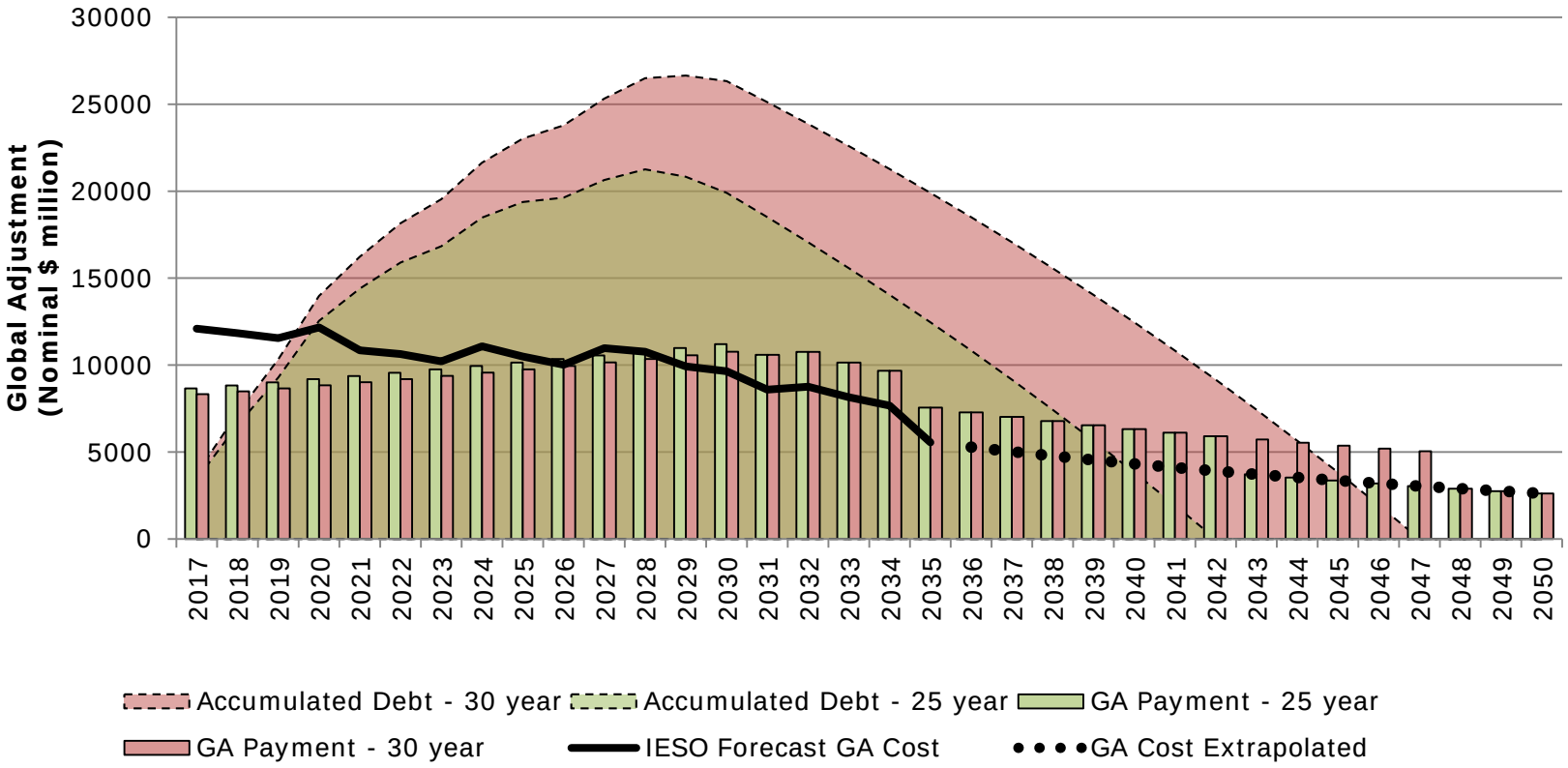
# 3. Interest Rate Risk – Residential Impacts




- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

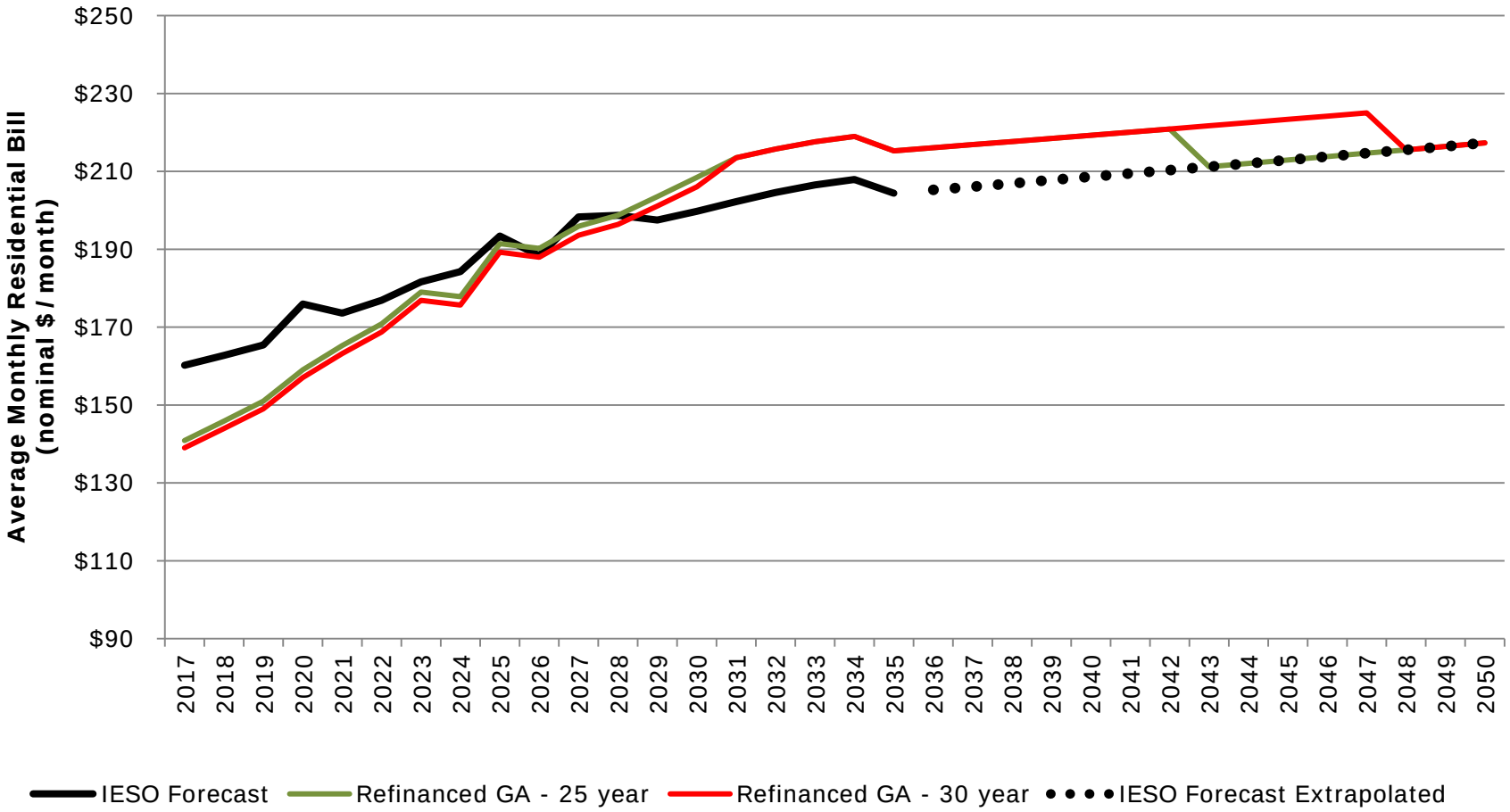
# 4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.




- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

# 4. Maximize Short-term Cost Reduction with Limits – Residential Impacts




- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan; Gavin He |
| **Subject:** | FW: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 10:00:38 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v7 (CEFD).docx<br>ATT00001.htm<br>Proposed Initiatives to Transform Ontarios Electricity Sector 20170113_CEFD.pptx<br>ATT00002.htm |

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FYI.

Hoping to finalize on our end by early afternoon…..Emily might have other comments.

I think what things need to be checked against the updated deck, as well.

John.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 9:59 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John, Emily,

I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.

I also made some edits to Energy's slides but not sure those are needed.

Thanks,

Francisco

> -----Original Message-----
> From: John Kim
> Sent: Saturday, January 14, 2017 11:45 PM
> To: Emily Kerr <Emily.Kerr@ofina.on.ca>
> Subject: RE: Rate Mitigation
>
> Hi Emily,
>
> Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.

Thanks,

John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>

Sent: Saturday, January 14, 2017 8:16 AM

To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)

Subject: Fw: Rate Mitigation

Good morning,

Attached are materials for Monday's rate mitigation meeting.

Keley

Original Message

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>

Sent: Saturday, January 14, 2017 7:49 AM

To: Orsini, Steve (CAB)

Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

Hi Steve,

Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility** | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| **Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time** | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value (share price) and impact fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |

| | |
|---|---|
| | • In the case of projects located in First Nation territories it could have an upfront fiscal impact if Province is not able to amortize those projects (TBC with OPCD).<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a windfall. It was fiscally neutral, it represented revenue to OEFC and an expense to Hydro One.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates<br>• OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding th Global Adjustment (GA) |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |

**Detail on Proposals**

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.

  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income (revenue) to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income (expense) of Hydro One.
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- Having OEFC help implement this measure may require introducing changes to OEFC's objects as is legal mandate is to help reduce and pay down stranded debt.
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.

**Commented [JK1]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

**Commented [JK2]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.

- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of options to delay recovery of part of the Global Adjustment (GA) by debt financing and recovering over a 25 to 30 year period.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1:
  - Option 2:
  - Option 3:
  - Option4:
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

[Check and Update]

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**~~December 12~~January 15, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

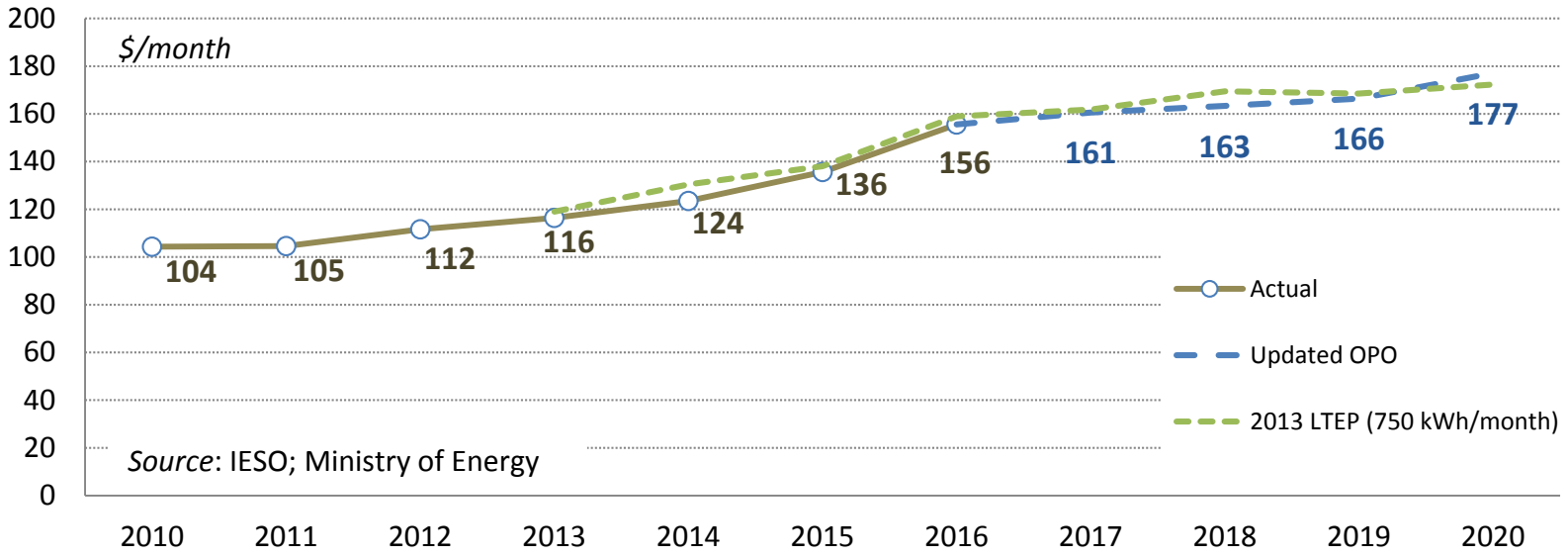
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast*




**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Broad Policy Themes / Rationale

- Support the continued reduction in the differential across distribution rates (as charged by Local Distribution Companies) across the Province through the potential enhancement of Rural or Remote Electricity Rate Protection, (RRRP). In order to not increase regulatory costs to customers as a result, this program can be moved to the tax-base.
- Provide a greater focus and support on lower income Ontarians by funding the Ontario Electricity Support Program (OESP) through the tax-base, as well as enhancing the support available through the program.
- Amortize electricity conservation and demand management (DM) programs over 15-years to provide lower costs for electricity consumers.
  - Alternatively, pay for conservation/DM programs through the tax-base and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties and expansion of natural gas to underserved areas (i.e., rural and remote communities), etc.
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" an alternative rate plan, based on a flat electricity rate, as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time. Also give consumer greater transparency with respect to electricity costs by providing more details regarding the Global Adjustment (GA).
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers, a benefit of $7/MWh.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 1.53 | 1.58 | 1.61 | 1.66 | 1.70 | 1.74 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.57 | 0.79 | 0.98 | 1.13 | 1.29 | 1.44 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC Efficiencies/Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.71 | 0.89 | 1.08 | 1.22 | 1.35 | 1.24 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. v Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 2.04 | 2.10 | 2.15 | 2.22 | 2.27 | 2.32 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.76 | 1.05 | 1.31 | 1.51 | 1.71 | 1.92 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC Efficiencies / Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.59 | 0.74 | 0.89 | 1.01 | 1.12 | 1.03 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Taxpayer Funded Electricity Price Mitigation

| *$M* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. Fund RRRP through the Tax-Base* | - | 666 | 684 | 700 | 719 |
| 2. Fund OESP through the Tax-Base | | | | | |
| a. Enhance OESP Benefit | | 162 | 226 | 279 | 322 |
| b. Expand OESP Eligibility | | TBD | TBD | TBD | TBD |
| 3. Conservation Funding Options | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | - | - | - | - | - |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | 100 | 390 | 390 | 390 | 390 |
| 5. Dedicate Departure Tax | 260 | 260 | 260 | 260 | 260 |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC Efficiencies / Rates | - | - | - | - | - |
| c. OPG – Operational Efficiencies | - | - | - | - | - |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers) | 110 | 450 | - | - | - |
| 9. Extend the Length of Existing Wind/Solar Contracts at Lower Prices | - | - | - | - | - |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| Fund Conservation Programs Through The Tax-Base | 154 | 632 | 649 | 567 | 568 |
| Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy
**Note:** *Assumes RRRP enhancement to reduce distribution rates to $30 for LDCs and **Assumes increase OESP credit by 50%.
Not included in chart is additional $18M/year to fund potential First Nations rate program through the Tax-Base.

# Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are aimed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

- Given that these programs focus on promoting equity between different areas of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.
  - These enhancements would also work in conjunction with the Ontario Energy Board's focus on reducing LDC costs outlined in option 6b.

# 1. Rural or Remote Rate Protection (RRRP) Expansion

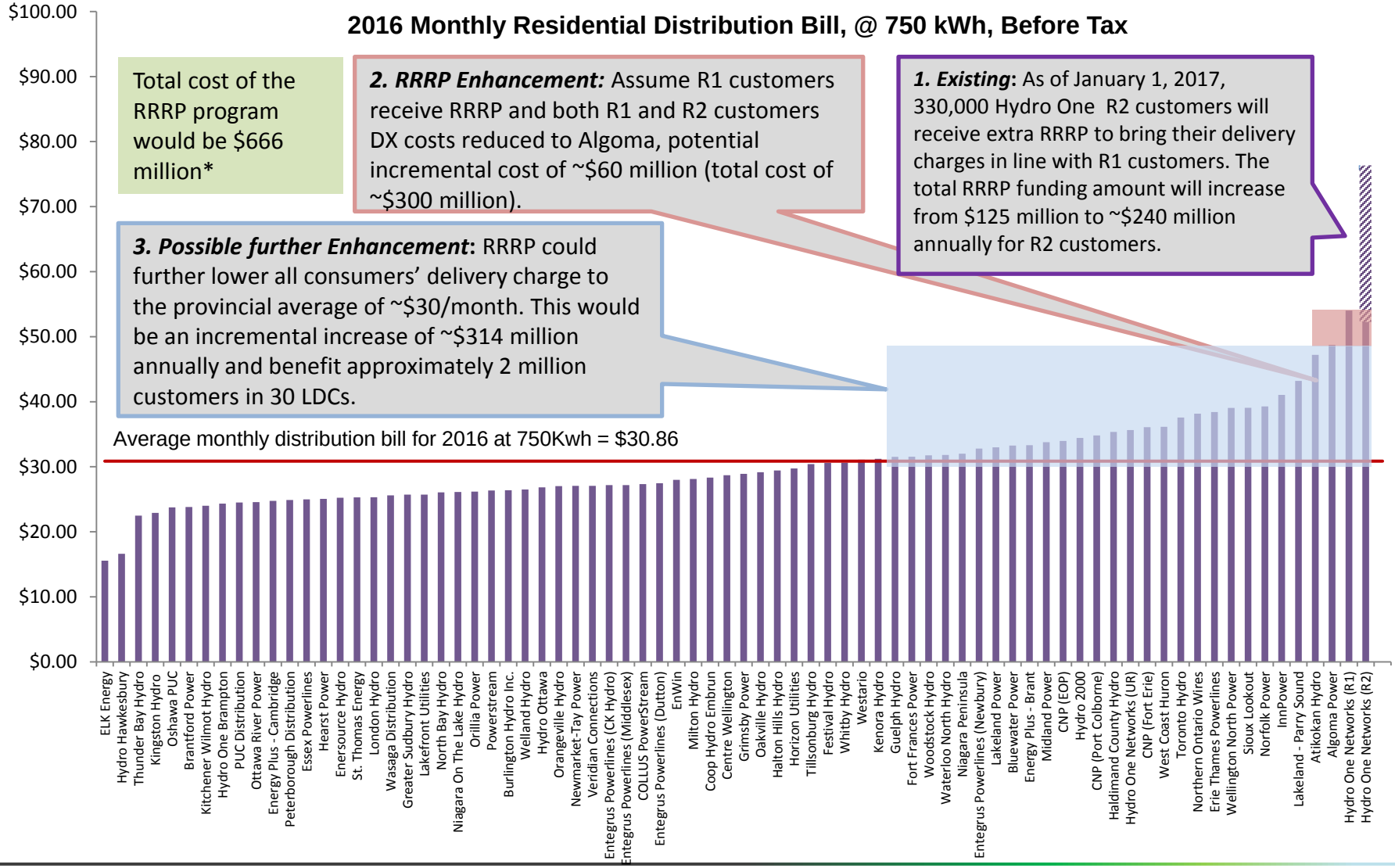
- The Rural or Remote Rate Protection (RRRP) program supports the most costly-to-serve distribution customers in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
  - Costs to these Hydro One customers are higher than average because of their relatively low density. The OEB mandates that they pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies.
  - To mitigate these costs, the RRRP was recently enhanced to help lower the bills of Hydro One's R2 customers to around those of its R1 (medium density) customers.
- Although other LDCs do not have medium- and high-density rates, there is a wide range of distribution costs between LDCs. The RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - Could be done on its own or as part of exploring an Ontario-wide uniform "postage stamp" delivery rate.

**Considerations**

- RRRP will be enhanced for R2 customers on January 1, 2017 to have their costs reduced to approximately R1 distribution costs levels. The RRRP could be further enhanced to include R1 customers, and have R2 and R1 customers reduce their costs down to Algoma (see next slide). This would cost $300 million in the first year (and would adjust year over year).
- If there was a desire to reduce costs for all LDCs, a simple average of distribution cost before tax, across all rate zones is $30.86 per month, for a residential customer consuming 750 kWh per month.** Bringing all delivery rates down to this average would cost approximately $500 million for the first year, with escalation in line with average distribution rate increases.
  - This assumes Hydro One R2 consume 1,200 kWh and H1 R1 customers consume 1,000 kWh per month.
- If all customers were brought down to the average costs (see the chart on the next slide for more detail):
  - It is assumed that residential customers with bills less than the provincial average see no change;
  - Majority of the enhanced benefit would go to Hydro One R1 and Toronto Hydro customers; and
  - Mechanism to ensure that LDCs continue to be motivated to achieve efficiencies would need to be designed (see section 4).
- Enhanced RRRP support may be best provided from the tax-base, because if funded from the rate-base, it would increase the costs for all customers who may argue that it is unfair that they are being asked to pay more to subsidize those in other LDCs.
- In conjunction with using the tax-base to reduce delivery charges to the provincial average, the OEB could be asked to explore moving to a province-wide "postage stamp" delivery rate that would be the same across the province to be implemented over time.
  - Could be "winners and losers" as delivery rates less than the average would go up in a postage stamp model;
  - A "postage stamp" model could help incent LDC consolidation.

**Note:** This is based on preliminary estimates and the amount will fluctuate on monthly consumption from customers and LDCs have different customer base with different consumption types.

# 1. Rural or Remote Rate Protection (RRRP) Expansion (cont'd)




*Note: this includes the ~$50M currently supporting Algoma Power and Hydro One Remotes.*

# 2a. Enhance Ontario Electricity Support Program (OESP) Benefit

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills. The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices and at launch, it was estimated ~560,000 families could be eligible and some 261,000 applications have been submitted.

- The OESP program benefits could be increased across the board by 50%, which would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).

- The OESP program could also be further enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).

**Considerations**

- If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible.
  - At the time of program design, advice was given that a 40-50% participation rate would be high for an application-based program delivered through electricity bills.
  - The province would need to work with LDCs if the rebate was to appear on electricity bills rather than be delivered via the income tax system (e.g., through the Trillium Benefit).

# 1 & 2a. Fiscal Impacts of RRRP, OESP and First Nation Rate

- Table below shows estimates of program costs up to 2022:

| Year | OESP ($M) | OESP + 50%($M) | RRRP($M) | RRRP Enhancement ($M) | First Nations Delivery Rate($M) | TOTAL RANGE ($M) (from status quo to OESP and RRRP enhancements) |
|---|---|---|---|---|---|---|
| 2017 | $108 | $162 | $292 | $374 | $18 | $418 to $846 |
| 2018 | $150 | $226 | $300 | $384 | $18 | $468 to $928 |
| 2019 | $186 | $279 | $306 | $394 | $18 | $510 to $997 |
| 2020 | $215 | $322 | $315 | $404 | $18 | $548 to $1,059 |
| 2021 | $243 | $365 | $322 | $415 | $18 | $583 to $1,120 |
| 2022 | $272 | $408 | $329 | $426 | $18 | $619 to $1,181 |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections above assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
   - The second column forecast also assumes the existing credit amounts increase by 50%.
     - Forecast assumes 10% administration costs
     - Forecast does not account for the approximately 142,000 low-income households that OEB estimated are not eligible because they do not directly receive an electricity bill.

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.
   - Expansion to cap distribution rates for other customers is based at $374M and assumes escalation of 2.6% (historical average dx rate increase). This is a conservative estimate, as Hydro One and Toronto Hydro increases could drive program costs beyond the average increase.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 2b. Expand OESP Eligibility

**Expanded Coverage**

- When OESP was being created, the OEB estimated that are 713,000 low-income households, of which 20% do not receive electricity bills. Thus, only 571,000 would potentially be eligible for OESP.
- If moved to the tax base, the OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity.

**Eligibility Categories**

- OESP has two credits amounts:
    1) Basic credit of $30-50 per month, based on the level of income and the number of residents.
    2) Enhanced credit of $45-75 per month for those with unique electricity needs:
        a) Electric heating,
        b) Indigenous customers, and
        c) Certain electrically intensive medical devices.
- The enhanced credit can be expanded to include additional eligibility categories of customers. For example, a new “Low Density Consumer” category could be introduced that provides Hydro One R2 customers (highest distribution rates) eligible for OESP the enhanced credit.

**Considerations**

- Potential costs for expanded coverage and new eligibility categories depend on updated estimates and changes to program design and delivery.
- There would be value in keeping the OESP as an income-tested program to distinguish it from other initiatives (e.g. RRRP, which is designed to address disparity between rural and urban distribution costs).

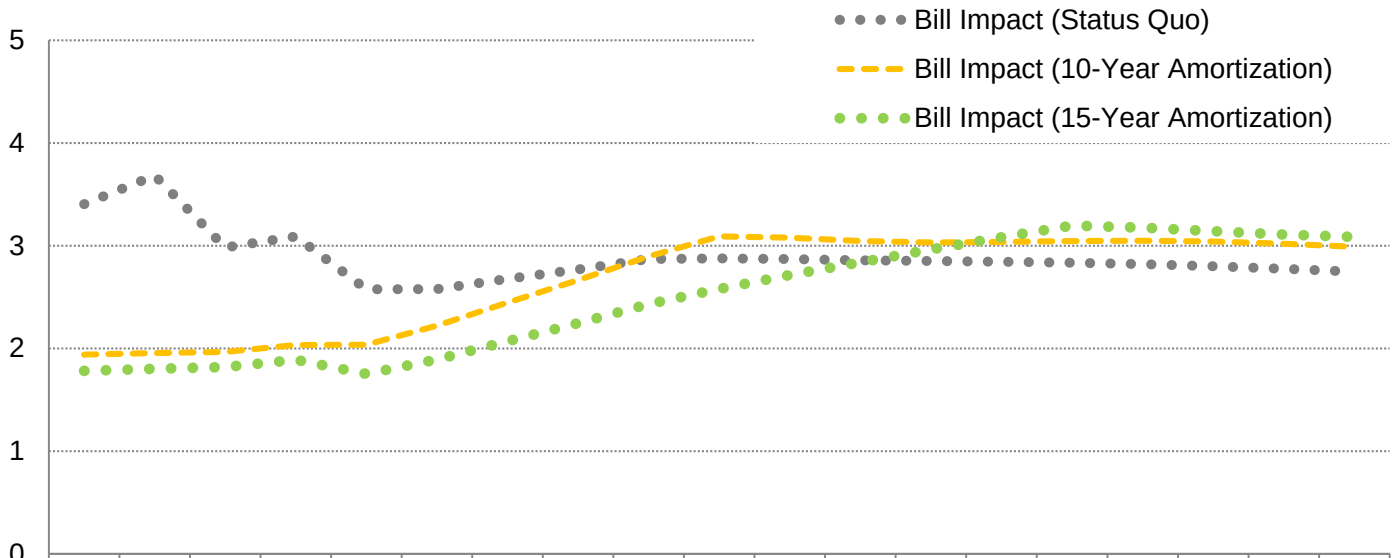
# 3a. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized. This would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs).
  - The time period over which costs could be amortized would be over the lifetime of funded CDM measures.
  - ENERGY is working with IESO to determine the appropriate lifetime period – the graph on the next slide, which illustrates residential bill impacts, presents two cases: **10-year and 15-year measure lifetimes**.
- In both cases, amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020. Over time the benefit would decrease and turn into a cost (higher electricity rates than would otherwise occur), as interest charges begin to grow. Estimated interest charges are as follows (a 3% interest rate is assumed; increases in interest rates could result in higher overall interest charges):
  - $712 million ($2016) – Amortizing eligible 2017-2035 CDM costs for 10-year period; and
  - $1.3 billion ($2016) – Amortizing eligible 2017-2035 CDM costs for 15-year period .
- Legislative changes would be needed to allow recovery of interest payments from ratepayers, or these costs could be recovered from the Consolidated Revenue Fund (CRF, or taxes).
- An alternative that could be explored would be to pay for CDM costs, or for a portion of these, from the tax-base (*see Appendix for more detail on tax funding option*).

# 3a. Amortize Conservation Program Costs (cont'd)

## Conservation Residential Bill Impact – Status Quo, 10-Year and 15-Year Amortization

***CDM Bill Impact ($/month)***




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bill Impact (Status Quo) | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | 2.68 | 2.77 | 2.87 | 2.88 | 2.87 | 2.86 | 2.85 | 2.84 | 2.83 | 2.82 | 2.80 | 2.78 | 2.75 |
| Bill Impact (10-Year Amortization) | 1.94 | 1.95 | 1.97 | 2.03 | 2.04 | 2.22 | 2.45 | 2.67 | 2.90 | 3.09 | 3.08 | 3.05 | 3.03 | 3.04 | 3.04 | 3.05 | 3.04 | 3.02 | 2.99 |
| Bill Impact (15-Year Amortization) | 1.78 | 1.80 | 1.82 | 1.89 | 1.75 | 1.89 | 2.07 | 2.25 | 2.43 | 2.58 | 2.71 | 2.84 | 2.96 | 3.08 | 3.20 | 3.18 | 3.14 | 3.11 | 3.09 |

Source: IESO; Ministry of Energy

**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10 of 15-year borrowing rate of 3.0%.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.
- Legislative amendments would be needed to allow recovery of loan interest charges from GA.
- ENERGY staff have developed a note to seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
- ENERGY is working with IESO to seek an opinion on the proposal from IESO's external auditor.
- ENERGY would then send the IESO external auditor's opinion along with ENERGY's explanatory note to the Ontario Provincial Controller (OPC) to seek a formal opinion on whether CDM costs could be amortized according to rate-regulated accounting standards.
- Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 3b. Rate Smoothing of Conservation Program Costs

- "Rate smoothing" could achieve the same rate reduction effect as amortization.
- Instead of taking out a loan to amortize conservation costs, a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Each year, IESO would defer recovery of a portion of annual conservation costs. Financing would also be required, such as from the OFA, to pay the interest on the deferral account. Interest would accrue on the deferred amounts, likely at the same rates as for the amortization option.
- Deferred costs could be recovered over any time period. If a 10 or 15 year-period was chosen, the rate impacts would be the same as in the amortization option.

**Considerations**

- Option would **not** require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open the Ministry to criticism by the Controller and/or Auditor General since the rate impact is the same.
- The Ministry would have more control under this option to change deferred amounts each year, as opposed to the terms set by a loan agreement under the amortization example.
- There is precedence to this approach for nuclear investments, which otherwise would result in volatile increases and decreases for Ontario ratepayers over the investment period. In 2015, the Ministry amended a regulation that requires the Ontario Energy Board (OEB) to set "smoothed" nuclear rates for OPG's Darlington and Pickering nuclear stations over a 20-year period.
  - The regulation allows OPG to defer recovery in rates of a portion of its nuclear revenue during the Darlington refurbishment (expected to be complete in 2026) and recover these deferred costs over the remaining ten years.
  - OPG will establish a "deferral account" to record the deferred amounts each year up to 2026 plus accumulated interest on the balance to reflect OPG's financing costs as a result of rate smoothing. The deferral account is then drawn down on a straight-line basis between 2026 and 2036.
- At minimum, new regulation would be required. However, further analysis is needed to determine the relevant regulation or legislation, to be amended for IESO (e.g., OEB regulation of IESO costs and fees, GA regulation for how IESO recovers its conservation costs from ratepayers).

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure

- Fund investments in specific energy infrastructure projects through the tax-base. **Note:** This could include the provincial portion of funding for the Remote First Nation Connection Project, a fund to support projects that improve adequacy and reliability in areas where new transmission would unlock economic growth and expansion of natural gas service to underserved communities.

**Considerations**

- Tax-base funding would allow for energy infrastructure to be built without impacting electricity and natural gas rates.
- Would require increasing the amount of funding committed to the Trillium Trust. All fiscal impacts from broadening Hydro One have been committed to the Trillium Trust $5.7 billion target and allocated to Moving Ontario Forward projects.
- There would be an ongoing fiscal impact from the amortization and funding of the investments. Where amortization is not possible there would be an upfront fiscal impact.

*Remote Connection Project:*

- Ontario ratepayers currently support costs of remote electricity service through RRRP on the order of $28 million/year
- Connecting 21 remote communities to the Ontario grid is supported by a positive business case due to diesel cost savings over time. If RRRP is funded through the tax base as proposed above, this project represents an opportunity to reduce impacts from RRRP.
- Direct investment in Ontario's portion of the capital costs of the project through a provincial fund (e.g., Trillium Trust) could also be considered along with mechanisms for cost recovery through transmission rates to refresh the fund as industry benefits from the transmission investment.
- The amount of investment and long-term savings depend on a federal contribution to the project and ENERGY is currently in discussions with Canada with the goal of concluding a cost-sharing agreement by spring 2017.
- A move to tax-based funding may have implications for cost oversight, since the OEB's mandate is to have oversight of ratepayer impacts. Alternative methods to review cost prudence of tax-based funding may be needed.

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (cont'd)

**Considerations (cont'd)**

*Transmission Projects to Enhance Economic Growth:*

- A tax-based fund could target investments in projects that have been identified in IESO regional plans and that would stimulate economic growth but are not proceeding due to cost barriers under the OEB's beneficiary pays principle. Investments could also target areas where the existing system poses challenges for delivering reliable service such as in parts of Northern Ontario with long single circuits.
- Potential opportunities for investment could include a transmission reinforcement in the **Greenstone area**, upgrades south of **Red Lake** and others TBD based on program design.
- This approach would allow a potion of project costs to be socialized to advance key projects without impacting rates or OEB's principles of cost allocation. Scope and scale of fund would be refined through program design.

*Natural Gas Expansion to Underserved Communities:*

- The Government has currently committed to expanding natural gas access to more communities in Ontario (i.e., $200 million Natural Gas Access Loan and $30 million Natural Gas Economic Development Grant).
  - Natural gas is an affordable heating source in Ontario. Its continues to be less expensive than alternative sources such as electric baseboards, heating oil and propane. For example, switching from oil to natural gas can save an average consumer an estimated $1,500 annually.
  - Increasing access to other energy sources such as natural gas, provides Ontarians with more options to meet their needs, reduce their energy costs and improve their quality of life.
  - Expansion of natural gas delivery infrastructure is widely supported in underserved communities (i.e., a recurring theme at ROMA) as a means to provide consumers and businesses in underserved communities with more affordable energy choices, attract new industry to Ontario and benefit agricultural producers.
- A grant program complements the Ontario Energy Board's recent decision enabling greater rate-based expansion to unserved areas, including rural and remote communities.
  - Applying Trillium Trust funding would make it possible to enhance the Grant Program and service more communities.

# 5. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.
- If the Province were to transfer $2.6 billion in economic benefits to the rate base over 10 years suggest the following fiscal impacts (assuming 140TWh per year):
  - Residential Ratepayer Impact (if spread over 10 years): up to $1.39 per month on a typical bill; and
  - Industrial Ratepayer Impact (if spread over 10 years): up to $1.86 / MWh
- There would be no certainty that the OEB could still decide to allocate some or all of Hydro One's deferred tax benefit to ratepayers which would have fiscal impact (lower share price and lower net income over time).

**Considerations**

- Cost savings to ratepayers and associated fiscal impacts would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- The departure tax was effectively a true-up for lower PILs payments from Hydro One in previous years – it was not a one-time windfall for the Province. In other words, it ensures that Hydro One paid all its tax obligations under the PILs regime before moving into the normal corporate tax regime.
- The related ~$2.4 billion fiscal benefit to the Province (from the deferred tax benefit) has already been credited to the Trillium Trust to be used to build infrastructure under Moving Ontario Forward.
- Repurposing funds paid to OEFC would ~~may~~ have an impact on the defeasance of electricity stranded debt and would cause the first increase in stranded debt since 2004.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to ~~infrastructure investments already made in the sector, or to specific initiatives such as conservation~~).

# 6a. Empower Energy Agencies – IESO / Market Renewal

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 6b. LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
  - Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
    - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.

**Considerations**

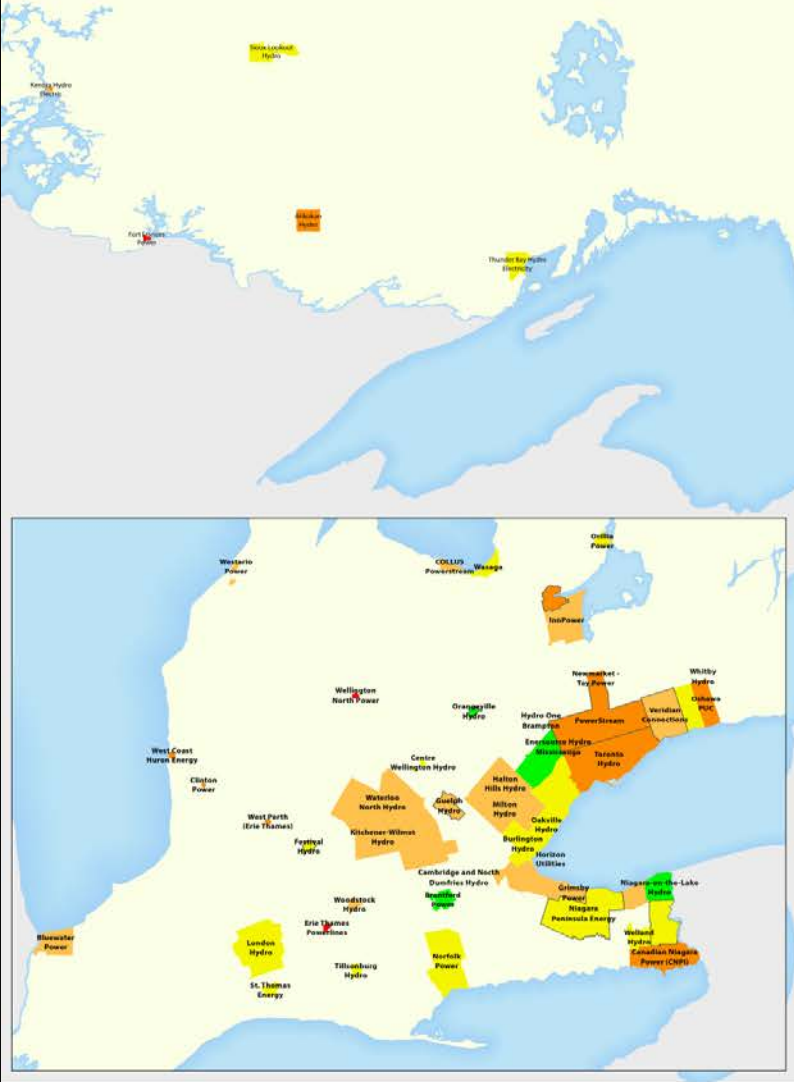
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.

- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
  - To further help address the costs associated with the Delivery line of the electricity bill, program such as the RRRP (previous slide) could be expanded to include other customers that may face higher costs.

- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.

- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation. Further changes to the tax incentives and/or revisiting legislated consolidation could be considered.

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

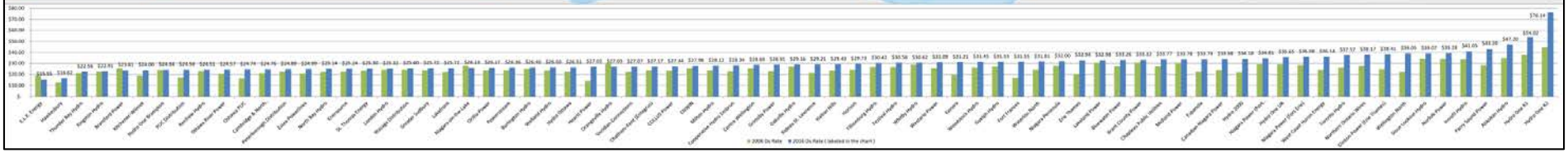
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# 6c. Empower Energy Agencies – OPG / Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

**Considerations**

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.
- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available, providing customers with pricing choice.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- Would provide consumers with electricity pricing choice.
- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro- November 2016 rates)

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7b. Give Consumers More Rate Choices and Greater Transparency – Detailed Global Adjustment

- Provide electricity consumers greater transparency with respect to electricity generation costs by providing more details regarding the Global Adjustment (e.g., adding a line on hydro bills, quarterly energy reports, etc).

**Considerations**

- As electricity bills have increased, many consumers have complained about a lack of transparency on the drivers of electricity costs. In particular, consumers and legislative officers have singled out the GA.

- Providing consumers with additional information on the cost components and amounts recovered through the GA would help consumers understand how the different forms of electricity generation in Ontario contribute to consumers costs.

- Providing additional information to consumers on electricity commodity cost drivers without sufficient context or background could simply lead to increased complaints about particular generating technologies that make up large shares of costs (e.g., nuclear).

- Adding a breakout of the amount of GA on residential electricity bills could lead to further confusion due to the existing breakout of multiple time-of-use buckets.

- Alternatively, the existing quarterly Ontario Energy Report, which provides various energy sector data, could be leveraged to show a breakout of quarterly GA costs by fuel type. A link on electricity bills could point to this information.

# 8. Help Small Business Manage Their Electricity Cost – End DRC Early for Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the proponents agreeing to a lower price in the near term.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period ; discussions/consultation may be required in advance of this potential option moving forward.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- Since the Minister of Energy is not a party, IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms would also reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.

- Projects over 500 kW would offer the most savings potential as they represent the majority of installed renewables capacity and are spread across fewer contracts.

- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.

- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh;
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
  - **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 million | $582 million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - For example, the New contract is $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 million | $632 million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# 10. Tax Relief for Solar and Wind Contracts

- In 2010 and 2011 Ontario procured large scale projects (>500 kW) through the FIT program at standard offer pricing.

- The FIT program was the centerpiece of the GEA which established the economic and social goals of growing the green economy, including establishing a local renewable energy manufacturing base, supporting the development of green energy jobs, and providing incentives for Indigenous participation.

- To help achieve these economic and social goals, the FIT program offered pricing at above competitive procurement rates, and provided Indigenous and Community participation adders, which resulted in economic benefits to all Ontarians, but resulted in additional costs borne by Ontario's electricity ratepayers.

- Ontario could fund the added cost of some or all of these economic and social incentives by shifting their costs from the rate-base to the tax-base.
    1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
    2. The tax base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT.

**Considerations**

- If applied to projects in commercial operation the benefit to the ratepayer would be immediate.
- Comparing FIT pricing to competitive procurement pricing could provide a reasonable representation of energy procurement without the added cost of economic and social incentives.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
   - For example, from 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
   - The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
   - If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
   - The $3.3 billion difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.
   - This represents estimated average ratepayer savings of $1.50/ month relative to OPO forecasts.
   - The same approach could be considered for solar projects however, prior to LRP I in 2016, Ontario had not procured solar capacity competitively and international cost comparisons are challenging given differences in regional development costs.
   - This example does not include the value of participation price adders available for community and indigenous participation.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

2. The tax-base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT 1 solar and wind projects.

   - For example, 17 large FIT 1 wind and solar projects have Indigenous and/or Community participation making them eligible for a price adder in addition to their base contract price.

   - The estimated value of these price adders is approximately $17.1 million (NPV 2017) over the expected remaining term of their contracts.

   - This represents estimated ratepayer savings of approximately $0.01/month relative to OPO forecasts.

# FIT 1 and GEIA Wind Projects in Commercial Operation
(source: IESO Active Contracts List, October 31, 2016)

| Count | Program | MW | COD |
|---|---|---|---|
| 1 | FIT 1 | 0.8 | Oct-10 |
| 2 | FIT 1 | 18 | Jul-15 |
| 3 | FIT 1 | 23 | Aug-15 |
| 4 | FIT 1 | 40 | Jan-15 |
| 5 | FIT 1 | 10 | Sep-14 |
| 6 | FIT 1 | 10 | Sep-14 |
| 7 | FIT 1 | 10 | Jun-14 |
| 8 | FIT 1 | 99 | May-13 |
| 9 | FIT 1 | 100 | Oct-15 |
| 10 | FIT 1 | 4 | Sep-12 |
| 11 | FIT 1 | 100 | Apr-16 |
| 12 | FIT 1 | 15 | Jun-15 |
| 13 | FIT 1 | 18 | Mar-12 |
| 14 | FIT 1 | 104.4 | Nov-13 |
| 15 | FIT 1 | 40 | Dec-15 |
| 16 | FIT 1 | 60 | May-14 |

| Count | Program | MW | COD |
|---|---|---|---|
| 17 | FIT 1 | 125 | Aug-13 |
| 18 | FIT 1 | 73.5 | Aug-14 |
| 19 | FIT 1 | 102 | Jan-15 |
| 20 | FIT 1 | 9 | Jan-12 |
| 21 | FIT 1 | 4.1 | Dec-15 |
| 22 | FIT 1 | 0.5 | Oct-13 |
| 23 | FIT 1 | 82.8 | Nov-11 |
| 24 | FIT 1 | 18.45 | Sep-16 |
| 25 | FIT 1 | 60 | Jul-14 |
| 26 | FIT 1 | 10 | Oct-16 |
| 27 | FIT 1 | 6.15 | Nov-14 |
| 28 | FIT 1 | 2.3 | Aug-15 |
| 29 | FIT 1 | 10 | Feb-16 |
| 30 | FIT 1 | 8.2 | Nov-14 |
| 31 | FIT 1 | 150 | Nov-14 |
| 32 | FIT 1 | 91.39 | Dec-14 |

| Count | Contract | MW | COD |
|---|---|---|---|
| 33 | FIT 1 | 25 | May-15 |
| 34 | FIT 1 | 82.8 | Nov-11 |
| 35 | FIT 1 | 30 | Mar-14 |
| 36 | FIT 1 | 17.6 | May-16 |
| 37 | FIT 1 | 23 | Dec-12 |
| 38 | FIT 1 | 99 | May-13 |
| 39 | FIT 1 | 48.6 | Dec-11 |
| 40 | FIT 1 | 19.44 | Aug-15 |
| 41 | FIT 1 | 10.8 | Mar-12 |
| 42 | FIT 1 | 38.88 | Sep-15 |
| 43 | FIT 1 | 60 | Aug-14 |
| 44 | GEIA | 270 | Mar-14 |
| 45 | GEIA | 180 | Dec-15 |
| 46 | GEIA | 148.6 | Dec-14 |
| 47 | GEIA | 270 | May-15 |

# Key Outcomes / Next Steps

- The proposed initiatives provide the following opportunities to:
  - Provide a greater focus on vulnerable consumers by funding electricity support programs through the tax-base.
    - Enhance existing and new support programs targeted at the most vulnerable consumers (i.e., OESP and RRRP); and
    - Better harmonize delivery rates across the province.
  - Re-set how energy infrastructure is funded by shifting costs to the tax-base from the rate-base.
  - Provide electricity consumers with greater choices and transparency (e.g., alternative rate plan based on a flat electricity rate, unpacking the Global Adjustment costs, etc);
  - Provide system benefits (e.g., market renewal);
  - Increase cost effectiveness and improve efficiency; and
  - Lower the cost of electricity for all consumers.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require legislative and/or regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

A. Rural or Remote Rate Protection (RRRP) – Overview and Enhancements
B. Fund Conservation Programs Through the Tax-Base
C. Eliminate the Industrial Conservation Initiative (ICI)
D. Cancel Large Renewable Procurement I (LRP I)

# A. RRRP Overview and Enhancements

- The Delivery line of the electricity bill is composed of Distribution and Transmission Costs. While transmission costs are uniform across the province, LDC costs vary by distributor and account for about 20% of the total bill for the electricity customers.
  - See slide X for a map of delivery rate increases between 2006 and 2016.
- The Rural or Remote Rate Protection (RRRP) framework was put in place in 2001 to help offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations.
- RRRP is available to: residential Hydro One R2 customers (~350,000 customers), Algoma Power customers (~11,600 customers); H1 remote customers (~3,500 customers).
  - To date, R2 customers receive a fixed amount of $125 million a year distributed amongst the customers. Algoma and Remote customers have RRRP calculated by the OEB each year that fluctuates based on average provincial distribution increases.
- Because the amount had been fixed for over a decade, the Province recently increased funding of the RRRP program for Hydro One R2 customers from $125 million to $240 million. This will be effective as of January 1, 2017, and will bring their delivery charges in line with the next highest charges from Hydro One's R1 customer class.

# B. Fund Conservation Programs Through the Tax-Base

- Propose to fund 2017-2020 electricity conservation and demand management program costs* using tax dollars instead of ratepayer dollars.
  - Funds received through the Hydro One Departure Tax could potentially be repurposed towards this.
- Total remaining 2017-2020 electricity conservation program costs are expected to be ~$2.1 billion.
- Post 2020, this option could evolve to funding conservation programs through the Greenhouse Gas Reduction Account.

**Considerations**

- Electricity conservation programs provide a number of benefits to society, however, Ontario's ratepayers have been covering these costs:
  - Avoiding/deferring future energy infrastructure investments, reducing disruption in communities (e.g., avoiding the need to build new natural gas generation);
  - Environmental benefits (e.g., reduced natural gas peaking generation and GHG emissions); and
  - Social and economic benefits (e.g., job creation and assistance managing electricity bills).
- There is precedence for using tax dollars to fund conservation programs.
  - Between 2007 and 2011, Ontario funded the Home Energy Savings retrofit program using tax dollars.
- Funding conservation programs though the tax-base is expected to result in a benefit of $3.40/month for residential electricity consumers in 2017. This could provide immediate short term relief to consumers while other rate mitigation initiatives are developed (e.g., market renewal, LDC efficiencies).

*** Note:** This includes costs towards the Conservation First Framework, Industrial Accelerator Program, Demand Response and the Conservation Fund)

# C. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

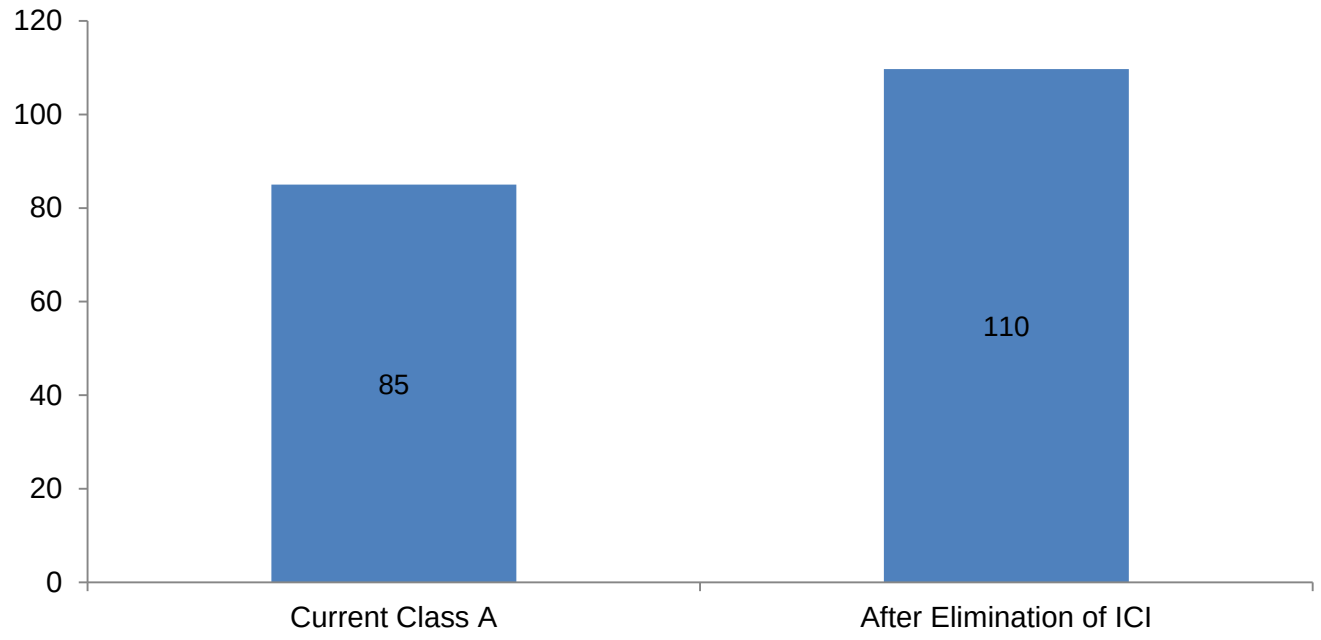
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# C. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# D. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period.
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g. rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

*Cancel/Adjust Announced Procurements:*

- Amendments to existing directions to IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

*Cancel Existing LRP I Contracts:*

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

**Legal Analysis**

- Any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements.
  - An amendment to an existing direction would not require Cabinet approval, however, further analysis is required to determine if direction to cancel LRP I contracts could be considered as amending existing direction.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights. This reasoning would likely apply equally to any direction to IESO to cancel LRP I contracts. Previous advice has also flagged a risk that the Province could be liable for damages in tort for inducing a breach of contract (or other claims).
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

**From:** Ronald Kwan
**To:** John Kim; Emily Kerr
**Subject:** FW: rate mitigation
**Date:** Thursday, January 12, 2017 1:25:21 PM

---

Hi,

FYI. Some implementation questions.

Ron

---

**From:** Ronald Kwan
**Sent:** January-12-17 12:37
**To:** Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>
**Subject:** RE: rate mitigation

Hi Scott,

The quick thought I had was then on a question on what the roles of each OEFC and IESO would be.

I had thought what was being contemplated was that IESO would be held whole, and OEFC would "pay" -- borrowing money to do so], instead of IESO having ratepayers pay through the GA. In this scenario, OEFC has an expense to IESO, financed through debt as OEFC has no associated revenue (at least at the outset until the relative GA size is reversed over time. As a sub-option, if the contracts could be assigned to OEFC, then OEFC's NUG regulation could potentially be listed and have OEFC recover the costs over time, not in the year-of – but that would have a fiscal impact since expense in the early years would exceed recoveries through the GA.

Your alternative seems to be where IESO simply borrows from OEFC, so for OEFC all of this is happening on the balance sheet, where OEFC borrows from the Province and then lends to IESO, so no net income statement or stranded debt impact on OEFC. However, in this case, IESO is short. It has cash from the OEFC financing, but it doesn't have the annual revenue to cover its contractual obligations. Wouldn't that likely affect the IESO and how it accounts for the contracts?

In either case, I'd think that implementation and accounting questions would need to be addressed, (e.g., objects of the corps, legislation / regulations).

Ron

---

**From:** Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
**Sent:** January-12-17 12:04
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** rate mitigation

Hi Ron,

Thinking more about our conversation yesterday around financing of a portion of “out-of-market” generation costs. If IESO entered into a financing arrangement with OEFC and agreed to repay these costs + interest over a set time period, could OEFC record a receivable to offset / avoid the in-year expense?

I ask this in part because one of the other options on the table is to renegotiate wind contracts to reduce current costs by offering to extend the length of the contracts. That will rely on private proponents’ cost of capital. We could do the same thing using the Province’s costs of funds by financing a portion of the current cost through the OEFC and then agreeing to have ratepayers repay in years 20-30, once contracts have expired, but the facilities potentially still have remaining operating life.

Just a thought – happy to chat.
Scott

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Gavin He |
| **Cc:** | Salman Qadir |
| **Subject:** | Fw: Benefit Implementation |
| **Date:** | Thursday, December 08, 2016 10:58:10 PM |

Could you check with Ken? Also let Rob know likely respond next week following review

**From:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>
**Sent:** December 8, 2016 4:04:51 PM
**To:** John Kim
**Cc:** Ken Kandeepan; Singh, Inayat (ENERGY); Salman Qadir; Gavin He; Sunita Chander (ENERGY)
**Subject:** RE: Benefit Implementation

Hi John,

In response to your question we have updated the language in the MOU Section 3. b) to be more clear. Please see the below language that we plan to include in this MOU.

> "The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time."

Does this language provide the level of clarity that you are looking for? If not, please let me know and we can discuss.

Thank you,

-Robert
(416) 325-6899

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 9:25 AM
**To:** Hunter, Robert A. (ENERGY); Chander, Sunita (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Salman Qadir; Gavin He
**Subject:** RE: Benefit Implementation

Hi Sunita, Robert,

We need some clarity on what you mean by this not most likely.

Thanks,

John.

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Thursday, December 08, 2016 9:03 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hi John,

In regards to records that the OFA must maintain related to the OREC, we do not need to have direct database access to your records, but records should be available upon request of the Ministry. Most likely we would ask for documents to be shared electronically via email if necessary, unless directed otherwise.

Regards,

-Robert
(416) 325-6899

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 8:47 AM
**To:** Hunter, Robert A. (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Chander, Sunita (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Robert,

In the version you sent back, you mention the Ministry having full access to such records. What are your expectations of how such access to take place?

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Monday, December 05, 2016 10:21 AM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hello,

Following up on Sunita's earlier email; have you had a chance to review the attached MOU? If there are any changes please let us know as soon as possible. We are aiming to have this finalized by the end of this week.

Thank you,

-Robert
(416) 325-6899

---

**From:** Chander, Sunita (ENERGY)
**Sent:** November-27-16 2:15 PM
**To:** Kandeepan, Ken (OFA); Kim, John (OFA)
**Cc:** Hunter, Robert A. (ENERGY); Singh, Inayat (ENERGY); An, Tai (ENERGY/MEDEI/MRI)
**Subject:** RE: Benefit Implementation

Hi, attached is the ENERGY-OFA MOU, one or two adjustments in the attached.

If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.

Thanks,

<< File: MOU - MoE OFA- DAP Nov 25.doc >>

---

**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Michael,

Attached is a working draft of the MOU. OFA Legal had based it on the OCEB one, slightly updated for the proposed new rebate. I'm sure Energy will have some updates to suggest on it too.

Ron << File: MOU - MoE OFA re OREC(v3)_Clean.doc >>

-----Original Appointment-----
**From:** Reid, Michael (ENERGY) [mailto:Michael.Reid@ontario.ca]
**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

---

Location: 77 Grenville Street, 6th Floor, Boardroom 6B

Upon arriving on the 6th floor, please call Betty at 5-6559 on the lobby phone.

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| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | John Kim; Shajee Kathirgamanathan |
| **Cc:** | Tomasz Bugajski |
| **Subject:** | Fw: Cab Sub edits & Major Projects |
| **Date:** | Wednesday, September 07, 2016 10:07:30 AM |
| **Attachments:** | Cabinet Submission - Electricity Price Mitigation 20160906 DMO.PPTX |

Hi,

See attached.

Ron

---

**From:** Young, Gwendolynne (MOF) <Gwendolynne.Young@ontario.ca>
**Sent:** September 7, 2016 10:04 AM
**To:** Ronald Kwan; Tim Schuurman (MOF)
**Cc:** Christopher Pearce (MOI); David McLean (MOF); Jenarra DeSouza (MEDTE/MRI); Birks, Ryan (MOF); Sriram Subrahmanyan (MOF)
**Subject:** FW: Cab Sub edits & Major Projects

Hi Ron and Tim,

Attached is the latest deck we received from ENERGY on HST/Electricity.

**Gwen Young**
p: 416.325.0741 | bb: 647.982.2419

---

**From:** Katona, Keley (ENERGY)
**Sent:** September 6, 2016 7:24 PM
**To:** DeSouza, Jenarra (MOF); Armstrong, Hillary (ENERGY)
**Cc:** Young, Gwendolynne (MOF); Subrahmanyan, Sriram (MOF); Langleben, Ann (MOF)
**Subject:** RE: Cab Sub edits & Major Projects

Thanks for these comments. We have reflected them in the attached as well as a number of comments from our MO. We expect further changes from our MO this evening / tomorrow morning and will keep you updated on subsequent drafts of the deck.

Keley

---

**From:** DeSouza, Jenarra (MOF)
**Sent:** September-06-16 6:00 PM
**To:** Katona, Keley (ENERGY); Armstrong, Hillary (ENERGY)
**Cc:** Young, Gwendolynne (MOF); Subrahmanyan, Sriram (MOF); Langleben, Ann (MOF)
**Subject:** Cab Sub edits & Major Projects

Hi Keley and Hillary

Attached are suggested edits for the Electricity Price Mitigation CabSub

See slides 4, 34 and 35
Pls also note that the draft Minute on slide 26 may contain direction that was not reflected in the last draft of the Bill we received from Energy. For example, prescribing a date prior to January 1, 2017 as the effective date and prescribing a cap.

If you have questions pls let us know
Hopefully they can be considered for the next draft of the deck

Also – could you pls confirm if this version will be presented to Major Projects on Thursday
And that ENE will be leading the briefing

Cheers
Bernice Lau

- for Jenarra DeSouza

# Electricity Price Mitigation

## Ministry of Energy

## WORKING DRAFT

## Date: September 14, 2016

Minister

Deputy Minister

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

- Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables.
  - This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%.

- Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online.

- The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers.

Note: Throughout the deck, language will stay “Class B (Commercial)” and “Class A (Industrial) for clarity.

Ontario

# Electricity Consumer Classes

- There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

- The following slide provide further information on the prices paid by different classes of electricity consumers.

**** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

Keep this slide as introduces ICI, RRRP, OESP

# Current Rate Base Cost Shift Programs

- Ontario has implemented several programs to help electricity consumers
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Industrial Conservation Initiative (ICI) Encourages Ontario's largest consumers to reduce consumption during peak periods to save on average 25% on their electricity bills.
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
- These programs have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial) as shown in the table below.

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

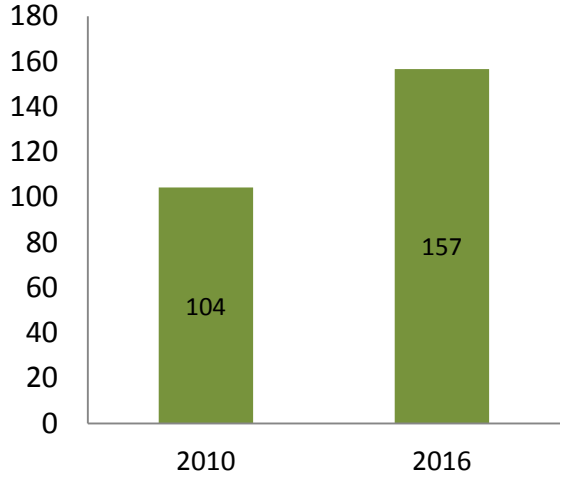
**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

# Prices by Electricity Consumer Class

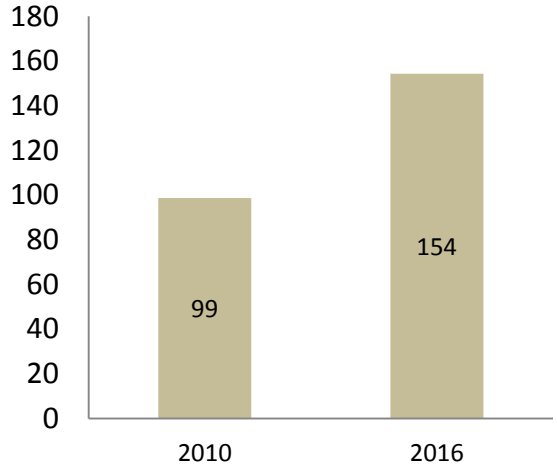
- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.

- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers.

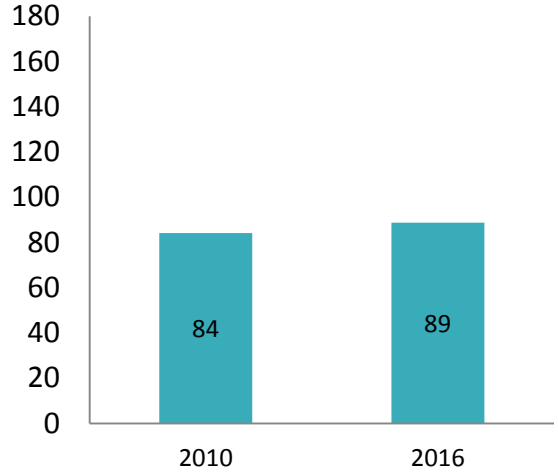
**Typical Residential Bill (750/kWh per month)**




**Typical Commercial Price (Class B) ($/MWh)**




**Typical Industrial Price (Class A) ($/MWh)**



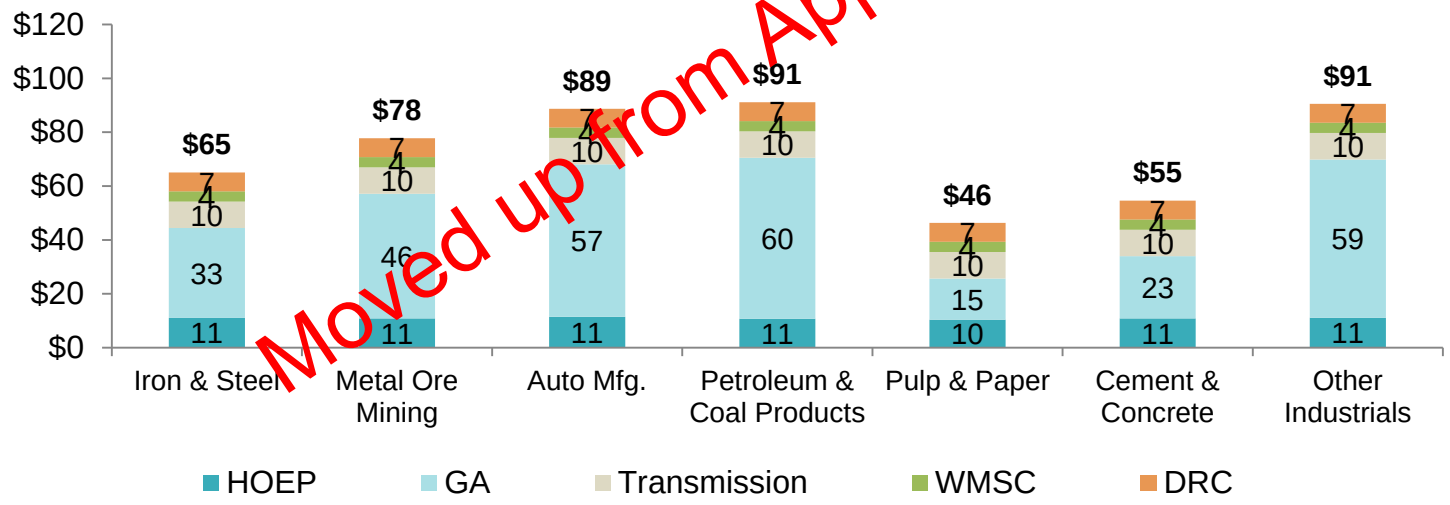

**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

# Industrial Electricity Prices Vary by Sector

- While Class A (industrial consumers) benefit from participation in the ICI program, there is a significant amount of variability in the ability to shift away from peak periods across customer classes, impacting the savings achieved.

- The below chart shows the prices paid in 2015 across a number of industrial sectors. Consumers in the north that receive rebates under the Northern Industrial Electricity Rate Program (NIERP) achieve rates that are $20/MWh lower than the below.

**Average all-in Class A, Transmission-connected Electricity Prices by Industrial Sector (estimated $/MWh), Year-to-Date June 2016**

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**Note:** HOEP = Hourly Ontario Energy Price, GA = Global Adjustment, WMSC = Wholesale Market Service Charges, DRC = Debt Retirement Charge

# Existing Rate Mitigation

- Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs.
  - For example, Northern Ontario residential electricity consumers receive tax credits in recognition of higher electricity costs in the north and rural consumers receive a subsidy funded through the rate-base due to the higher cost of delivering power to rural areas.

- As of 2016, the government removed the Debt Retirement Charge (DRC) ~~from~~ for certain residential electricity consumption ~~bills~~. While this saves a typical residential electricity ratepayer about $60 per year, it is less than the benefit previously provided through the Ontario Clean Energy Benefit (OCEB).
  - OCEB provided a tax-base rebate of 10% rebate on the total cost of electricity charges related to electricity consumption on eligible bills between 2011 and 2015.

MOVED to APPENDIX

- Because electricity costs must be fully recovered from electricity consumers, rate mitigation funded through the rate-base often represents a shifting of costs from one consumer group to another (i.e., industrial to residential and commercial consumers).
  - Rate-based initiatives are generally associated with incenting changes in behaviour that provide electricity system benefits (i.e., shifting electricity consumption from on-peak to off-peak periods).

- The following slides provide an overview of the programs currently available to different electricity consumer classes along with the cost shift associated with several of the programs.

# Existing Rate Mitigation (cont'd)

| Program | Consumer Type | Rate/Tax -based | Description |
|---|---|---|---|
| Northern Ontario Energy Credit | **Residential** | Tax | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year. |
| Ontario Energy and Property Tax Credit | | Tax | Also delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families. |
| Ontario Electricity Support Program | | Rate | Provides ongoing assistance directly on the bills of eligible low-income electricity consumers. |
| Rural or Remote Rate Protection | | Rate | Provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas. |
| saveONenergy Conservation Programs (including Home Assistance Program for low income customers) | | Rate | Delivered by LDCs which provide financial incentives for electricity-saving measures like LEDs, ENERGY STAR certified ceiling fans, baseboard programmable thermostats, clotheslines, and advanced powerbars. |
| saveONenergy Conservation Programs (including Retrofit Program for Buildings and other programs) | **Commercial** | Rate | saveONenergy suite of electricity conservation programs for commercial customers offered by local distribution companies (LDCs) help businesses save energy to better manage their electricity consumption and reduce their annual electricity costs. See Appendix for more information. |
| Industrial Conservation Initiative | **Industrial** | Rate | Encourages Ontario's largest consumers to reduce consumption during peak periods to save on average 25% on their electricity bills. |
| Industrial Accelerator Program | | Rate | Provides financial incentives of up to $10 million to transmission-connected electricity consumers, to invest in energy-efficiency or self-generation which would reduce the amount of electricity withdrawn from the provincial grid. |
| Industrial Electricity Incentive | | Rate | Provides reduced electricity rates for companies starting or expanding operations in Ontario. |
| Northern Industrial Electricity Rate Program | | Tax | Provides $20 megawatt per hour (MWh) rebate for qualifying large northern industrial consumers. |
| Demand Response | | Rate | Provides payments to businesses and industry to shift consumption at times when the electricity system is stressed. DR currently provides ~500 MW of capacity to the system. |

MOVED to APPENDIX

Keep this slide as introduces important context

Ontario

# Actions to Bend the Cost Curve

- A number of actions have and are being taken to reduce overall electricity system costs:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

# 2016 Budget Committed to Recycling CCAP Proceeds

- The 2016 Budget committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers.

- To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP) committed $1.3 billion from the Greenhouse Gas Reduction Account (GGRA) over the first compliance period (2017-2020).

- The $1.3 billion was estimated to go to different electricity consumer classes as follows:
  - $120 million for residential consumers;
  - $170 million for commercial consumers; and
  - $40 million for industrial consumers.

# ~~Context –~~ Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:

  - **Tax-based Lever:**
    - Provide an on-bill rebate funded from the tax-base to all consumers or specific classes of consumers (i.e., the Ontario Clean Energy Benefit (OCEB) provided a rebate for eligible electricity consumers).

  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.

  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds to offset the cost of existing initiatives that help reduce greenhouse gas (GHG) emissions (i.e., the CCAP committed to offset the impact of cap and trade and to keep electricity rates affordable).

# Rate Mitigation Proposal

- The Ministry of Energy is proposing to implement the following electricity price mitigation initiatives. The approach identified below would provide relief across all electricity consumer classes:

  1) Offset an amount equal to the provincial portion of HST ~~Provide an 8% rebate~~ to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms~~), equivalent to the provincial portion of HST~~ by providing a 8% rebate and update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers

  1) Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial) and recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

- The following slides provide additional information on the above initiatives.

***Notes:**
Eligibility for the 8% rebate would be similar to OCEB and include some customers not on the Regulated Price Plan (RPP), such as Independent Power Authority consumers and consumers that have opted-out of RPP.
See Appendix for discussion on HST considerations.

Note: Shows after-tax for RPP consumers.

# Rate Mitigation Proposal – Illustrative* Impacts

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Impact** | | Class B (Commercial) Impact | Class A (Industrial) Impact | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural*** (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br><br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$10/ month<br><br>(-6%) | -$46/ month<br><br>(-18%) | -$1/MWh<br><br>(-1%) | -$1/ MWh<br><br>(-1%) | Up to -$52/MWh<br><br>(-34%) |

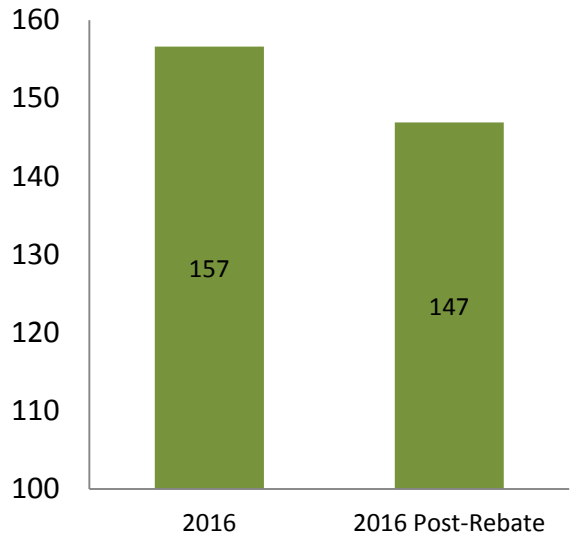
***Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

** Regulated Price Plan Impact represents an after-tax value of the rate mitigation proposal.

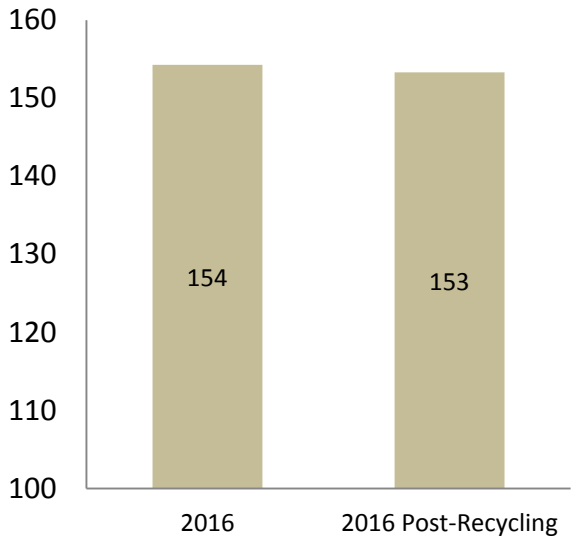
*****Note**: Rural customers refers to customers of Hydro One eligible to receive RRRP (R2 rate class customers)

# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class

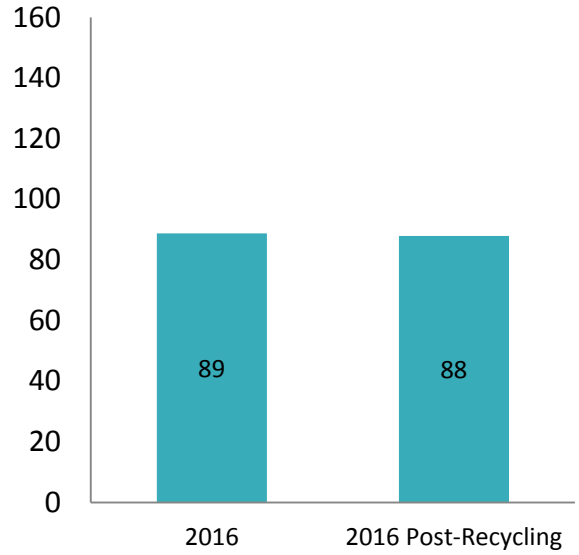
**Typical Residential Bill**
**750/kWh per month**




**Typical Commercial Price ($/MWh)**
**ADD NEW CLASS A TO THIS CHART**




**Typical Industrial Price ($/MWh)**




**Residential:** The net impact of the ~~8% rebate~~ rate mitigation initiatives is a 6% reduction.

**Commercial:** The net impact of ~~proceeds recycling~~ the rate mitigation initiatives is a 1% reduction.

**Industrial:** The net impact of ~~proceeds recycling~~ the rate mitigation initiatives is a 1% reduction.

**Note:** Residential bills reflect electricity rates as per the Regulated Rate Plan (RRP) which came into effect on May 1, 2016. Commercial and industrial electricity prices reflect YTD June 2016. The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

# 1) Regulated Price Plan Eligible Consumers and Rural or Remote Rate Protection Update

# 8% Rebate to Regulated Price Plan Eligible Consumers

- ENERGY is proposing to introduce legislation/regulation by X [placeholder for date] to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit.
  - This would be equivalent to the provincial portion of the HST*.

| **Eligible for the 8% rebate**<br>(< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate**<br>(> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>  − Coffee / snack retailer<br>  − Convenience store<br>  − Apparel store<br>  − Hair salon<br>  − Small insurance office | • Class A consumers<br>  − Manufacturer<br>  − Large grocery store<br>  − Mines<br>  − Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>  − Commercial offices (low rise)<br>  − Hotel<br>  − General warehousing |

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).

***Note:** An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

# Illustrative Bill Impacts

| | Current Bill (after tax) | Current Rate mitigation initiatives* | Cost of new initiatives (RRRP and ICI) | New Rate Mitigation initiatives | Net impact | New Bill (after tax) |
|---|---|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $157 /month | N/A | $1.31/month | 8% pre-tax rebate: - $11 | -$10 (-6%) | $147 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $259 /month | RRRP – $32 | $1.74/month | 8% pre-tax rebate: - $16<br>Updated RRRP: - $28 | -$46 (-18%) | $212 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $119 /month | OESP - $38 | $1.31/month | 8% pre-tax rebate: - $10 | -$8 (-6%) | $126 /month |
| Small Business (Toronto - $/MWh) | $ / MWh | N/A | $1.74/MWh | 8% pre-tax rebate: x/MWh | | |
| Farm ( xxxx - $/MWh) | $ / MWh | N/A | $1.74/MWh | 8% pre-tax rebate: x/MWh | | |

Placeholder - Pending Update

*Note: some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as xx per year.

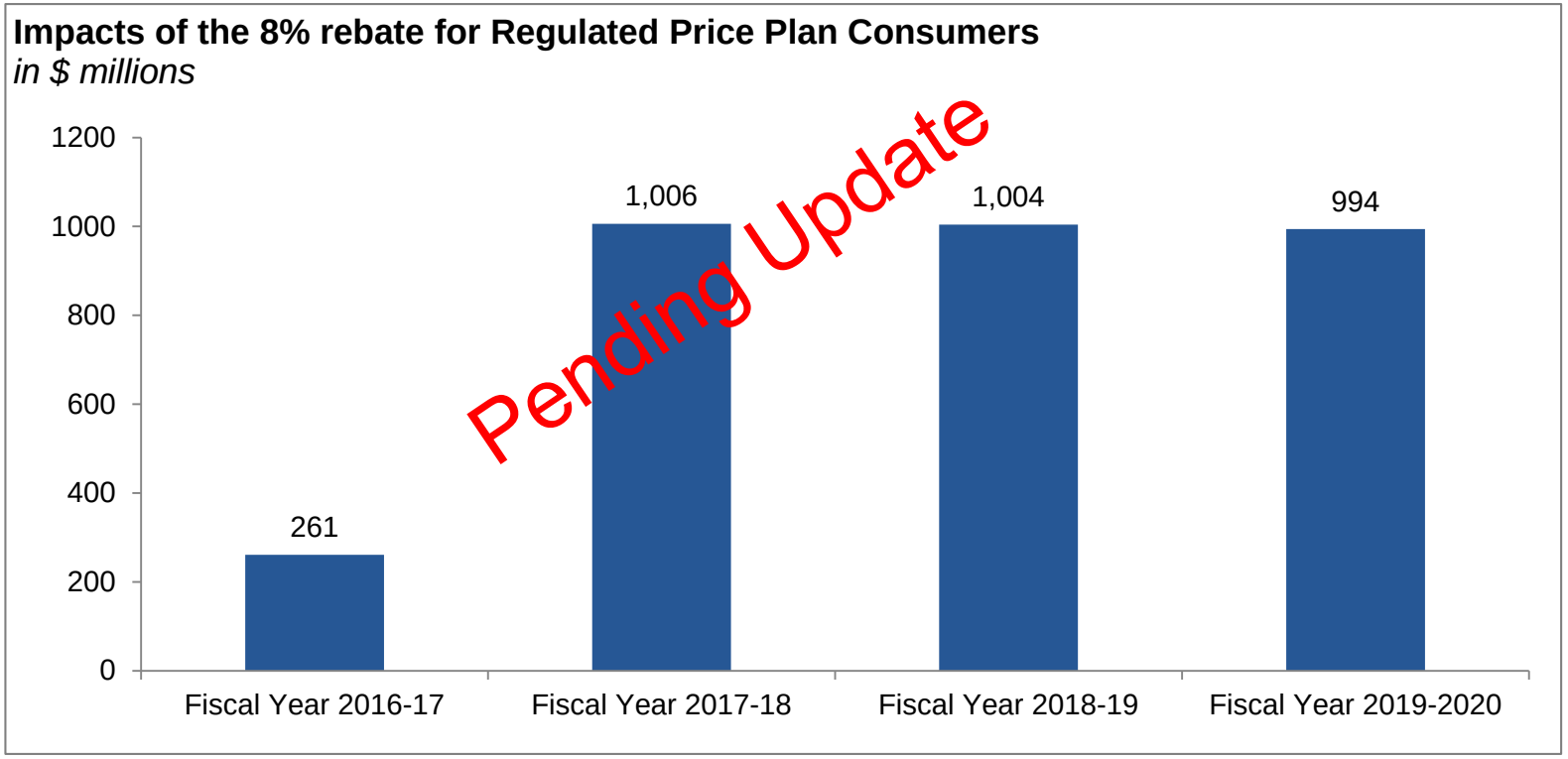
** income of less than $28,000, family of 4.

Totals may not add due to rounding. The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

Note: Kept slide in as CO/PO requested this slide.

# 8% Rebate to Regulated Price Plan Eligible Consumers – Projected Impact

- ENERGY estimates that the average annual cost of an 8% rebate to consumers eligible for Regulated Price Plan consumers would be approximately $1.0 billion between 2017 and 2020.



# Placeholder – Electricity Bill Mock-Up

Moved up from Appendix

# Rural or Remote Rate Protection (RRRP) Update

- ENERGY is proposing to amend O.Reg 442/01 to provide an additional $110 million in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

- RRRP is a rate-based funded subsidy program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.
  - Today, RRRP is a $175-million program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
  - The majority of the program funding ($125.5 million) provides a subsidy to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a monthly subsidy for R2 customers of $31.50.
  - RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

- An additional $110 million in program funding would see an increased subsidy of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.
  - This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
  - The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the subsidy remains constant.

Note: Recommend moving this slide to the appendix.

# Rural or Remote Rate Protection (RRRP) Update

| Bill Comparisons @ 1000kWh/month (Pre-HST) | | |
|---|---|---|
| | **Total Current Delivery**** Charge** | **Total Current Bill** |
| **Hydro One R2** (Current RRRP Subsidy Levels) | ~$111 | ~$229 |
| **Hydro One R2** (With Proposed RRRP Expansion) | ~$83 | ~$201 |
| **Hydro One R1** | ~$82.50 | ~$201 |
| **Algoma Power** (Receives RRRP) | ~$79.50 | ~$197 |
| **Provincial Average*** | ~$51 | ~$169 |
| **Lowest Cost Total Bill LDC**** | ~$48 | ~$149* |
| **Lowest Cost Delivery Charge LDC***** | ~$36 | ~$154 |

**Average Bill of Ontario municipal LDCs and non-municipal Algoma Power, CNPI, and Hydro One Urban. Excludes Hydro One Remote, Hydro One R1 and Cornwall Electric.*

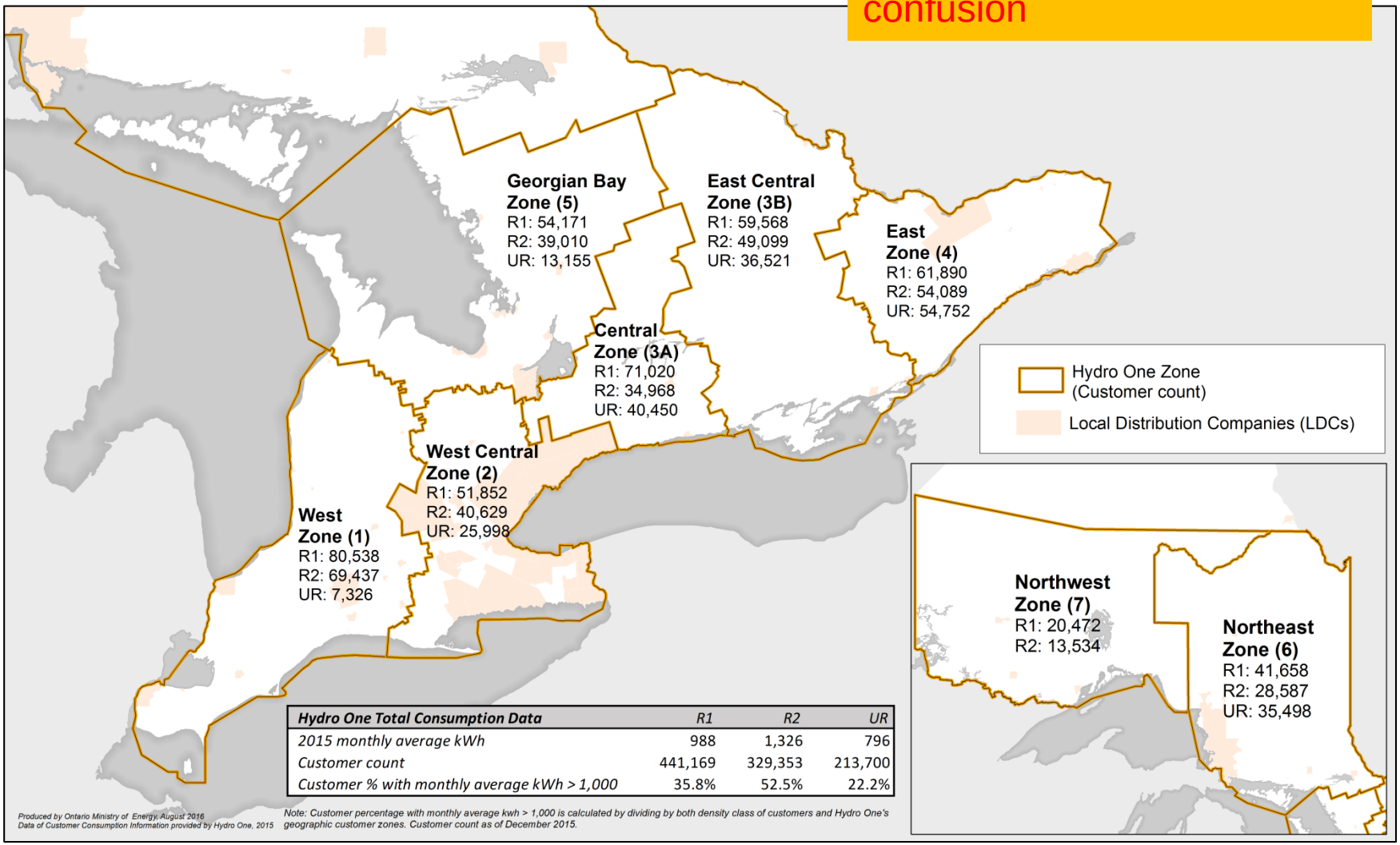
***The LDC with the lowest total bill is Fort Frances Power Corporation (FFPC). However, FFPC does not have the lowest delivery costs in the province. FFPC customers who are not enrolled with a retailer receive a $0.0125/kwh discount on power due to a historic (1905) mill agreement. In order to maintain the discount, FFPC maintains its ROE at 0%.*

****Hydro Hawkesbury has the lowest delivery rates at ~$36 per month*

*****Delivery charges include distribution rates (fixed and variable), transmission, and line loss.*

# 2) Rural or Remote Rate Protection (RRR Consumers by Customer Class

Slide to be updated to only include numbers related to R2 customers to avoid confusion

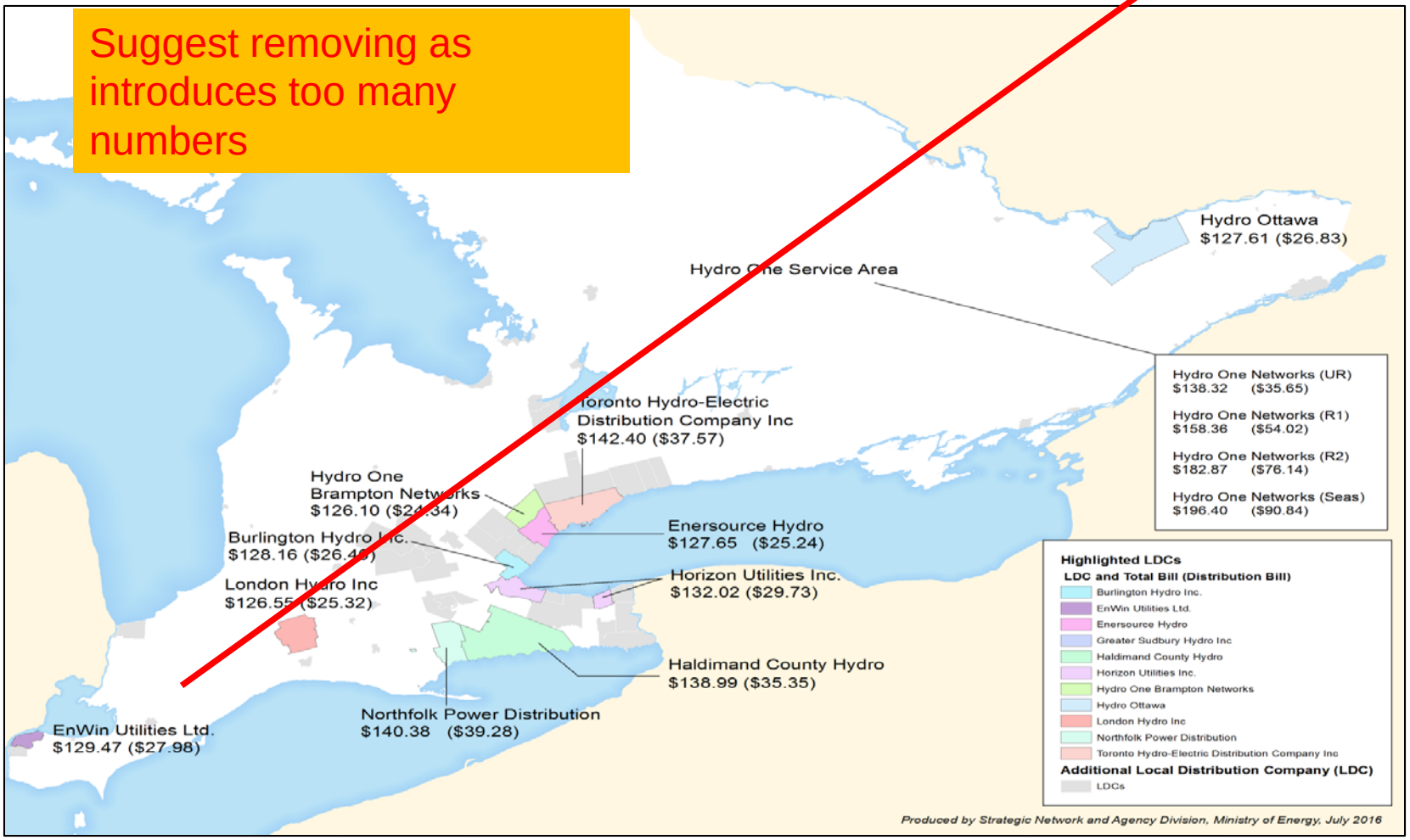



| Hydro One Total Consumption Data | R1 | R2 | UR |
|---|---|---|---|
| 2015 monthly average kWh | 988 | 1,326 | 796 |
| Customer count | 441,169 | 329,353 | 213,700 |
| Customer % with monthly average kWh > 1,000 | 35.8% | 52.5% | 22.2% |

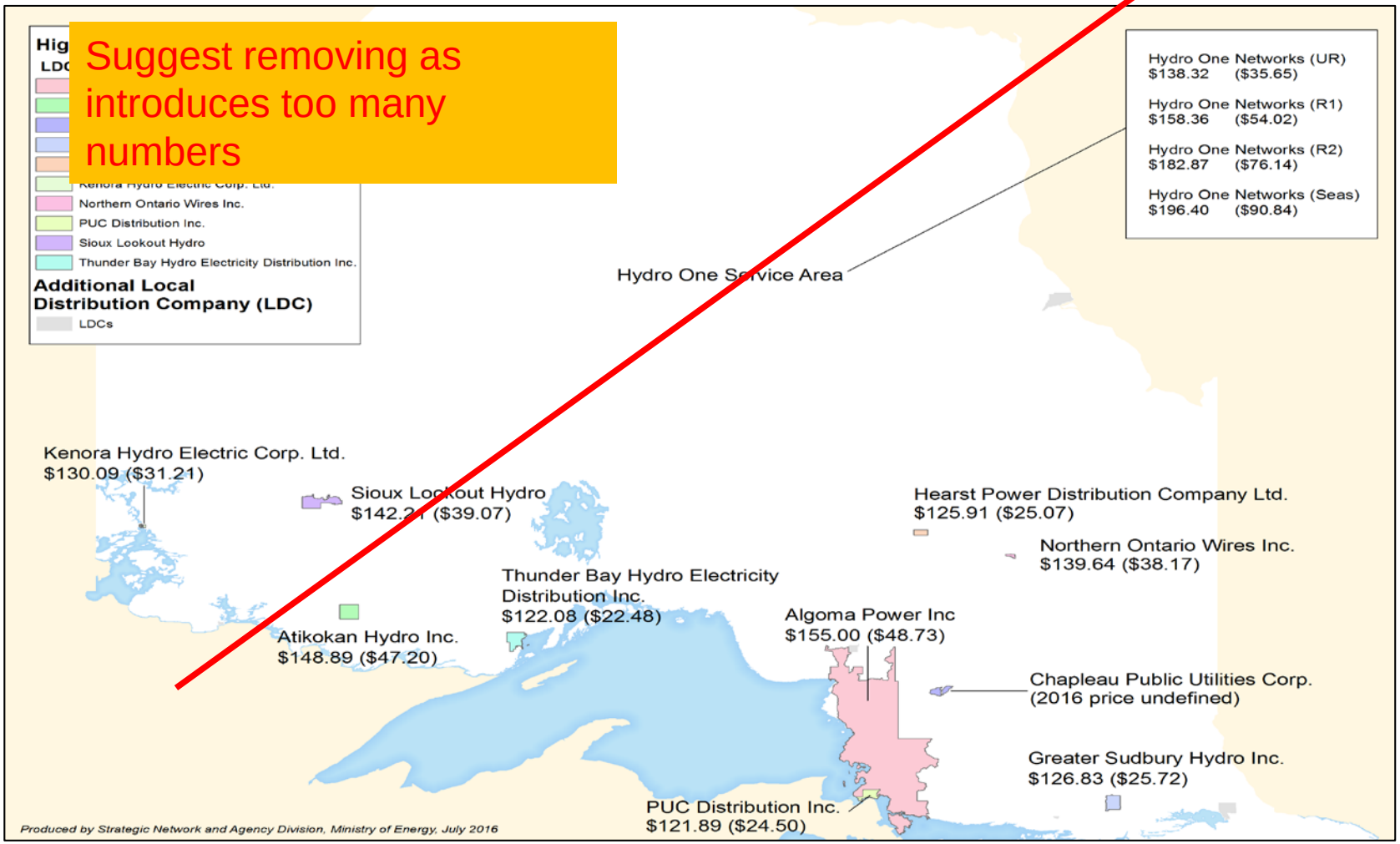
Produced by Ontario Ministry of Energy, August 2016
Data of Customer Consumption Information provided by Hydro One, 2015

Note: Customer percentage with monthly average kwh > 1,000 is calculated by dividing by both density class of customers and Hydro One's geographic customer zones. Customer count as of December 2015.

# Rural or Remote Rate Protection (RRRP) Update – Selected Rate Comparison – Total Bill and Distribution Rate



# Rural or Remote Rate Protection (RRRP) Update – Selected Rate Comparison – Total Bill and Distribution Rate



# 2) Expand Industrial Conservation Initiative and Recycle Cap and Trade Proceeds

# Industrial Conservation Initiative (ICI) Expansion

- ENERGY is proposing to amend O. Reg. 429/04 to expand ICI eligibility effective [X placeholder date].

- Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers).
  - Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

- ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:
  - Reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods;
  - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
  - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

# ICI Expansion – Projected Impact

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

- The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility
  - Short-term refers to the expected impact once ICI billing begins for new Class A consumers (one year after expanded eligibility takes place).
  - Long-term is the expected impact once new Class A consumers have had time to significantly change their behaviour and investment decisions in response to the ICI.

- The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating.

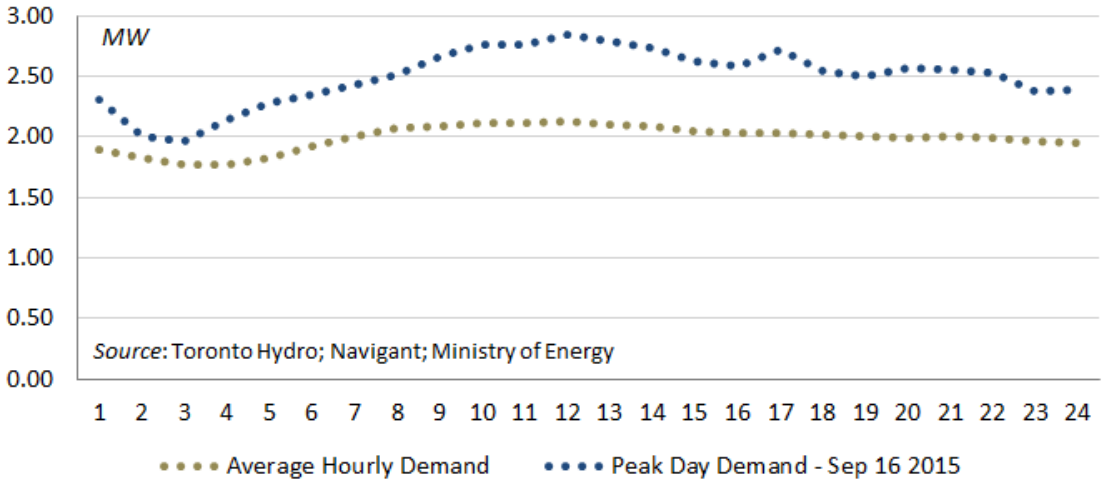
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.

# ICI Expansion – Illustrative Example of Newly Eligible Consumer

- Plastics manufacturers, such as Poly Five Plastics in Toronto, are among the consumers that would become eligible if the threshold was lowered.
- Such manufacturers fall under NAICS* code 32 and have relatively flat load profiles, reflecting around the clock production. This means they would be beneficiaries of ICI even with no change in consumption behaviour.
- Companies like Poly Five Plastics could expect to see greater savings if they are willing and able to respond to the higher prices during high demand hours.

**Typical Demand Profile, 2-3 MW Consumer**

*Manufacturer, NAICS Code 32 - Nov 2014 to Oct 2015*




**Illustrative Bill Savings, 2-3 MW Consumer**

| | *Status Quo* | *No Price Response* | *Short Term Response* | *Long Term Response* |
|---|---|---|---|---|
| | **Class B** | **Class A** | **Class A** | **Class A** |
| GA | 75.26 | 58.06 | 43.55 | 32.03 |
| Total bill | **126.28** | **109.09** | **94.58** | **83.06** |
| *Savings* | | *-14%* | *-25%* | *-34%* |

Source: Navigant; Ministry of Energy

*** Note:** North American Industry Classification System (NAICS) is the standard used by statistical agencies in classifying business establishments.

# Illustrative Bill Impacts

| | Current Bill | Current Rate mitigation initiatives* | Cost of new initiatives (RRRP and ICI) | New Rate Mitigation initiatives | Net impact | New bill |
|---|---|---|---|---|---|---|
| Large Institutional (Toronto – 10 MW, $/MWh) | | | | | | |
| Large Industrial (Timmins – 10 MW, $/MWh) | | | | | | |
| Small Industrial – opt-in (Toronto – 2 MW, $/MWh) | | | | | | |
| Small Institutional (Toronto – 500 kw, $/MWh) | | | | | | |
| Large Commercial – no opt-in (Toronto – 2 MW, $/MWh) | | | | | | |

Placeholder - Pending Update

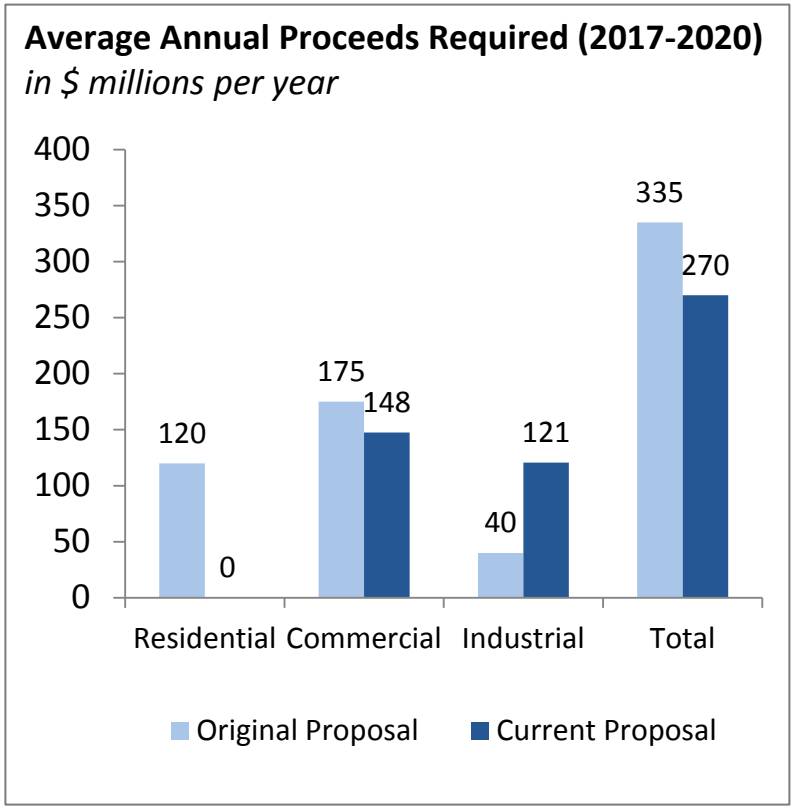
Note: There is the potential for a consumer eligible for the Regulated Price Plan to opt-out of the Regulated Price Plan to opt-in to Class A and receive all three benefits (i.e., Regulated Price Plan, ICI, proceeds recycling).

# Redirect Cap and Trade Proceeds Recycling

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.
  - To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).

- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

- The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $0.24 billion over the first compliance period).




**Note:** The original proposal was to offset the impact of cap and trade via GA to the average industrial, and would provide a benefit to commercial and residential consumers. Current proposal would recycle proceeds volumetrically to industrial and commercial consumers.

# Redirect Cap and Trade Proceeds Recycling

- Recycling cap and trade auction proceeds to lower the cost of electricity would offset consumers' contributions to non-emitting generation.

- Recycling helps pay for committed investments/initiatives which reduce GHGs (e.g., non-emitting generation and conservation programs).
  - Due to the long-term nature (typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period. These costs will continue well beyond the timelines described in the CCAP.

- Recycling cap and trade auction proceeds volumetrically to Class B (commercial) and Class A (industrial) consumers maintains the incentive to shift consumption from on-peak to off-peak hours.

- Using cap and trade auction proceeds to lower the cost of electricity would make it more competitive with traditionally cheaper fossil fuels.

- By using the proceeds to lower the cost of electricity, there is potential to incent fuel-switching away from fossil fuels toward much cleaner grid-connected electricity and support CCAP goals of electrification.

# Illustrative Bill Impacts

Placeholder

# Considerations

# Considerations – Implementation

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010.
  - If passed, the legislation would require a general regulation.
  - Amendments would also be required to various regulations to expand ICI and RRRP.

- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. ENERGY (possibly through Ontario Energy Board) will consult with LDCs to accurately assess these impacts once the program has been announced.
  - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - Timing concerns may be alleviated by allowing LDCs to provide retroactive rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.

- Detailed messaging on bills (for "low-volume" consumer bills ) could be implemented by amending O. Reg. 275/04 (made under the Ontario Energy Board Act, 1998). ~~See appendix for bill mock-up.~~
  - The rebate would not be directly linked to HST.
  - With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.

- ENERGY will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

# Considerations – Fiscal

- The Climate Change Action Plan (CCAP) committed about $1.3 billion over four years for electricity mitigation for industrial, commercial and residential consumers from GGRA proceeds.
  - The current rate mitigation proposal requires approximately 20% less in proceeds, saving approximately $240 million relative to the CCAP commitment over the first compliance period (2017-2020).
- The 8% rebate is expected to cost about $1 billion per year (i.e., $4 billion from 2017-2020), representing an additional pressure on the fiscal plan.
  - Consideration could be given to allocating the $240 million in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset.
- In the absence of any offset strategies, the full cost of the rate mitigation approach would add to the pressures and risks that need to be managed in order for the government to balance the budget in 2017-18 and stay balanced in 2018-19 and beyond.

# Considerations – Legal

- In order to avoid characterization as an unconstitutional tax, a non-tax levy must have a sufficient nexus between those who pay and the regulatory scheme in the sense that those who pay have caused the need for or benefit from the regulatory scheme. Although the case law is not developed on the extent to which some regulated actors can be required to subsidize others, risk is reduced to the extent that any cross-subsidization serves true regulatory goals rather than revenue re-distribution goals.

- HST Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):
  - Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

- ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):
  - Shifting costs to some consumers to lower rates for others without more carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

- RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):
  - Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

- Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):
  - To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

# Communications

- Public high-profile communications would coincide with introduction of legislation (September 2016).
  - Stakeholder outreach/technical briefings with LDCs, Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.
  - Echo public announcements in southwest and north; proactive provincial/local media.

- **Positioning:**
  - A fiscally prudent plan to benefit all ratepayers in a lasting, meaningful way.
  - Rural customers will receive the largest single rate relief ever.
  - Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.

- **Issues Considerations:**
  - Significant benefit for rural and remote residential customers; net gain for all residential customers.
  - More complex to communicate, but can be presented as a full plan that includes reforms and improvements to the system.
  - Consistent with cap-and-trade commitment that no business sector will be left worse off, though small businesses outside ICI will benefit the least.

# Communications – Key Messages

- [Placeholder]

# Proposed Cabinet Minute

CABINET AGREED THAT:

1. THE MINISTRY OF ENERGY (ENERGY), WITH SUPPORT FROM THE MINISTRY OF FINANCE (MOF), SHALL PREPARE LEGISLATION THAT WOULD PROVIDE AN EIGHT PERCENT (8%) REBATE ON THE PRE-TAX COST OF ELECTRICITY FOR THE FOLLOWING CLASSES OF CONSUMERS:
   A. ALL CONSUMERS ELIGIBLE TO BE BILLED UNDER THE ONTARIO ENERGY BOARD'S REGULATED PRICE PLAN; AND
   B. ANY OTHER CONSUMERS WHO WERE ELIGIBLE FOR FINANCIAL ASSISTANCE UNDER THE *ONTARIO CLEAN ENERGY BENEFIT ACT, 2010* (OCEBA) DURING THE PERIOD THAT PROGRAM WAS IN PLACE.

2. THE LEGISLATION SHALL BE GENERALLY MODELLED UPON THE OCEBA, AND WOULD INCLUDE THE FOLLOWING ELEMENTS:
   A. THE REBATE WOULD BE AVAILABLE STARTING JANUARY 1, 2017 AND BEFORE SUCH DATE AS MAY BE PRESCRIBED;
   B. THE REBATE WOULD NOT BE SUBJECT TO A CAP UNLESS A CAP IS PRESCRIBED;
   C. THE LEGISLATION WOULD SPECIFY THE TYPES OF COSTS TO WHICH THE REBATE WOULD OR WOULD NOT BE APPLIED, WITH AUTHORITY TO MAKE CHANGES BY REGULATION;
   D. THE LEGISLATION WOULD ADDRESS INVOICING REQUIREMENTS, INCLUDING AUTHORITY TO PRESCRIBE HOW THE REBATE IS TO APPEAR ON CONSUMER ELECTRICITY BILLS;
   E. THE LEGISLATION WOULD INCLUDE AUTHORITY TO PRESCRIBE THE WAY IN WHICH THE REBATE IS TO BE FLOWED THROUGH TO CONSUMERS, AND THE WAY IN WHICH ELECTRICITY VENDORS PROVIDING THE REBATE ARE TO BE REIMBURSED;
   F. THE LEGISLATION WOULD INCLUDE RECORD-KEEPING REQUIREMENTS FOR ELECTRICITY VENDORS AND ANY OTHER PRESCRIBED PERSONS; AND
   G. THE LEGISLATION WOULD INCLUDE INSPECTION POWERS FOR INSPECTORS APPOINTED BY THE MINISTER OF FINANCE, INCLUDING POWERS RELATED TO RECOVERY OF OVERPAYMENTS.

Pending Update

# Proposed Cabinet Minute (cont'd)

3. ENERGY AMEND O. REG. 429/04 (ADJUSTMENTS UNDER SECTION 25.33 OF THE ACT) MADE UNDER THE *ELECTRICITY ACT, 1998* TO EXPAND ELIGIBILITY FOR CLASS A CONSUMERS AND CLASS A MARKET PARTICIPANTS UNDER THE INDUSTRIAL CONSERVATION INITIATIVE (ICI) TO ALL ELECTRICITY CONSUMERS AND MARKET PARTICIPANTS WITH A PEAK DEMAND ABOVE AN AVERAGE OF ONE MEGAWATT (1MW) WITH NO SECTORAL RESTRICTIONS ON PARTICIPATION.

4. ENERGY AMEND O. REG 442/01 (RURAL OR REMOTE ELECTRICITY RATE PROTECTION) MADE UNDER THE *ONTARIO ENERGY BOARD ACT, 1998* TO INCREASE THE TOTAL AMOUNT OF RATE PROTECTION AVAILABLE TO LOW DENSITY HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE RATE PROTECTION PROGRAM BY $110 MILLION, EFFECTIVE JANUARY 1, 2017.

5. ENERGY CONSIDER AND, IF APPROPRIATE, UTILIZE A MECHANISM TO PERIODICALLY ADJUST THE TOTAL ANNUAL AMOUNT OF RATE PROTECTION AVAILABLE TO HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE ELECTRICITY RATE PROTECTION REGULATION / PROGRAM, EFFECTIVE JANUARY 1, 2018.

Pending Update

6. ENERGY TO RECYCLE UP TO AN AVERAGE OF $270 MILLION OF CAP AND TRADE AUCTION PROCEEDS FROM THE *GREENHOUSE GAS REDUCTION ACCOUNT* PER YEAR OVER THE FIRST COMPLIANCE PERIOD (2017-2020) TO COMMERCIAL AND INDUSTRIAL ELECTRICITY CONSUMERS.

7. ENERGY AND MOF TO WORK WITH CABINET OFFICE (CO) AND PREMIER'S OFFICE (PO) ON COMMUNICATIONS PLAN.

# Appendix

# Glossary of Terms

- **Class A:** A category of electricity consumer/market participant established via the Industrial Conservation Initiative (ICI) that pays Global Adjustment (GA) based on their electricity consumption during the five highest peak demand hours during the year. To be eligible for Class A status a consumer/market participant must have an average hourly peak demand of greater than 5MW or greater than 3 MW and less than or equal to 5MW for certain industrial sectors.

- **Class B:** A category of electricity consumer/market participant that pays GA as a flat rate applied to electricity consumption. Class B electricity consumers/market participants have a peak demand over 50 kilowatts and are not eligible for – or choose not to become – Class A status.

- **Cost Shift Impact:** In the context of electricity rate mitigation programs, the impact of electricity rate mitigation programs in terms of assigning fixed costs of the electricity system to the different electricity consumer classes (e.g. Class A, Class B, RPP).

- **Demand Response (DR):** Programs designed to reduce the amount of electricity drawn from the grid during peak demand periods. Customers could be responding to changes in the price of electricity during the day, incentive payments and/or other mechanisms.

- **Distribution:** A distribution system carries electricity from the transmission system and delivers it to consumers. Typically, the network would include medium-voltage power lines, substations and pole-mounted transformers, low-voltage distribution wiring and electricity meters.

- **Feed-in Tariff (FIT):** A guaranteed rate that provides stable prices through long-term contracts for energy generated using renewable resources.

# Glossary of Terms (con't)

- **Global Adjustment (GA)**: The GA is the difference between the total payments made to certain contracted or regulated generators and demand management projects, and market revenues. The GA serves a number of functions in Ontario's electricity system; it provides more stable electricity prices for Ontario's consumers and generators; it maintains a reliable energy supply; and, it recovers costs associated with conservation initiatives that benefit all Ontarians.
  - The GA is calculated each month by taking into account the following components: Generation contracts administered by the Ontario Electricity Financial Corporation; OPG's nuclear and baseload hydroelectric generation; and OPA contracts with generators and suppliers of conservation services. Consumers on the regulated price-plan (RPP) pay a fixed price set every six months by the Ontario Energy Board which includes the GA, while customers who have a retail contract pay the contract price for their electricity plus the Global Adjustment.

- **Greenhouse Gas Reduction Account (GGRA)**: An account established in the Public Accounts under Bill 172 ("Climate Change Mitigation and Low-carbon Economy Act, 2016") to record proceeds from the distribution of Ontario emission allowances, amounts payable to the Crown, administrative penalties, all expenditures of public money incurred under cap and trade.

- **Kilowatt (kW)**: A standard unit of power that is equal to 1,000 watts (W). Ten 100-watt light bulbs operated together require one kW of power.

- **Kilowatt-hour (kWh)**: A measure of energy production or consumption over time. Ten 100-watt light bulbs, operated together for one hour, consume one kWh of energy

- **Load Size**: The amount of electricity - in standard units of power (i.e., kW/MW) – that a facility/building is able to consume at any one time from the transmission or distribution system.

# Glossary of Terms (con't)

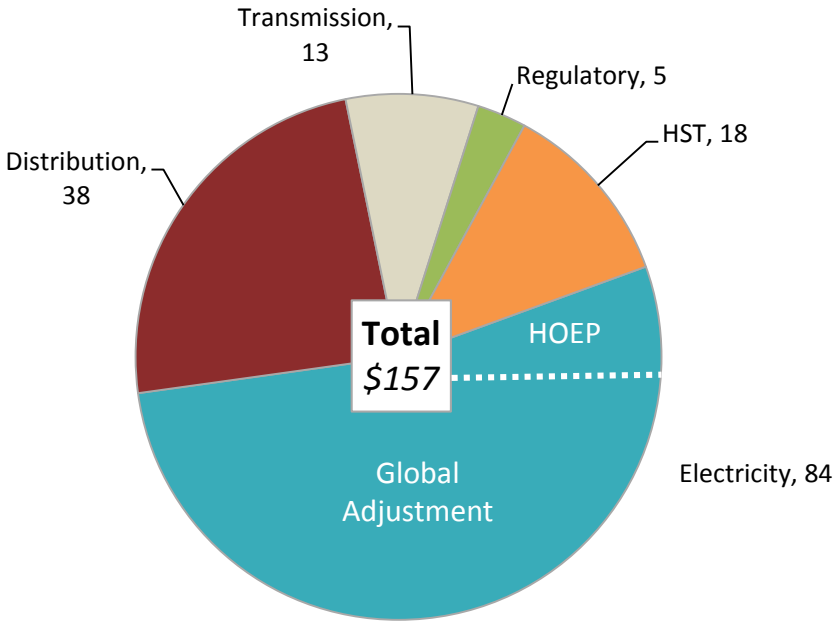
- **Local Distribution Company (LDC)**: A utility that owns and/or operates a distribution system for the local delivery of energy (gas or electricity) to consumers.
- **Megawatt (MW)**: A unit of power equal to 1,000 kilowatts (kW) or 1 million watts (W).
- **Megawatt-hour (MWh)**: A unit of power equal to 1,000 kilowatt-hours (kWh).
- **Peak Demand**: Peak demand, peak load or on peak are terms describing a period in which demand for electricity is highest.
- **Proceeds Recycling (Cap and Trade)**: Applying revenue associated with the functioning of the Ontario cap and trade program to electricity bills in recognition of the significant emissions reduction achieved since 2003.
- **Regulated Price Plan (RPP)**: An Ontario Energy Board developed electricity price plan that provides stable and predictable electricity pricing, encourages conservation and ensures the price consumers pay for electricity better reflects the price paid to generators. The plan has been in place since 2005.
- **Terawatt-hour (TWh)**: A unit of power equal to 1 billion kilowatt-hours.
- **Transmission**: The movement of electricity, usually over long distance, from generation sites to consumers and local distribution systems. Transmission of electricity is done at high voltages. Transmission also applies to the long distance transportation of natural gas and oil.
- **Supply Mix**: The different types of resources that are used to meet electricity demand requirements in a particular jurisdiction. Normally the mix is expressed in terms of the proportion of each type within the overall amount of energy produced.

# Residential Electricity Prices

- There are approximately 5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of May 1, 2016 (750 kWh/month)*




*Source*: OEB, Toronto Hydro

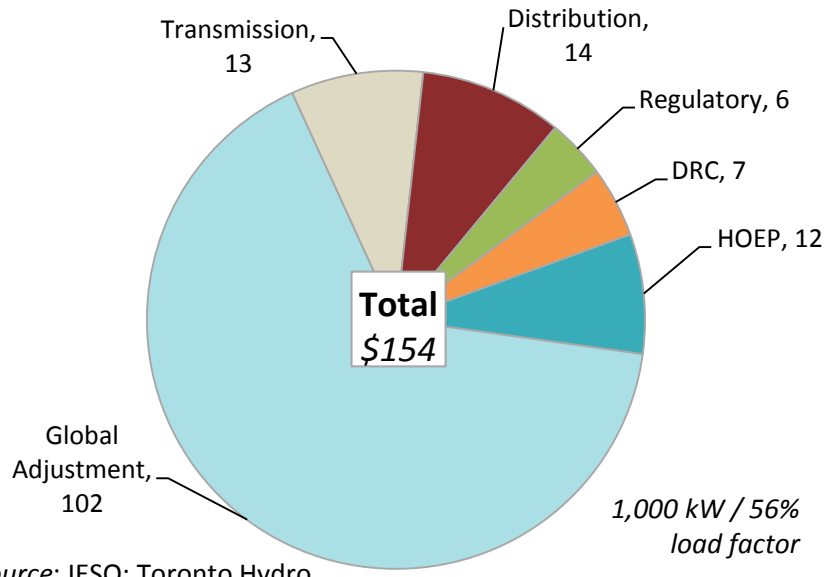
# Commercial Electricity Prices

- There are approximately 400,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.

- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




*Source*: IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.

- Targeted pricing programs are currently not available for Class B consumers.

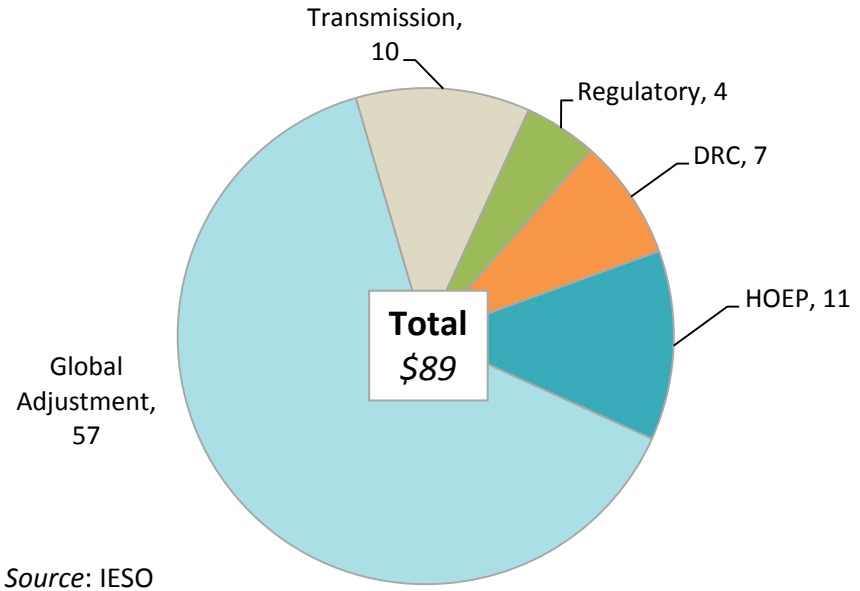
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*




*Source*: IESO

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $64/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Electricity System Cost Reduction Initiatives

- A number of actions have and are being taken to reduce overall electricity system costs:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
  - Reducing Feed-in-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

MOVED to APPENDIX

# Existing Rate Mitigation

- Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs.
  - For example, Northern Ontario residential electricity consumers receive tax credits in recognition of higher electricity costs in the north and rural consumers receive a subsidy funded through the rate-base due to the higher cost of delivering power to rural areas.

- As of 2016, the government removed the Debt Retirement Charge (DRC) from residential electricity bills. While this saves a typical residential electricity ratepayer about $60 per year, it is less than the benefit previously provided through the Ontario Clean Energy Benefit (OCEB).
  - OCEB provided a tax-base rebate of 10% rebate on the total cost of electricity charges related to electricity consumption on eligible bills between 2011 and 2015.

- Because electricity costs must be fully recovered from electricity consumers, rate mitigation funded through the rate-base often represents a shifting of costs from one consumer group to another (i.e., industrial to residential and commercial consumers).
  - Rate-based initiatives are generally associated with incenting changes in behaviour that provide electricity system benefits (i.e., shifting electricity consumption from on-peak to off-peak periods).

- The following slides provide an overview of the programs currently available to different electricity consumer classes along with the cost shift associated with several of the programs.

# Existing Rate Mitigation (cont'd)

| Program | Consumer Type | Rate/Tax -based | Description |
|---|---|---|---|
| Northern Ontario Energy Credit | **Residential** | Tax | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year. |
| Ontario Energy and Property Tax Credit | | Tax | Also delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families. |
| Ontario Electricity Support Program | | Rate | Provides ongoing assistance directly on the bills of eligible low-income electricity consumers. |
| Rural or Remote Rate Protection | | Rate | Provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas. |
| saveONenergy Conservation Programs (including Home Assistance Program for low income customers) | | Rate | Delivered by LDCs which provide financial incentives for electricity-saving measures like LEDs, ENERGYSTAR certified ceiling fans, baseboard programmable thermostats, clotheslines, and advanced powerbars. |
| saveONenergy Conservation Programs (including Retrofit Program for Buildings and other programs) | **Commercial** | Rate | saveONenergy suite of electricity conservation programs for commercial customers offered by local distribution companies (LDCs) help businesses save energy to better manage their electricity consumption and reduce their annual electricity costs. See Appendix for more information. |
| Industrial Conservation Initiative | **Industrial** | Rate | Encourages Ontario's largest consumers to reduce consumption during peak periods to save on average 25% on their electricity bills. |
| Industrial Accelerator Program | | Rate | Provides financial incentives of up to $10 million to transmission-connected electricity consumers, to invest in energy-efficiency or self-generation which would reduce the amount of electricity withdrawn from the provincial grid. |
| Industrial Electricity Incentive | | Rate | Provides reduced electricity rates for companies starting or expanding operations in Ontario. |
| Northern Industrial Electricity Rate Program | | Tax | Provides $20 megawatt per hour (MWh) rebate for qualifying large northern industrial consumers. |
| Demand Response | | Rate | Provides payments to businesses and industry to shift consumption at times when the electricity system is stressed. DR currently provides ~500 MW of capacity to the system. |

Note: MO requested that this slide be removed; staff recommend keeping it in the appendix.

# saveONenergy Conservation

| Program | Consumer Type | Description |
|---|---|---|
| **Heating and Cooling Initiative** | **Residential** | Provides rebates to help offset the cost of purchasing and installing new heating and cooling equipment in the home. |
| **Coupons** | | Available in-store for one month in the spring and fall and can be downloaded year-round to use at participating retailers to help Ontarians save on a wide range of energy-efficient products including LED bulbs, power bars with integrated timers and more. |
| **Audit Funding** | **Business** | Up to 50% of the cost of an energy audit to identify opportunities for energy efficiency upgrades and eligible incentives. |
| **Retrofit Program** | | Provides various incentives for as much as 50 per cent of project costs, and advanced funding for assisted and social housing buildings, for updating old or inefficient equipment, including lighting, motors, unitary AC or packaged rooftop units. |
| **Small Business Lighting** | | Provides incentives for new energy efficient lighting. |
| **New Home Construction** | | Designed to encourage home builders and renovators to construct energy-efficient homes, and includes incentives for installation of energy-efficient measures. |
| **Training and Support** | | Helps provide access to the most up-to-date training, such as in building commissioning, certified measurement and verification, and how to be an energy manager. |
| **Process and Systems** | | Provides up to $50,000 for engineering studies and up to 70% of capital costs for energy efficiency upgrades. |
| **Industrial Accelerator Program** | | Assists eligible transmission-connected companies to fast track capital investment in major energy conservation projects. |

Note: MO requested that this slide be removed; staff recommend keeping it in the appendix.

# HST – Overview

- The HST is a value-added tax. Unlike a sales tax, under a value-added tax most businesses effectively do not pay tax on their inputs because they are able to claim input tax credits (ITCs).
  - Through ITCs, the HST removes embedded sales taxes paid by businesses.
  - Only HST registrants that have taxable sales can claim ITCs. Businesses selling HST-exempt goods or services (such as financial services) are not eligible to claim input tax credits.

- Unlike businesses engaged in commercial activities, Public Service Bodies (PSBs) are generally not eligible to claim input tax credits. Instead, they can recover a portion of the HST paid by applying for PSB rebates from the Canada Revenue Agency.
  - PSBs consist of municipalities, universities, public colleges, school authorities, hospital authorities and charities and qualifying non-profit organizations.
  - See ~~Appendix for additional information~~ Additional Information – Public Service Bodies.

- To help low- to moderate-income individuals and families with the sales tax they pay on home energy costs (including electricity), Ontario provides tax relief through the energy component of the Ontario Energy and Property Tax Credit (OEPTC).
  - For the 2016 benefit year, eligible families and single people could get up to $224 to help with these costs, totalling about $445 million in tax relief.

- Ontario also provides tax relief through the Ontario Sales Tax Credit (OSTC), which was enhanced in 2010 to help low- to moderate- income individuals and families with the overall sales taxes they pay.
  - For the 2016 benefit year, eligible individuals can get up to $291 plus additional amounts of up to $291 for their spouse and each of their dependant children under age 19.
  - The 2016 OSTC is estimated to provide about $1.3 billion in tax relief.

# Sales Tax Treatment in Other Jurisdictions

| Jurisdiction | Tax | Tax Paid by Business Customers? | Tax Paid by Residential Customers? | Comment |
|---|---|---|---|---|
| **British Columbia** | PST | Yes – 7% | No | • PST does not apply to residential energy, including electricity, acquired solely for residential use in a residential dwelling<br>• BC's carbon tax does not apply to electricity bills. |
| **Alberta** | None | N/A | N/A | • Alberta does not have a provincial sales tax. |
| **Saskatchewan** | PST | Yes – 5%<br>Except for electricity purchased to heat a building. | No | • PST does not apply to electricity purchased for use in a residential dwelling.<br>• PST does not apply to electricity purchased for use in heating a building that is heated solely by the electricity. |
| **Manitoba** | PST | Yes – 8%<br>Reduced rate of 1.6% applies to electricity used by a qualifying business to operate machinery | Yes – 8%<br>Electricity purchased for mixed use, 80% of which is home heating, has a reduced rate of 1.4%. Electricity solely to heat the purchaser's home is exempt. | • Winnipeg also applies a tax of 2.5% on residential and 5% on commercial. |
| **Ontario** | HST | Yes (less ITC (input tax credits)) | Yes – 8% | |
| **Quebec** | QST | Yes (less ITCs) | Yes – 9.975% | |
| **Nova Scotia** | HST | Yes (less ITCs) | Yes – 10% less provincially administered rebate. | • Rebate is equal to the provincial portion of the HST, and is administered similar to OCEB, but applies to many energy sources. |
| **New Brunswick** | HST | Yes (less ITCs) | Yes – 10% | |
| **Prince Edward Island** | HST | Yes (less ITCs) | Yes – 9% (10% beginning Oct 1, 2016) | |
| **Newfoundland and Labrador** | HST | Yes (less ITCs) | Yes – 10% | • Had a provincially administered Home Heating Rebate program until July 2015. |
| **Federal** | GST | Yes (less ITCs) | Yes – 5% | |

Note: MO requested that this slide be removed; staff recommend keeping it in the appendix.

# HST – Considerations

- An across-the-board 8% rebate could be criticized as providing HST relief to those who effectively do not pay HST (businesses) as well as to those who receive HST relief through Public Service Body rebates or income tax relief.

- Providing a rebate equivalent to the 8% provincial portion of the HST on electricity, could lead to pressure to provide similar relief for other fuels and energy sources.
  - Ontarians who heat their homes with electricity will benefit from the provincial rebate, while Ontarians who heat their homes with natural gas, heating oil, propane, etc. would continue to pay the full 13% HST on those other energy sources.
  - The costs of natural gas, heating oil, propane, etc. are expected to increase as a result of Ontario's forthcoming cap and trade program.

- The provincial rebate would be an amount equal to the 8% provincial portion of the HST on electricity. OCEB, in contrast, was 10% of the bill including HST.

- The Province may also need to change the reporting for the cost of the energy component of the Ontario Energy and Property Tax Credit, which provides relief for HST on home energy. The energy component is reported as an offset of HST revenue.
  - Ministry program expenses could increase by as much as $445 million (TBC).

- The greater degree of complexity in the design of the program, the more difficult it will be to draft, implement and administer.

- To improve the province's ability to track impacts and program outcomes, subsequent legislative amendments to enable exchanges of data with LDCs could be considered.

# Additional Information – Public Service Bodies

- Unlike businesses engaged in commercial activities, Public Service Bodies (PSBs) are generally not eligible to claim input tax credits. Instead, they can recover a portion of the HST paid by applying for PSB rebates from the Canada Revenue Agency.

- Ontario's rebate rates are intended to keep these sectors fiscally neutral relative to the Retail Sales Tax they paid on their inputs under the former RST system.

| REBATE RATES FOR PSBs | | |
|---|---|---|
| **PSB Type** | **Ontario (8%)** | **Federal (5%)** |
| Municipalities | 78% | 100% |
| Universities & Public Colleges | 78% | 67% |
| School Authorities | 93% | 68% |
| Hospital Authorities | 87% | 83% |
| Charities and Qualifying Non-Profit Organizations* | 82% | 50% |

**A qualifying non-profit organization receives at least 40% of its funding from government.*

# Industrial Conservation Initiative (ICI) – Overview

- In January 2011, Ontario amended O.Reg. 429/04 to implement the Industrial Conservation Initiative (ICI). This initiative established two classes of consumers:
  - "Class A" consumers are those with monthly peak demand exceeding 5 MW. They are charged global adjustment (GA) on the basis of their contribution to system peak demand during the highest 5 system demand hours of the year.
  - "Class B" consumers are all other consumers. They continue to be charged GA as a flat rate applied to their consumption.
- In May 2014, O.Reg. 429/04 was further amended to admit all consumers with monthly peak demand between 3 and 5 MW within certain energy-intensive industrial sectors into the ICI.
- This change has been successful in:
  - Incenting large consumers to significantly reduce their peak demand during the highest demand hours of the year, and
  - Providing large industrials with the ability to manage their electricity costs and remain competitive with competing jurisdictions.

# Expected Numbers of Newly Eligible ICI Consumers

- As part of its ICI survey, Navigant collected data on the number of consumers in the 1-2 MW, 2-3 MW and 3-5 MW categories. Navigant's response rate for the survey was approximately 76%. Approximately 300 consumers are currently participating in ICI.

- The table below sets out the number of consumers in each tranche from the survey along with an "adjusted number" which estimates the actual total number of customers in each tranche in the province (i.e., it accounts for the response rate).

- As expected, there are a greater number of consumers in the 1 -2 MW category than in the 2 – 3 MW category.

| | **1-2 MW** | **2-3 MW** | **3-5 MW*** |
|---|---|---|---|
| # of customers – ICI survey | 649 | 197 | 171 |
| # of customers – Adjusted for response rate | 854 | 259 | 225 |

*Source:* Navigant; Ministry of Energy

* Includes consumers that are already eligible for and participating in ICI. ENERGY estimates that approximately 75 of 225 estimated consumers in the 3-5 MW category are participating in ICI.

# Alignment With Climate Change Action Plan

- Ontario's Climate Change Action Plan (CCAP) commits $6.0 – 8.3 billion over 4 years to greenhouse gas (GHG) reduction initiatives, funded by Cap and Trade auction proceeds.

- The CCAP includes up to $1.32 billion over 4 years to help keep electricity rates affordable for residential and industrial consumers. This initiative is estimated to reduce up to 3,000,000 tonnes of greenhouse gas (GHG) emmissions by 2020.

| ***$ Billions*** | **2017-18** | **2018-19** | **2019-20** | **2020-21** | **Total** |
|---|---|---|---|---|---|
| Total Committed in CCAP | **$1.5 – 2.1** | **$1.5 – 2.1** | **$1.5 – 2.1** | **$1.5 – 2.1** | **$6.0 – 8.3** |
| *Electricity Price Mitigation* | *Up to 0.3* | *Up to 0.3* | *Up to 0.3* | *Up to 0.3* | *Up to 1.3* |

- Ontario's *Climate Change Mitigation and Low-carbon Economy Act, 2016* requires that all proceeds generated from Cap and Trade be used to help reduce greenhouse gas emissions.

- Should a portion of CCAP funding currently allocated to Electricity Price Mitigation be used to offset rate increases for certain industrial consumers, the remaining CCAP funding could provide a fiscal plan offset to the overall initiative by funding other existing initiatives that help reduce greenhouse gas emissions – for example:
  - Regional Express Rail;
  - Hamilton LRT;
  - Hurontario LRT; and
  - Energy efficiency in schools.

**From:** Ronald Kwan
**To:** John Kim; Shajee Kathirgamanathan
**Cc:** Tomasz Bugajski
**Subject:** Fw: CabSub edits
**Date:** Saturday, September 10, 2016 10:23:39 AM
**Attachments:** Cabinet Submission - Electricity Price Mitigation FINAL.pdf

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From: DeSouza, Jenarra (MOF) <Jenarra.DeSouza@ontario.ca>
Sent: September 10, 2016 10:20 AM
To: Tomasz Bugajski; Birks, Ryan (MEDEI/MRI); Ghufran Tarin (MOF); Ghufran Tarin (MOF); Shannon Lewis (MOF)
Cc: Ronald Kwan; Tim Schuurman (MOF); Brian Lewis (MOL); Michael Waterston (MOF); Sriram Subrahmanyan (MOF)
Subject: FW: CabSub edits

FYI - final Cabsub attached

From: Katona, Keley (ENERGY)
Sent: Saturday, September 10, 2016 10:15 AM
To: DeSouza, Jenarra (MOF)
Cc: Young, Gwendolynne (MOF); Subrahmanyan, Sriram (MOF); Langleben, Ann (MOF)
Subject: Re: CabSub edits

Attached.

From: DeSouza, Jenarra (MOF)
Sent: Saturday, September 10, 2016 10:13 AM
To: Katona, Keley (ENERGY)
Cc: Young, Gwendolynne (MOF); Subrahmanyan, Sriram (MOF); Langleben, Ann (MOF)
Subject: RE: CabSub edits

Noted. Could you pls share final materials

From: Katona, Keley (ENERGY)
Sent: Friday, September 09, 2016 7:26 PM
To: DeSouza, Jenarra (MOF)
Cc: Young, Gwendolynne (MOF); Subrahmanyan, Sriram (MOF); Langleben, Ann (MOF)
Subject: RE: CabSub edits

Thanks for these. Unfortunately, our Minister signed off on the submission this afternoon.

From: DeSouza, Jenarra (MOF)
Sent: September-09-16 7:12 PM
To: Katona, Keley (ENERGY)
Cc: Young, Gwendolynne (MOF); Subrahmanyan, Sriram (MOF); Langleben, Ann (MOF)
Subject: CabSub edits

Hi Keley

For your consideration - attached are comments for the Electricity Price Mitigation CabSub

Pls see slides 10, 13, 14, 24, 26, 29 and Appendix slide 34
The wording of the Cabinet Minute in this Cab Sub is preferred over the stand-alone wording in the excerpt

If you have any questions pls let us know

Cheers
Bernice Lau

- for Jenarra DeSouza

From: Lawson, Lynn (MOF)
Sent: September 9, 2016 3:23 PM
To: Subrahmanyan, Sriram (MOF); DeSouza, Jenarra (MOF)
Cc: Waterston, Michael (MOF); Langleben, Ann (MOF); Patel, Lesley (MOF); Lone, Dianne (MOF); Kennedy, Marta (MOF); Lam, Linda (MOF); Boxen, Simone (MOF); Diomin, Svetlana (MOF); Lewis, Shannon (MOF)
Subject: RE: Major Projects this week

The Cab Sub would benefit from some edits. We have comments on slides 10, 13, 14, 24, 26, 29 and Appendix slide 34. Please see attached

The wording of the Cabinet Minute in this Cab Sub is preferred over the stand-alone wording in the excerpt they provided.

From: Subrahmanyan, Sriram (MOF)
Sent: September 8, 2016 10:59 PM
To: Waterston, Michael (MOF); Lone, Dianne (MOF); Patel, Lesley (MOF); Langleben, Ann (MOF); Lawson, Lynn (MOF)
Cc: DeSouza, Jenarra (MOF)
Subject: Fw: Major Projects this week

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Young, Gwendolynne (MOF)
<Gwendolynne.Young@ontario.ca<mailto:Gwendolynne.Young@ontario.ca>>
Sent: Thursday, September 8, 2016 10:07 PM
To: Subrahmanyan, Sriram (MOF); DeSouza, Jenarra (MOF); Baig, Saad (MOF); Nguyen, Marianne (MOF); Schuurman, Tim (MOF); Kwan, Ronald (OFA); Pearce, Christopher (MOF); Birks, Ryan (MOF)
Cc: McLean, David (MOF)
Subject: Fw: Major Projects this week

Hi All - attached are updated materials from ENERGY.

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: McLean, David (MOF) <David.McLean@ontario.ca<mailto:David.McLean@ontario.ca>>
Sent: Thursday, September 8, 2016 8:32 PM
To: Young, Gwendolynne (MOF)
Subject: FW: Major Projects this week

FYI

From: Katona, Keley (ENERGY)
Sent: September 8, 2016 8:32 PM
To: Kwamena, Boafoa (CAB); McLean, David (MOF)

Cc: Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB); Moore, Karen (CAB)
Subject: RE: Major Projects this week

Hi,
Attached is the latest iteration of the Cabinet submission, including an updated minute. This is with our MO for review but wanted to keep you updated so you can continue to revise your TB / CAB notes. Note that some of the numbers have changed to remain consistent with methodology throughout the submission.
Keley

From: Katona, Keley (ENERGY)
Sent: September-08-16 12:22 PM
To: Kwamena, Boafoa (CAB); McLean, David (MOF)
Cc: Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
Subject: RE: Major Projects this week

For your records, attached is what was circulated at Major Projects today.

From: Katona, Keley (ENERGY)
Sent: September-07-16 3:38 PM
To: Kwamena, Boafoa (CAB); McLean, David (MOF)
Cc: Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
Subject: RE: Major Projects this week

We’re making edits based on comments from our MO. Could be this evening or tomorrow morning.

From: Kwamena, Boafoa (CAB)
Sent: September-07-16 3:33 PM
To: Katona, Keley (ENERGY); McLean, David (MOF)
Cc: Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
Subject: RE: Major Projects this week

Hi

Will be likely receive material  later today or tomorrow?

Thanks

From: Katona, Keley (ENERGY)
Sent: September-07-16 10:12 AM
To: Kwamena, Boafoa (CAB); McLean, David (MOF)
Cc: Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
Subject: Re: Major Projects this week

Sorry, disregard, we'll make it work on our end. Thanks.

From: Katona, Keley (ENERGY)
Sent: Wednesday, September 7, 2016 10:06 AM
To: Kwamena, Boafoa (CAB); McLean, David (MOF)
Cc: Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
Subject: RE: Major Projects this week

Hi Boafoa,

Wondering if it’s possible for the electricity item to be last on the agenda tomorrow. We have a Minister’s briefing which conflicts with Major Projects, involving the same staff and it would be very helpful if we could be on at 11am.

Thanks,
Keley

From: Kwamena, Boafoa (CAB)
Sent: September-06-16 5:29 PM
To: Katona, Keley (ENERGY); McLean, David (MOF)
Cc: Foster, Robert (CAB); MacIntyre, Kyle (TBS); Bromm, William (CAB)
Subject: Major Projects this week

Hi Keley/David

We will be adding the Electricity Pricing Mitigation item to Major Projects this Thursday. This will be an opportunity to ensure everyone is on the same page in advance of the TB trip next week. Major Projects is scheduled from 10:30 to 11:30 on Thursday. This item will be the first–10:30 to 11:00. Please let me know if this time doesn't work or if there are any concerns.

Thanks
Boafoa

Boafoa Kwamena
Special Advisor
Office of the Secretary of the Cabinet
Cabinet Office
416-325-4400
Boafoa.kwamena2@ontario.ca<mailto:Boafoa.kwamena2@ontario.ca>

Ontario

# Electricity Price Mitigation

## Ministry of Energy

**Date: September 12, 2016**

Minister

Deputy Minister

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

- Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables.
  - This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%.

- Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online.

- The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers.

# Electricity Consumer Classes

- There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

**** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

# Current Rate Base Mitigation Programs

- Ontario has implemented several programs to help electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers;
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs; and
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- These programs have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial) as shown in the table below:

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

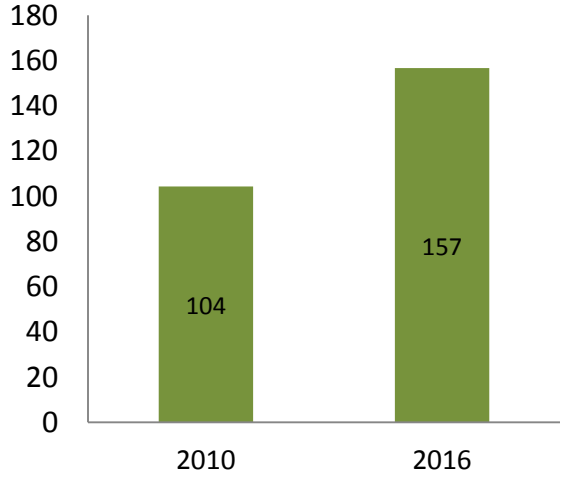
**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

# Prices by Electricity Consumer Class

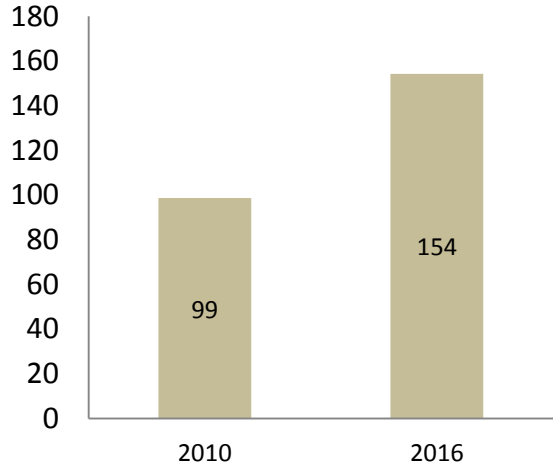
- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.

- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers.

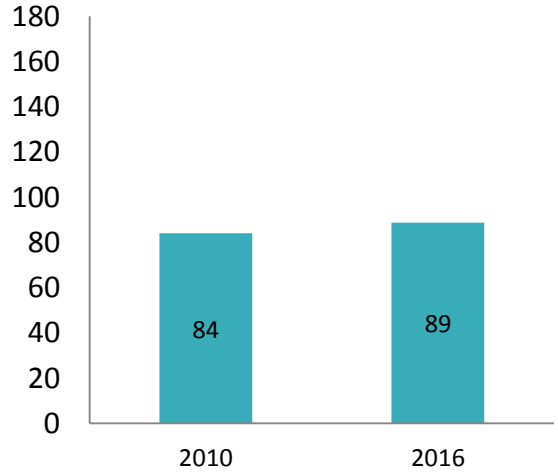
**Typical Residential Bill (750/kWh per month)**




**Typical Class B (Commercial) Price ($/MWh)**




**Typical Class A (Industrial) Price ($/MWh)**



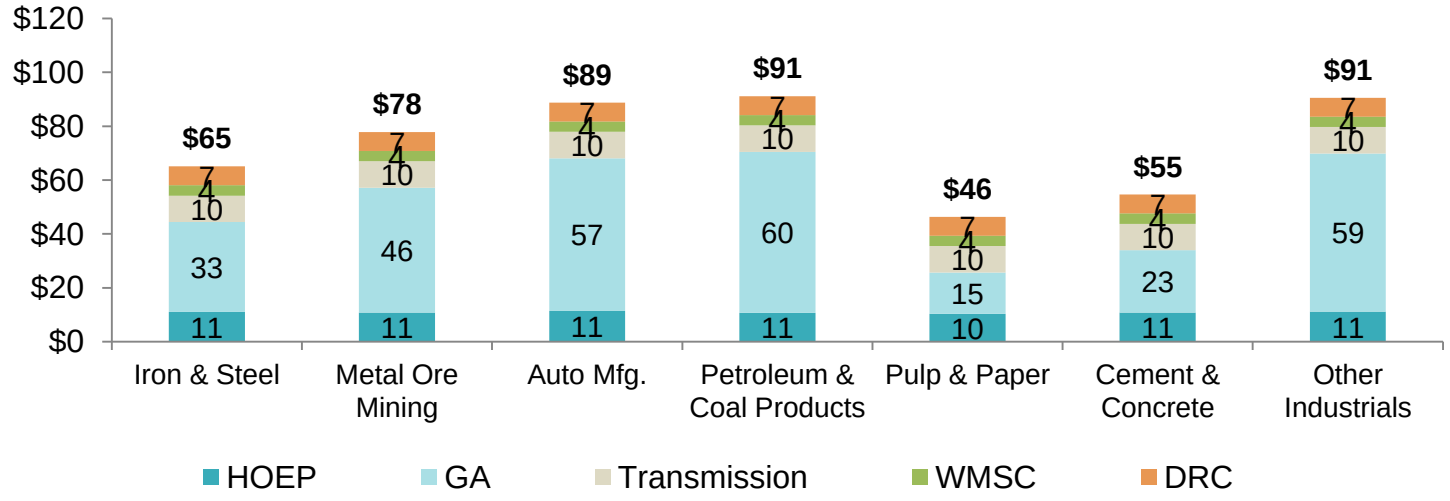

**Note:** 2016 represents May 2016 for residential after-tax and YTD June 2016 for commercial and industrial.

# Industrial Electricity Prices Vary by Sector

- While Class A (industrial consumers) benefit from participation in the ICI program, there is a significant amount of variability in the ability to shift away from peak periods across customer classes, impacting the savings achieved.

- The below chart shows the prices paid in 2015 across a number of industrial sectors. Consumers in the north that receive rebates under the Northern Industrial Electricity Rate Program (NIERP) achieve rates that are $20/MWh lower than the below.

**Average all-in Class A, Transmission-connected Electricity Prices by Industrial Sector (estimated $/MWh), Year-to-Date June 2016**




**Note:** HOEP = Hourly Ontario Energy Price, GA = Global Adjustment, WMSC = Wholesale Market Service Charges, DRC = Debt Retirement Charge

# Recent Actions to Bend the Cost Curve

- Since 2013, a number of actions have been taken to reduce overall electricity system costs:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

# Rate Mitigation

- The 2016 Budget committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) committed $1.3 billion from the Greenhouse Gas Reduction Account (GGRA) over the first compliance period (2017-2020).

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:

  - **Tax-based Lever:**
    - Provide an on-bill rebate funded from the tax-base to all consumers or specific classes of consumers (i.e., the Ontario Clean Energy Benefit (OCEB) provided a rebate for eligible electricity consumers).

  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.

  - **Cap and Trade Proceeds Lever:**
    - Redirect cap and trade proceeds to offset the cost of existing initiatives that help reduce greenhouse gas (GHG) emissions (i.e., the CCAP committed to offset the impact of cap and trade and to keep electricity rates affordable).

# Rate Mitigation Proposal

- The Ministry of Energy is proposing to implement the following electricity price mitigation initiatives. The approach identified below would provide relief across all electricity consumer classes:

  1) Provide an 8% rebate equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms) and update the Rural or Remote Rate Protection (RRRP) program, to provide relief to rural customers; and

  2) Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial) and redirect cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

- The following slides provide additional information on the above initiatives.

***Note:** Eligibility for the 8% rebate would be similar to OCEB and include some customers not on the Regulated Price Plan (RPP), such as Independent Power Authority consumers and consumers that have opted-out of RPP.

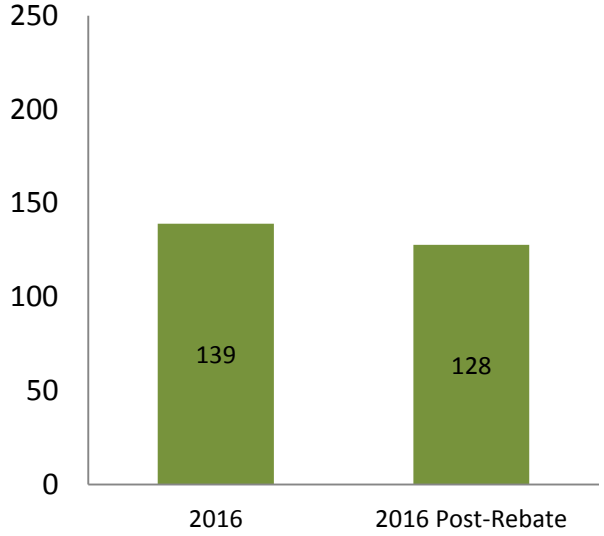
# Rate Mitigation Proposal – Illustrative Benefits*

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Benefit | | Class B (Commercial) Benefit | Class A (Industrial) Benefit | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br><br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br><br>(-8%) | -$45/ month<br><br>(-20%) | -$3/MWh<br><br>(-2%) | -$3/ MWh<br><br>(-3%) | Up to -$52/MWh<br><br>(-34%) |

*** Notes:** The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

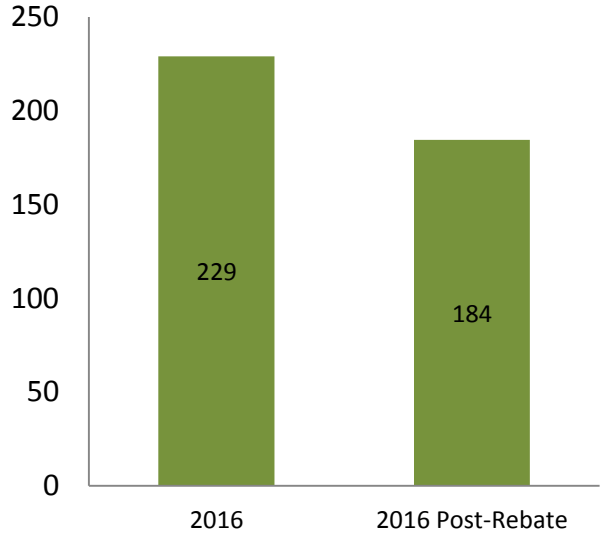
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class

**Typical Residential Bill**
**750kWh per month, 8% only**




The benefit is a 8% reduction.

**Rural (R2) Residential Bill**
**1,000kWh per month, 8% and RRRP Update**

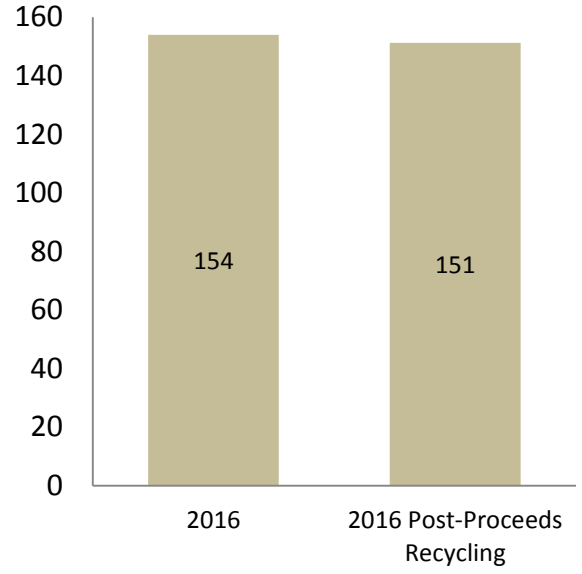



The benefit is a 20% reduction.

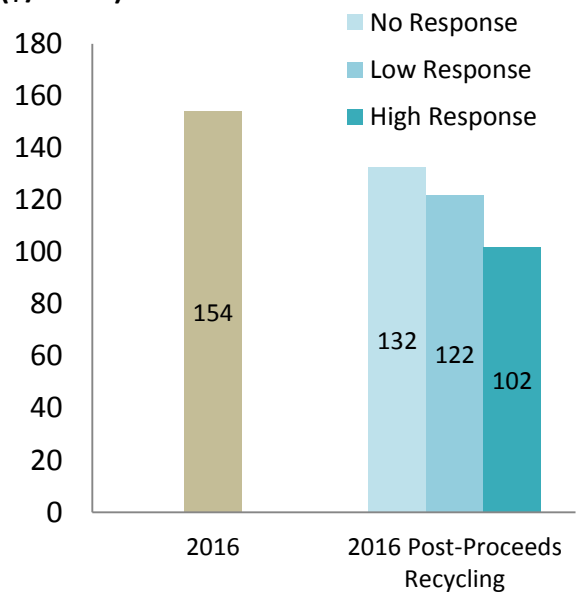
**Note:** The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh).

# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class (cont'd)

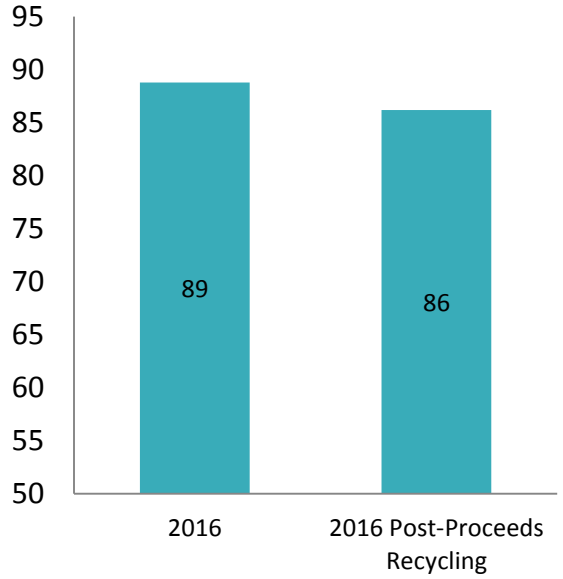
**Typical Class B (Commercial) Price ($/MWh)**




**Typical New Class A Price ($/MWh)**




**Typical Class A (Industrial) Price ($/MWh)**




**Class B:** The benefit is a 2% reduction.

**New Class A:** The benefit is a reduction of 14% to 34%.

**Existing Class A:** The benefit is a 3% reduction.

**Notes:** The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

# 1) Regulated Price Plan Eligible Consumers and Rural or Remote Rate Protection Update

# 8% Rebate to Regulated Price Plan Eligible Consumers

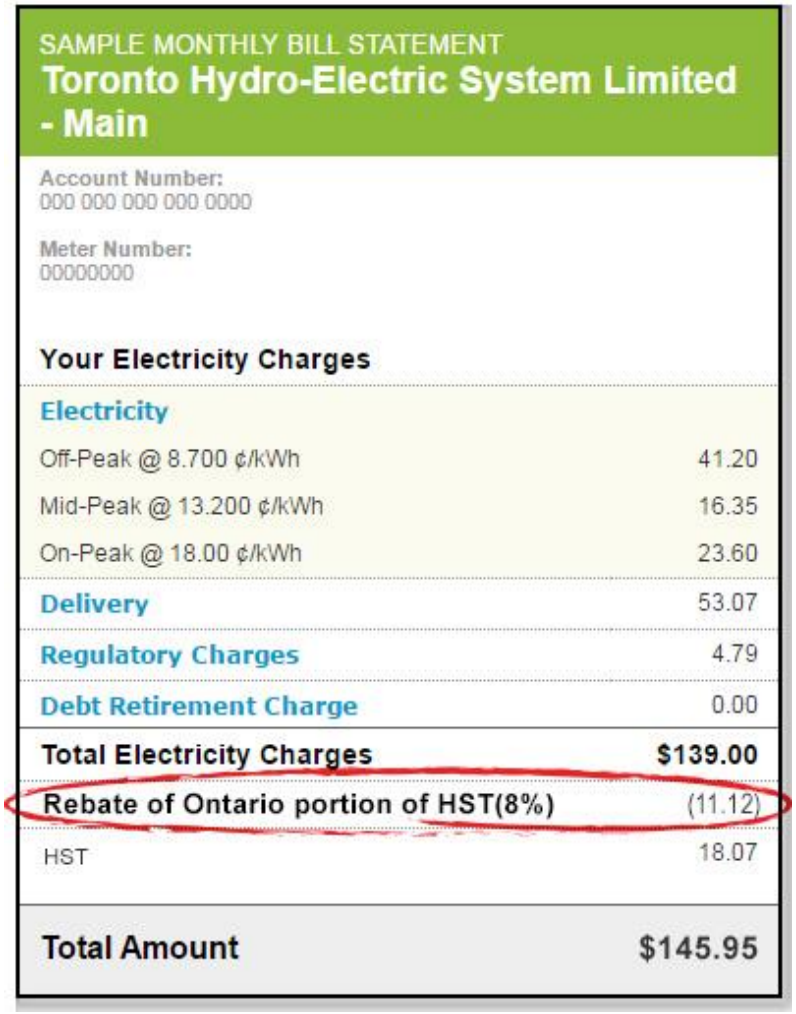
- Legislation/regulation will be introduced to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit.
  - This would be equivalent to the provincial portion of the HST*.

| **Eligible for the 8% rebate**<br>(< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate**<br>(> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>  – Coffee / snack retailer<br>  – Convenience store<br>  – Apparel store<br>  – Hair salon<br>  – Small insurance office | • Class A consumers<br>  – Manufacturer<br>  – Large grocery store<br>  – Mines<br>  – Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>  – Commercial offices (low rise)<br>  – Hotel<br>  – General warehousing |

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).

***Note:** An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

# Illustrative Electricity Bill Mock-Up



SAMPLE MONTHLY BILL STATEMENT

**Toronto Hydro-Electric System Limited - Main**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| **Rebate of Ontario portion of HST(8%)** | (11.12) |
| HST | 18.07 |
| **Total Amount** | **$145.95** |

**Note:** Final bill presentment pending submission to LRC.

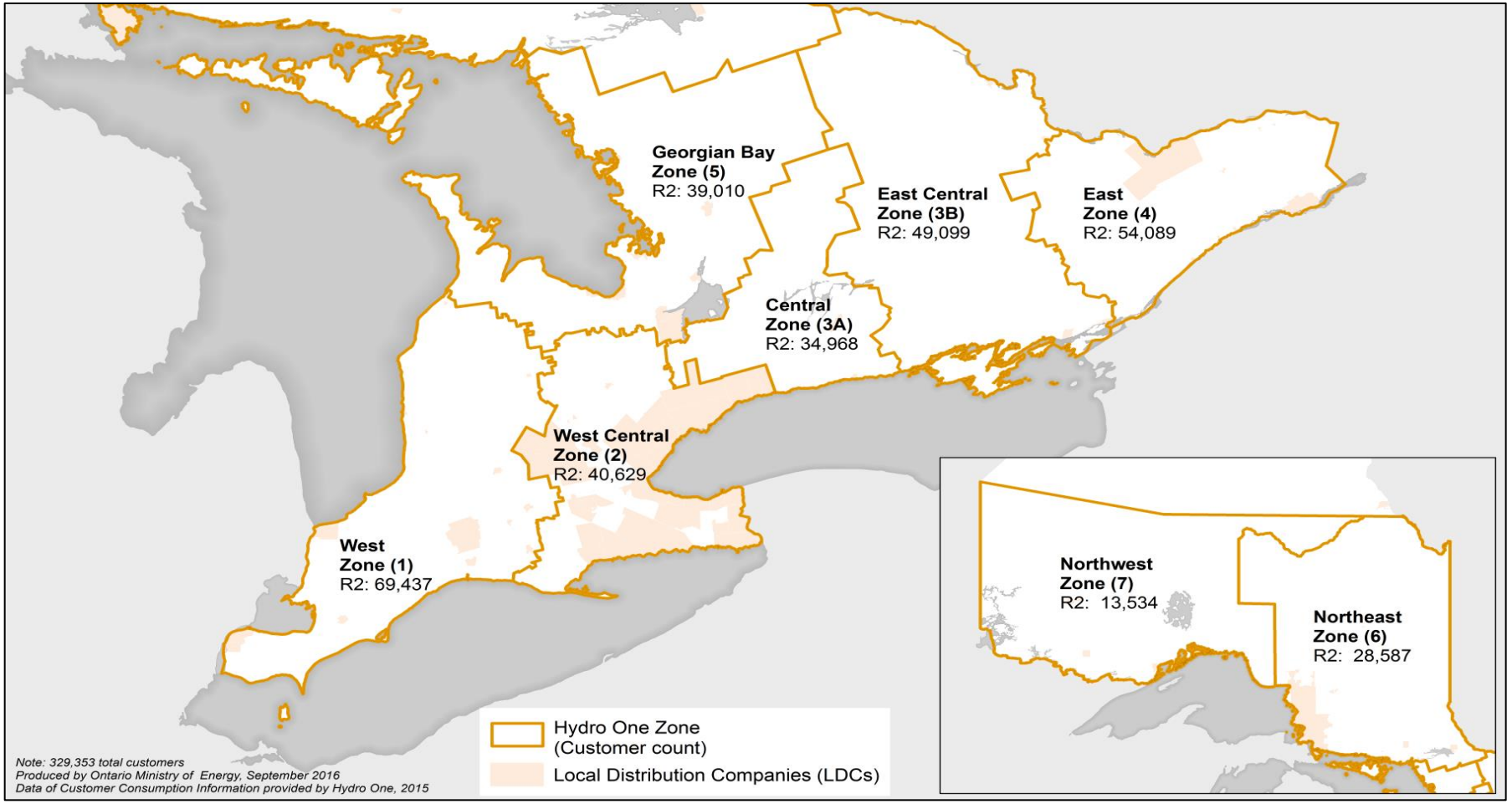
# Rural or Remote Rate Protection (RRRP) Update

- ENERGY is proposing to amend O.Reg 442/01 to provide an additional $110 million in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

- RRRP is a rate-based funded program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.
  - Today, RRRP is a $175-million program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
  - The majority of the program funding ($125.5 million) is provided to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a rebate of $31.50. The proposed update to the program would increase the benefit to $60/month.
  - RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

- An additional $110 million in program funding would see an increased benefit for eligible rural customers, including the 8% rebate, of $45/month. This would help bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.
  - This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
  - The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the benefit remains constant.

# Rural or Remote Rate Protection (RRRP) Update – R2 Customers by Region



## 2) Expand Industrial Conservation Initiative and Redirect Cap and Trade Proceeds

# Industrial Conservation Initiative (ICI) Expansion

- ENERGY is proposing to amend O. Reg. 429/04 to expand ICI eligibility. The base setting period for the expanded program would begin in 2017, with the benefit seen by consumers starting in 2018.

- Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers).
  - Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

- ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:
  - Reduce electricity peak demand and electricity system costs by incenting more consumers to lower their electricity demand during peak periods;
  - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
  - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

# ICI Expansion – Projected Impact

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

- The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility
  - Short-term refers to the expected impact once ICI billing begins for new Class A consumers (one year after expanded eligibility takes place).
  - Long-term is the expected impact once new Class A consumers have had time to significantly change their behaviour and investment decisions in response to the ICI.

- The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating.

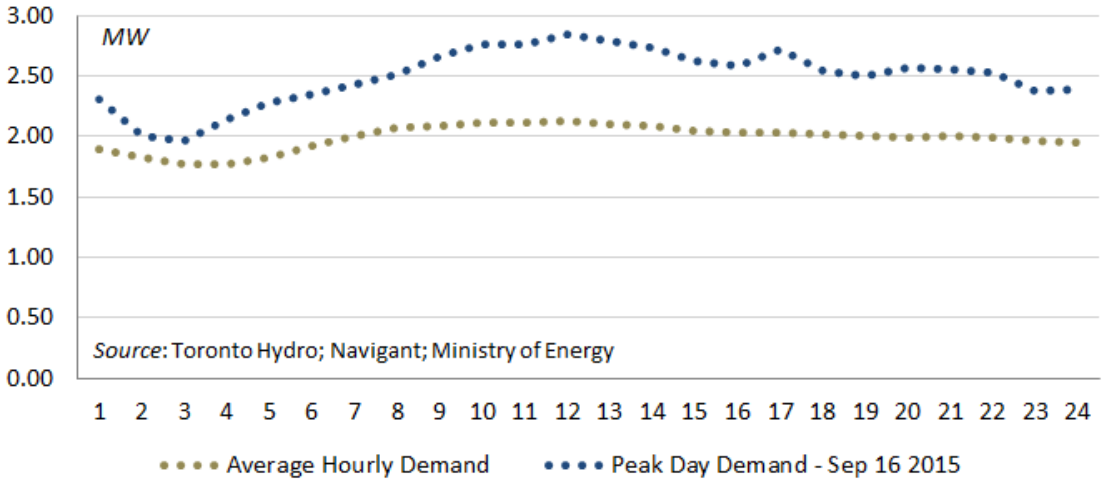
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.

# ICI Expansion – Illustrative Example of Newly Eligible Consumer

- Plastics manufacturers, such as Poly Five Plastics in Toronto, are among the consumers that would become eligible if the threshold was lowered.
- Such manufacturers fall under NAICS* code 32 and have relatively flat load profiles, reflecting around the clock production. This means they would be beneficiaries of ICI even with no change in consumption behaviour.
- Companies like Poly Five Plastics could expect to see greater savings if they are willing and able to respond to the higher prices during high demand hours.

**Typical Demand Profile, 2-3 MW Consumer**

*Manufacturer, NAICS Code 32 - Nov 2014 to Oct 2015*




**Illustrative Bill Savings, 2-3 MW Consumer**

| | *Status Quo* | *No Price Response* | *Short Term Response* | *Long Term Response* |
|---|---|---|---|---|
| | **Class B** | **Class A** | **Class A** | **Class A** |
| GA | 75.26 | 58.06 | 43.55 | 32.03 |
| Total bill | **126.28** | **109.09** | **94.58** | **83.06** |
| *Savings* | | *-14%* | *-25%* | *-34%* |

Source: Navigant; Ministry of Energy

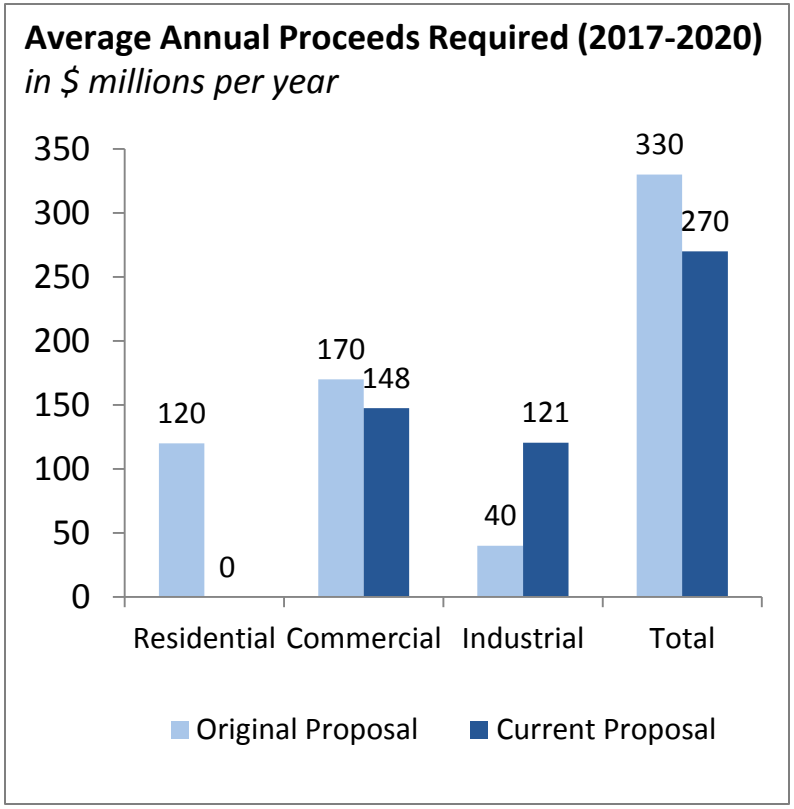
*** Note:** North American Industry Classification System (NAICS) is the standard used by statistical agencies in classifying business establishments.

# Redirect Cap and Trade Proceeds Recycling

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.
  - To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).

- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

- The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $0.24 billion over the first compliance period).




**Note:** The original proposal was to offset the impact of cap and trade via GA to the average industrial, and would provide a benefit to commercial and residential consumers. Current proposal would recycle proceeds volumetrically to industrial and commercial consumers.

# Redirect Cap and Trade Proceeds Recycling

- Redirecting cap and trade auction proceeds to lower the cost of electricity would offset consumers' contributions to non-emitting generation.

- Redirecting helps pay for committed investments/initiatives which reduce GHGs (e.g., non-emitting generation and conservation programs).
  - Due to the long-term nature (typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period. These costs will continue well beyond the timelines described in the CCAP.

- Redirecting cap and trade auction proceeds volumetrically to Class B (commercial) and Class A (industrial) consumers maintains the incentive to shift consumption from on-peak to off-peak hours.

- Using cap and trade auction proceeds to lower the cost of electricity would make it more competitive with traditionally cheaper fossil fuels.

- By using the proceeds to lower the cost of electricity, there is potential to incent fuel-switching away from fossil fuels toward much cleaner grid-connected electricity and support CCAP goals of electrification.

# Considerations

# Implementation

- On September 15, 2016, ENERGY is proposing to introduce the *Ontario Rebate for Electricity Consumers Act, 2016*.
  - If passed, the legislation would require a general regulation.
  - Amendments would also be required to various regulations to expand ICI and RRRP.

- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. ENERGY (possibly through Ontario Energy Board) will consult with LDCs to accurately assess these impacts once the program has been announced.
  - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - Timing concerns may be alleviated by allowing LDCs to provide retroactive rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.

- Detailed messaging on bills (for "low-volume" consumer bills ) could be implemented by amending O. Reg. 275/04 (made under the Ontario Energy Board Act, 1998).
  - The rebate would not be directly linked to HST.
  - With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.

- While the impact of cap and trade would be added to electricity bills as of January 2017, the offsetting effect of proceeds recycling may not occur immediately depending on implementation and potential alignment with the first auction expected in March 2017.
  - Should there be low demand for carbon allowances, auction proceeds would be less than the amount projected in the CCAP. This could mean a short-fall for proceeds recycling as proposed. However, natural gas utilities are expected to purchase allowances quarterly equal to their emissions.

- ENERGY will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

# Fiscal

- The Climate Change Action Plan (CCAP) committed about $1.3 billion over four years for electricity mitigation for industrial, commercial and residential consumers from GGRA proceeds.
  - The current rate mitigation proposal requires approximately 20% less in proceeds, saving approximately $0.24 billion relative to the CCAP commitment over the first compliance period (2017-2020).

- The 8% rebate is expected to cost about $1 billion per year (i.e., $4 billion from 2017-2020), representing an additional pressure on the fiscal plan.
  - Consideration could be given to allocating the $0.24 billion in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset.
  - If cap and trade auctions are under-subscribed, the $0.24 billion may not be available for reallocation to the fiscal plan.

- In the absence of any offset strategies, the full cost of the rate mitigation approach would add to the pressures and risks that need to be managed in order for the government to balance the budget in 2017-18 and stay balanced in 2018-19 and beyond.

# Legal

- In order to avoid characterization as an unconstitutional tax, a non-tax levy must have a sufficient nexus between those who pay and the regulatory scheme in the sense that those who pay have caused the need for or benefit from the regulatory scheme. Although the case law is not developed on the extent to which some regulated actors can be required to subsidize others, risk is reduced to the extent that any cross-subsidization serves true regulatory goals rather than revenue re-distribution goals.

- 8% Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):
  - Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

- ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):
  - Shifting costs to some consumers to lower rates for others without more carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

- RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):
  - Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

- Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):
  - To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

# Communications

- A series of high-profile announcements around introduction of legislation (September 2016).
  - Keynote speech and two public events pre-introduction
  - News release at introduction
  - Full media availability province-wide
  - Regional echo events post-introduction
  - Early engagement of EDA, CEOs of LDCs
  - Stakeholder outreach/technical briefings with Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.
- **Positioning:**
  - An unprecedented plan to benefit all ratepayers in a lasting, meaningful way.
  - Rural customers will receive the largest single rate relief ever.
  - Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.
- **Issues Considerations:**
  - Significant benefit for rural and remote residential customers; net gain for all residential customers.
  - Consistent with cap-and-trade commitment that no business sector will be left worse off.

# Key Messages

- We are taking unprecedented action to help people in their everyday lives.
- Residential ratepayers and other RPP eligible ratepayers will receive an eight per cent rebate on their electricity bill, equivalent to the provincial portion of the HST.
- Modernizing the RRRP will benefit 330,000 families in rural Ontario with significant reductions to their electricity bills ($45 a month).
- Over a thousand more Ontario businesses will be eligible to benefit from the ICI program, helping them stay competitive and grow.
- These actions will assist over five million families, farms and small businesses across Ontario.
- These actions today join our many existing initiatives too help keep electricity in Ontario clean, reliable and affordable.

# Proposed Cabinet Minute

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

    i. Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

    ii. Increase the total amount of rate protection available to R2 low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2003.

    iii. Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

    iv. Expand eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

# Proposed Cabinet Minute (cont'd)

2. ENERGY seek necessary TB/MBC approvals.

3. ENERGY seek approvals for the proposed *Ontario Rebate for Electricity Consumers Act, 2016* which would, subject to the Legislature's approval of the Act, include the following elements:
   i. The rebate would be available starting January 1, 2017;
   ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
   iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers' electricity bills;
   iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way in which electricity vendors providing the rebate are to be reimbursed;
   v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;
   vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments; and
   vii. The legislation would include consequential amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*; and
   viii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date

# Proposed Cabinet Minute (cont'd)

4. ENERGY to report back to LRC and Cabinet for approval of any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments.

5. ENERGY notes the following amendments:

   i. Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the Electricity Act, 1998 to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

   ii. Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density electricity customers and provide for a periodic adjustment mechanism.

6. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

7. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan

# Proposed Cabinet Minute (cont'd)

Cabinet approved version of the proposed *Ontario Rebate for Electricity Consumers Act, 2016* for introduction, subject to the following:

1. The Office of Legislative Counsel is authorized to prepare a French version and to make minor adjustments to the English version, for the purpose of ensuring consistency between the two versions and making other improvements or correcting mistakes discovered in the translation process.

# Appendix

# Illustrative Benefits

| | Current Bill ( before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $139 /month | N/A | 8% pre-tax rebate: - $11 | $128 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $229 /month | RRRP: –$32 | 8% pre-tax rebate + Updated RRRP: - $45 | $184 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $101 /month | OESP: -$38 | 8% pre-tax rebate: - $8 | $93 /month |
| Small Business (Toronto – 403,200 kWh/month) | $149 /MWh | N/A | 8% pre-tax rebate: - $12/MWh | $137 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $203 /MWh | N/A | 8% pre-tax rebate: - $16/MWh | $187 /MWh |

**Notes:**

***** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as $1,332 per year for a family.

** income of less than $28,000, family of 4.

The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Totals may not add due to rounding.

# Illustrative Benefits (cont'd)

| | Current Rate | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Rate |
|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | $105 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI + NIERP: -$69/MWh | Proceeds Recycling: -$2.60/MWh | $66 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling + ICI: Up to -$52/MWh | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $149 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $151 /MWh |

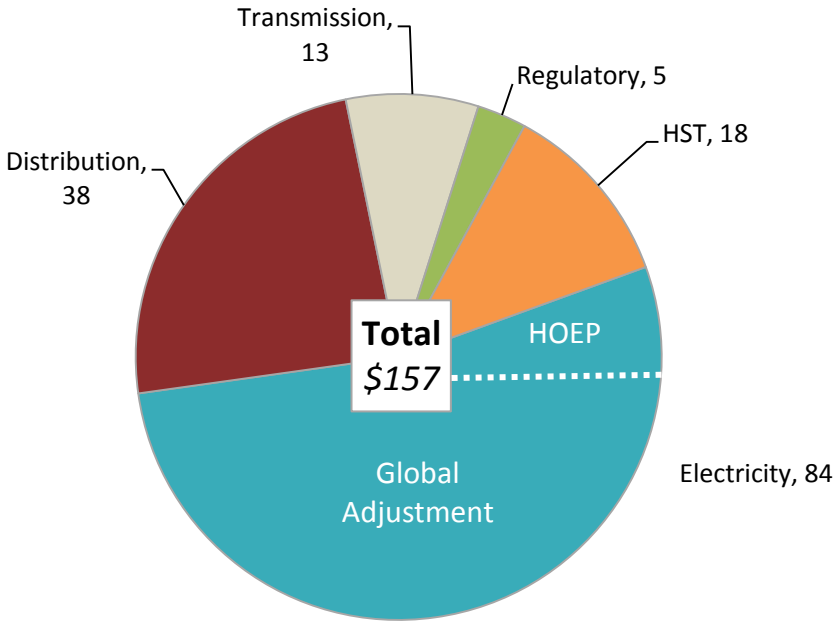
**Notes:**
The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of May 1, 2016 (750 kWh/month)*




*Source*: OEB, Toronto Hydro

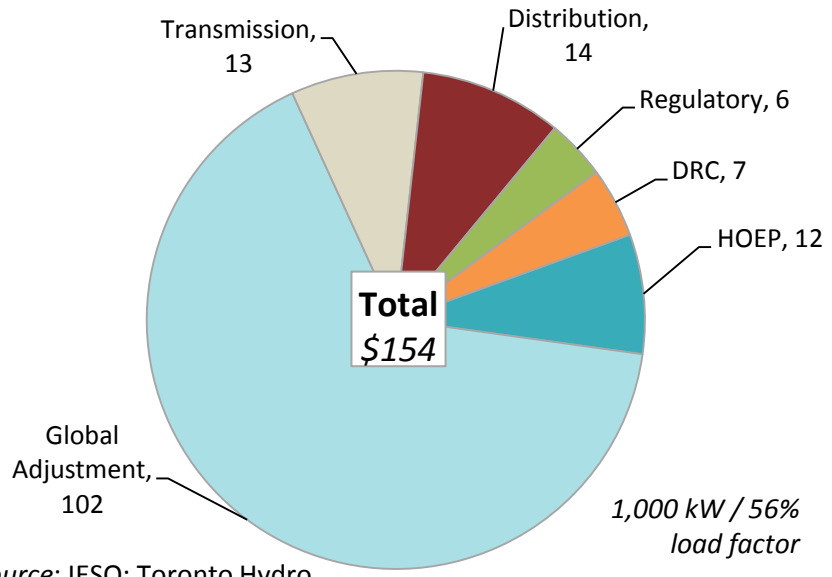
# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.

- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




*Source*: IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.

- Targeted pricing programs are currently not available for Class B consumers.

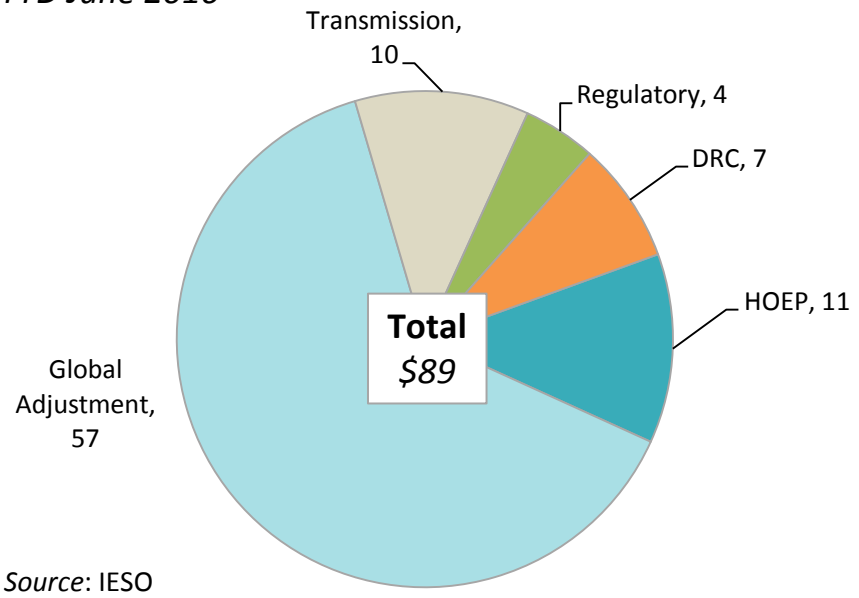
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*




*Source*: IESO

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Sales Tax Treatment in Other Jurisdictions

| Jurisdiction | Tax | Tax Paid by Business Consumers | Tax Paid by Residential Consumers | Comment |
|---|---|---|---|---|
| **British Columbia** | PST | Yes – 7% | No | • PST does not apply to residential energy, including electricity, acquired solely for residential use in a residential dwelling<br>• BC's carbon tax does not apply to electricity bills. |
| **Alberta** | None | N/A | N/A | • Alberta does not have a provincial sales tax. |
| **Saskatchewan** | PST | Yes – 5%<br>Except for electricity purchased to heat a building. | No | • PST does not apply to electricity purchased for use in a residential dwelling.<br>• PST does not apply to electricity purchased for use in heating a building that is heated solely by the electricity. |
| **Manitoba** | PST | Yes – 8%<br>Reduced rate of 1.6% applies to electricity used by a qualifying business to operate machinery | Yes – 8%<br>Electricity purchased for mixed use, 80% of which is home heating, has a reduced rate of 1.4%. Electricity solely to heat the purchaser's home is exempt. | • Winnipeg also applies a tax of 2.5% on residential and 5% on commercial. |
| **Ontario** | HST | Yes (less ITC (input tax credits)) | Yes – 8% | |
| **Quebec** | QST | Yes (less ITCs) | Yes – 9.975% | |
| **Nova Scotia** | HST | Yes (less ITCs) | Yes – 10% less provincially administered rebate. | • Rebate is equal to the provincial portion of the HST, and is administered similar to OCEB, but applies to many energy sources. |
| **New Brunswick** | HST | Yes (less ITCs) | Yes – 10% | |
| **Prince Edward Island** | HST | Yes (less ITCs) | Yes – 9% (10% beginning Oct 1, 2016) | |
| **Newfoundland and Labrador** | HST | Yes (less ITCs) | Yes – 10% | • Had a provincially administered Home Heating Rebate program until July 2015. |
| **Federal** | GST | Yes (less ITCs) | Yes – 5% | |

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Gavin He; Shajee Kathirgamanathan |
| **Subject:** | Fw: OPG as part of commodity cost |
| **Date:** | Sunday, January 15, 2017 2:44:03 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v8 (CEFD).docx |

fyi. I'm good with your edits.....we need to redo the tables, as evident in Emily's edits.

On delayed GA, where did the $2bn impact on the GA proposal come from?

---

**From:** Emily Kerr
**Sent:** January 15, 2017 2:38 PM
**To:** John Kim
**Subject:** RE: OPG as part of commodity cost

Hi John,

I made revisions to the note (attached). Gavin said he would be updating the GA section, so I didn't add to that at this time. I have also passed the attached version of the note on to Gavin.

By commodity cost of OPG generation I assume you mean the HOEP amount. In that case, I don't think IESO provides that data. You could estimate it by multiplying average HOEP by OPG generation for a particular time period.

IESO does provide how much GA is associated with OPG on this page: http://www.ieso.ca/Pages/Ontario%27s-Power-System/Electricity-Pricing-in-Ontario/Global-Adjustment.aspx

Emily

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**From:** John Kim
**Sent:** Sunday, January 15, 2017 11:13 AM
**To:** Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** OPG as part of commodity cost

Hi Emily,

Question for you. I'm not very good at navigating IESO site.....would you know how much of the total commodity cost OPG's generation accounts for? I was able to find other data but couldn't find this one....

John.

Y. John Kim
Director(A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

**CONTEXT**

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

**COMMENTS**

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

In addition, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to over $2 billion annually during the period that GA costs are deferred.

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility, and provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.** | • Significant fiscal exposure -- $0.42-0.845 bn in 2017 to $0.62-1.18 bn in 2022, ~~at current levels,~~ higher if OESP is enhanced. On-bill benefits.<br>• Funding programs through tax base estimated to reduce average monthly residential bill by approximately $2 in 2017, increasing to approximately $3 in 2022.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Amortize ~~Fund~~ **conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account. ~~programs through the tax base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time~~** | • It is unclear whether consevation costs could be amortized according to accounting standards. If this option was pursued without establishing Provincial Controller agreement on accounting, there could be a fiscal risk. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base. ~~Potentially significant fiscal impact – current program costs are about $0.45 bn~~<br>o Conservation programs do provide an electricity system benefits, but ~~would now be~~ fiscal~~ly~~-funding~~ed, so~~ would result in a cross-subsidisation from tax-base |

**Commented [EK1]:** Updated based on slide 12 in Energy's updated deck.

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|---|---|
| | ○ Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value (share price) and impact fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• In the case of projects located in First Nation territories it could have an upfront fiscal impact if Province is not able to amortize those projects (TBC with OPCD).<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a windfall. It was fiscally neutral, it represented revenue to OEFC and an expense to Hydro One.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates<br>• OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding th Global Adjustment (GA) |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some** | • Incurring debt to pay the generators their contracted or regulated payments |

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| **generation supply costs by partially financing the cost of the global adjustment (GA)** | • Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022~~Total of about $0.4 to 0.45 Billion/year~~):

~~This w~~Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), ~~-~~and ~~the~~ Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs. ~~Energy notes that~~
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
  - ~~The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).~~
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- ~~o~~ The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

~~Fund~~ Amortize Conservation Program~~s~~ Costs ~~through the Tax Base~~:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

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- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization of conservation costs was not permitted, a fiscal impact could result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

~~This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.~~

- ~~Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.~~

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase

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growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income (revenue) to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income (expense) of Hydro One.
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- Having OEFC help implement this measure may require introducing changes to OEFC's objects as is legal mandate is to help reduce and pay down stranded debt.
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

**Commented [JK2]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

**Commented [JK3]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
    - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of options to delay recovery of part of the Global Adjustment (GA) by debt financing and recovering over a 25 to 30 year period.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
    - Option 1:
    - Option 2:
    - Option 3:
    - Option4:
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

[Check and Update]

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**~~December 12~~January 15, 2016**

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan; Salman Qadir; Adam Prokop |
| **Cc:** | Gavin He |
| **Subject:** | Fw: Potential Rate Mitigation |
| **Date:** | Monday, December 05, 2016 9:24:30 PM |
| **Attachments:** | Price Mitigation Proposals_Dec5-16_v11.pptx<br>ATT00001.htm |

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Hi,

Something we will need to react quickly to. Remember also that we did a few slides a couple of weeks ago?

Thanks,

John.

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**From:** Ronald Kwan
**Sent:** December 5, 2016 8:14 PM
**To:** Francisco Chinchon; John Kim; Emily Kerr; Darren Scanlan
**Subject:** Fwd: Potential Rate Mitigation

Hi,

Lets meet in the morning to discuss.

We'll need a product for EOD. Could be an annotated slide deck, as well as a markup. Suggestion on any other formats?

Ron

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Date:** December 5, 2016 at 8:02:36 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
> **Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean,

David (MOF)" <David.McLean@ontario.ca>
**Subject: Fw: Potential Rate Mitigation**

Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.

From: Katona, Keley (ENERGY)
Sent: December 5, 2016 7:44 PM
To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)
Subject: FW: Potential Rate Mitigation

Hi,

See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?

If there are questions, I'm happy to discuss.

Thanks,
Keley

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II); and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.

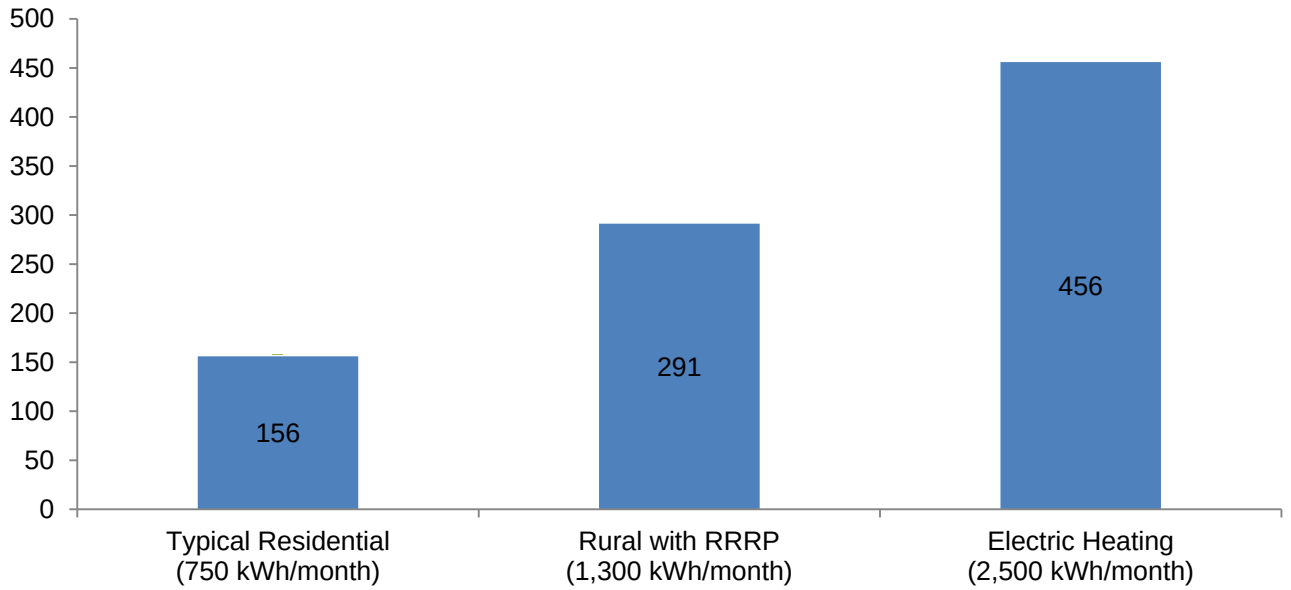
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

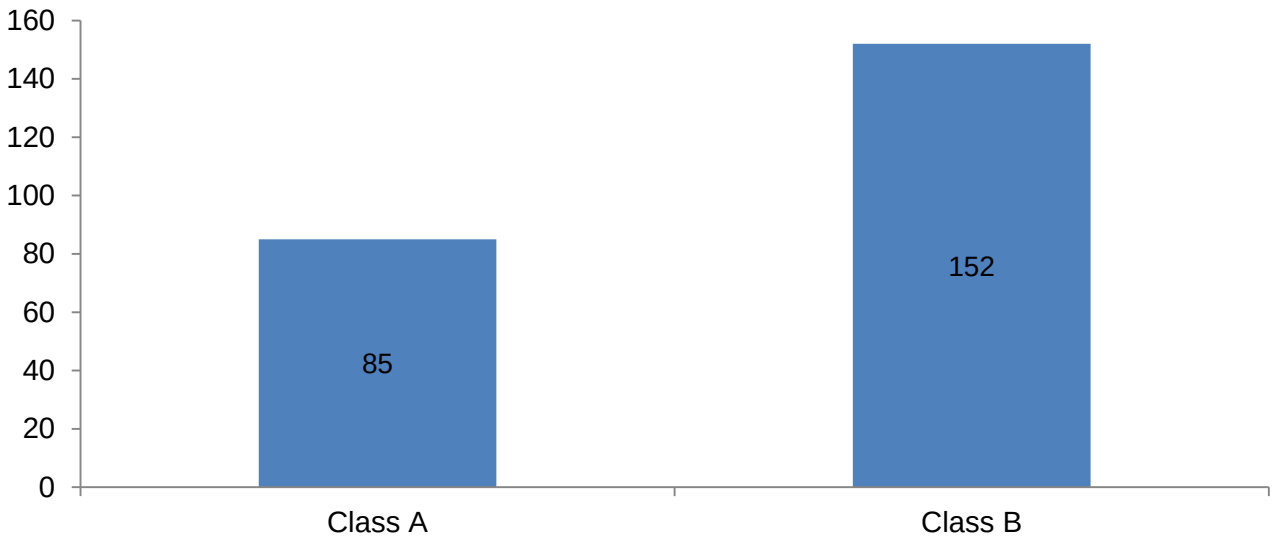



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of $xx [placeholder for OFA] on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $20 to $35 million annual fiscal pressure to the province [TBC by OPG / OFA].

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESB) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.
- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.
- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

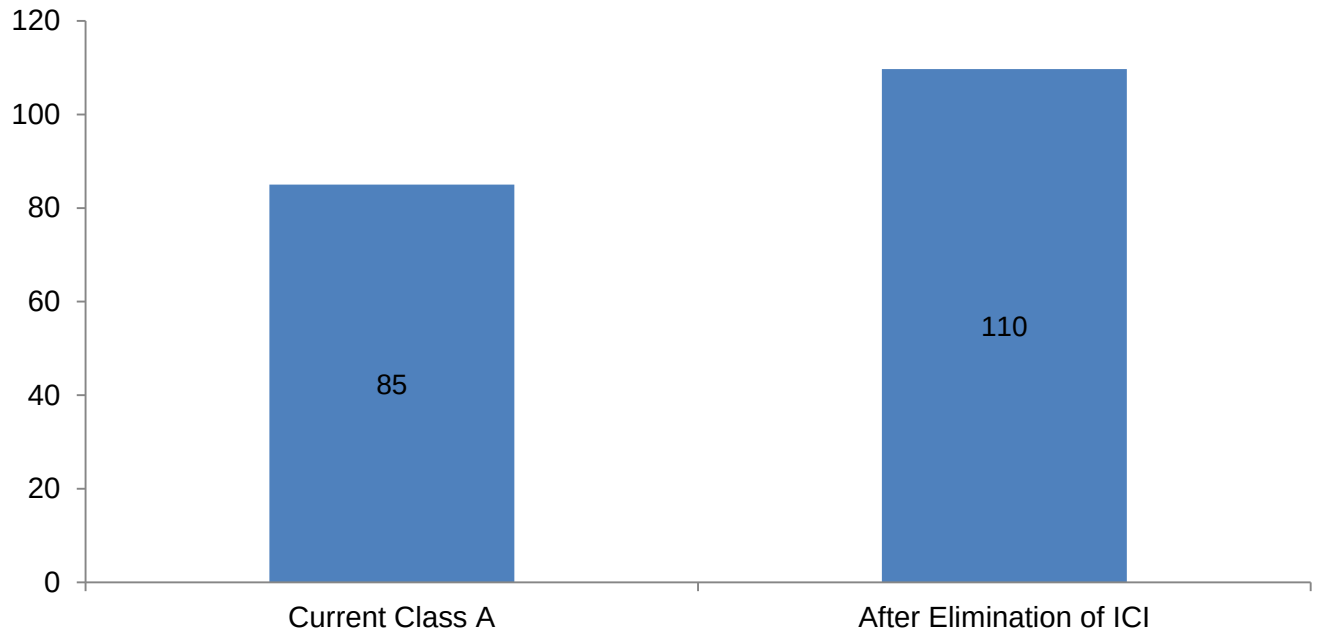
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

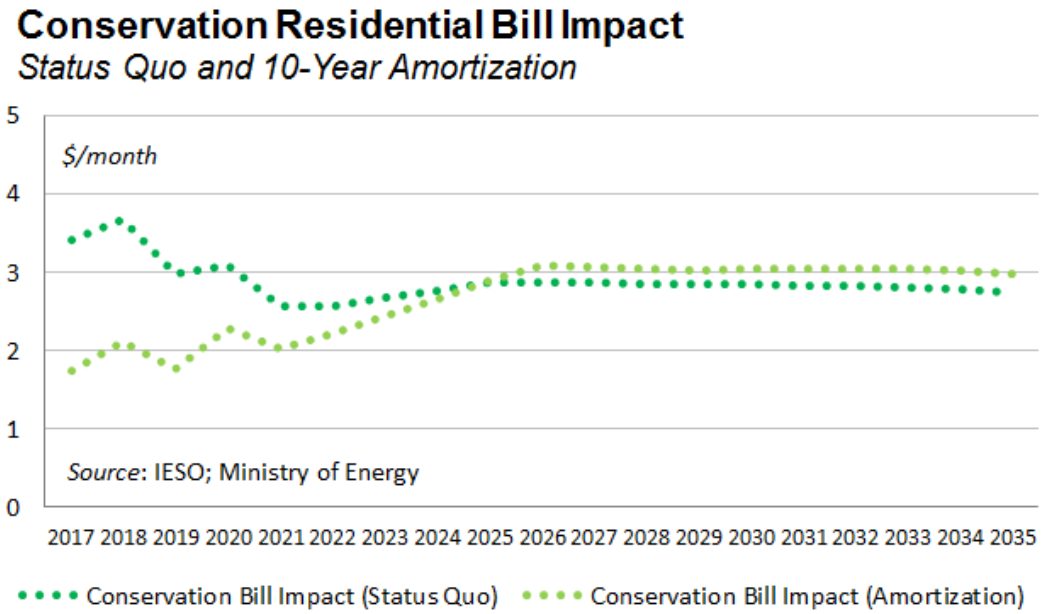
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

# Electricity Consumer Classes

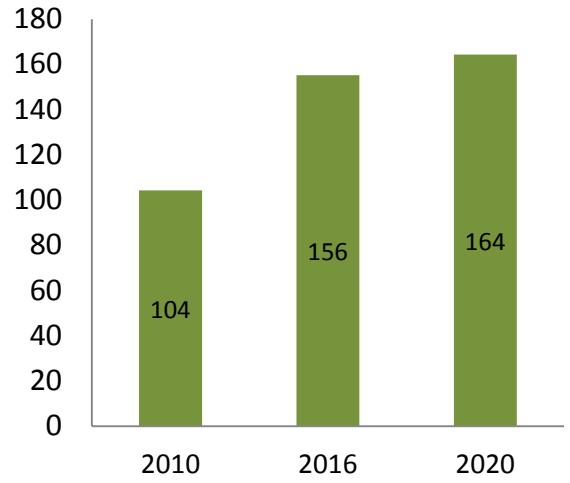
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

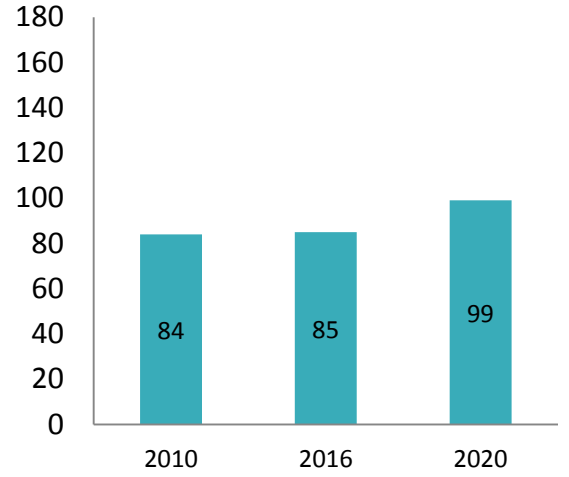
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

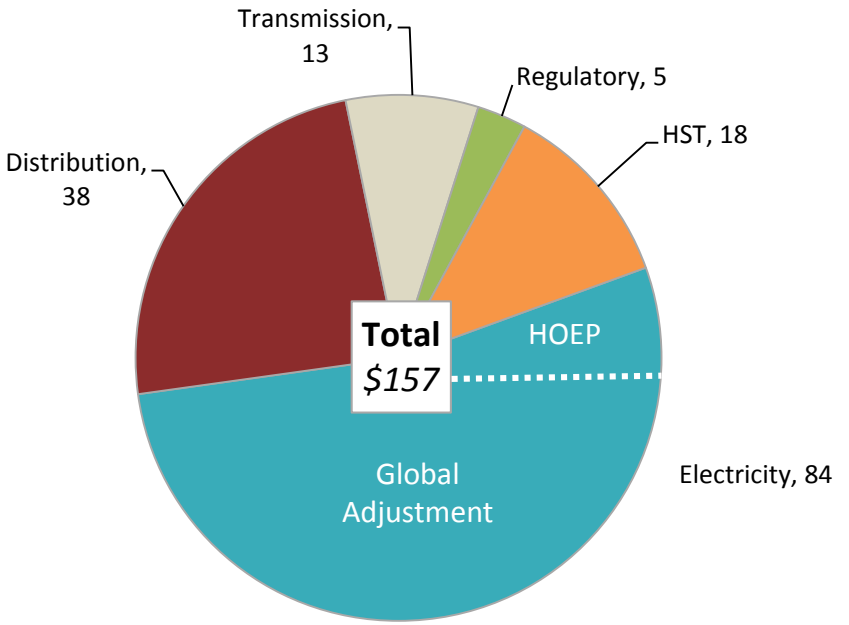
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



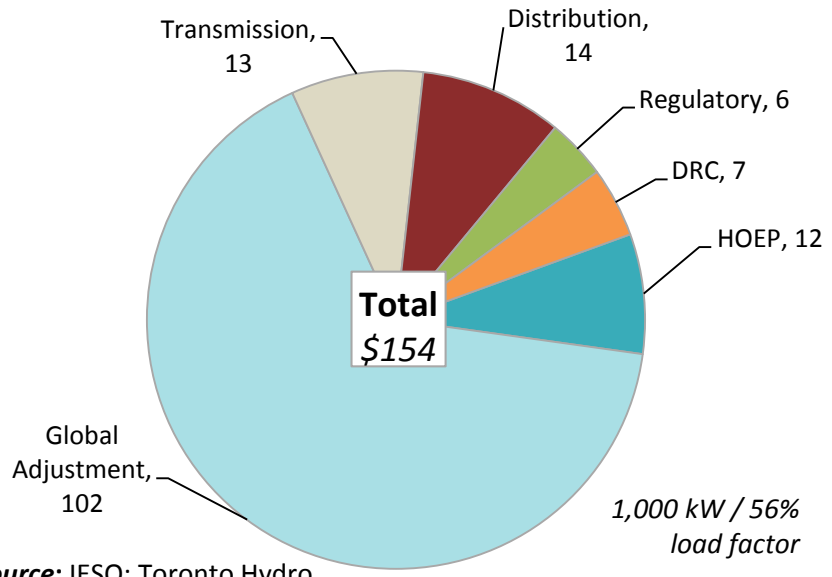

***Source*:** OEB, Toronto Hydro

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

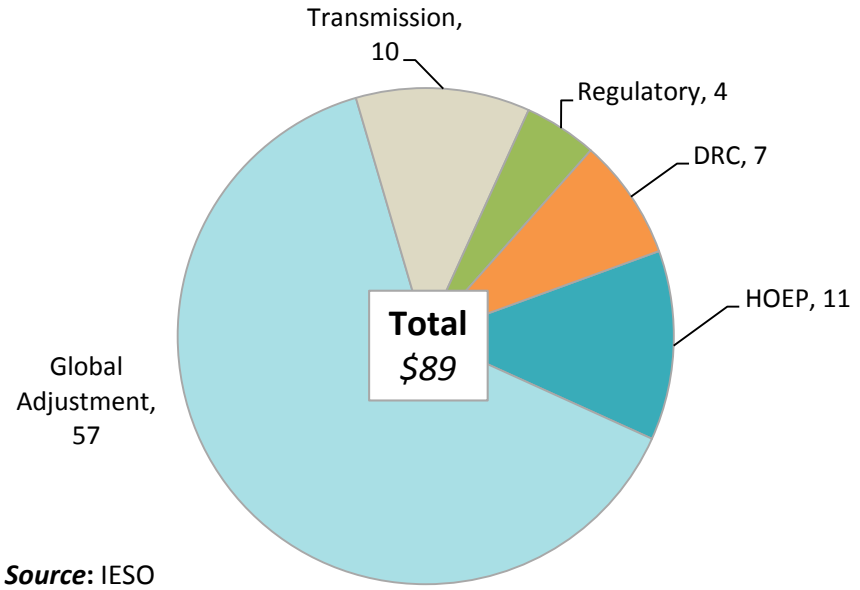
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



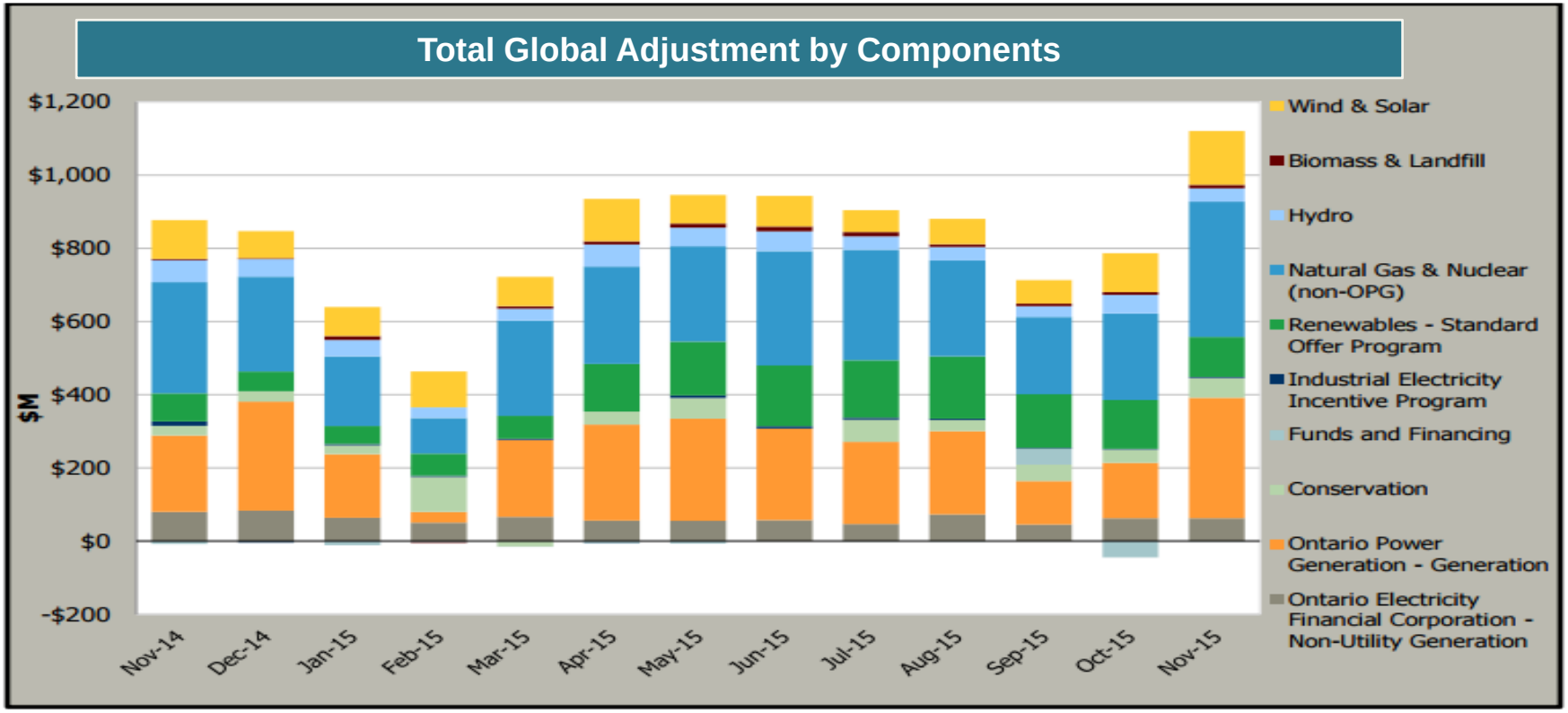

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

**From:** Fung, Felix (TBS)
**To:** John Kim; Shajee Kathirgamanathan
**Cc:** Madeleine Morgenstern (PPAGS)
**Subject:** Fw: Rate Mitigation - Final Cab Sub
**Date:** Sunday, September 11, 2016 9:22:17 AM
**Attachments:** Cabinet Submission - Electricity Price Mitigation FINAL.PDF

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Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Laughton, Patrick (TBS) <Patrick.Laughton@ontario.ca>
Sent: Saturday, September 10, 2016 12:26 AM
To: Fung, Felix (TBS); Morgenstern, Madeleine (TBS); Strang, James (TBS)
Cc: Duran-Schneider, Maria (TBS); Dutton, Andrea (TBS); Arbabzadeh, Nina (TBS)
Subject: Fw: Rate Mitigation - Final Cab Sub

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Hughes, Karen (TBS) <Karen.Hughes@ontario.ca>
Sent: Friday, September 9, 2016 11:11 PM
To: Laughton, Patrick (TBS)
Subject: Fw: Rate Mitigation - Final Cab Sub

FYI

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Greenberg, Martha (CAB) <Martha.Greenberg@ontario.ca>
Sent: Friday, September 9, 2016 10:34 PM
To: Hughes, Karen (TBS); Duran-Schneider, Maria (TBS)
Subject: Fw: Rate Mitigation - Final Cab Sub

FYI

From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
Sent: Friday, September 9, 2016 9:26 PM
To: Moore, Karen (CAB)
Cc: Greenberg, Martha (CAB)
Subject: Rate Mitigation - Final Cab Sub

Hi Karen,
Please find attached the final Cabinet submission. We'll bring copies for 8am Monday morning.
Keley

Ontario

# Electricity Price Mitigation

## Ministry of Energy

**Date: September 12, 2016**

Minister

Deputy Minister

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

- Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables.
  - This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%.

- Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online.

- The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers.

# Electricity Consumer Classes

- There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

**** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

# Current Rate Base Mitigation Programs

- Ontario has implemented several programs to help electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers;
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs; and
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- These programs have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial) as shown in the table below:

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

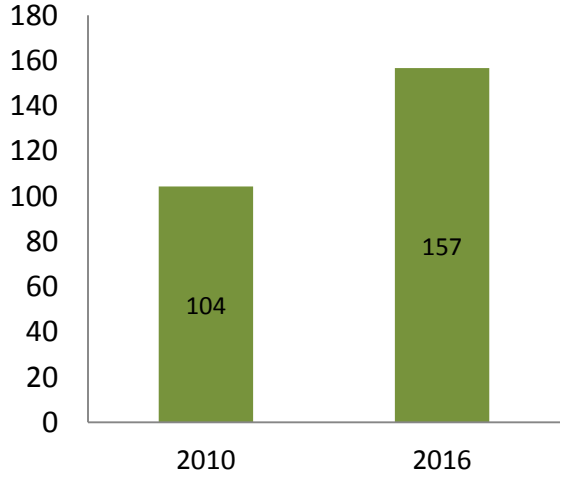
**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

# Prices by Electricity Consumer Class

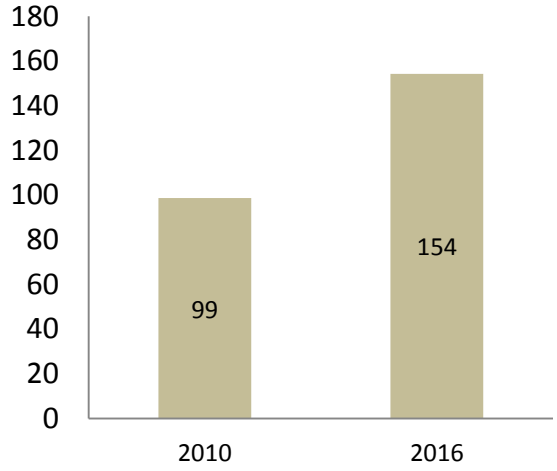
- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.

- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers.

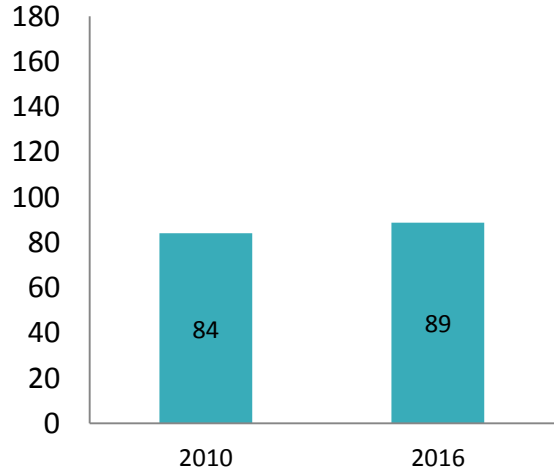
**Typical Residential Bill (750/kWh per month)**




**Typical Class B (Commercial) Price ($/MWh)**




**Typical Class A (Industrial) Price ($/MWh)**



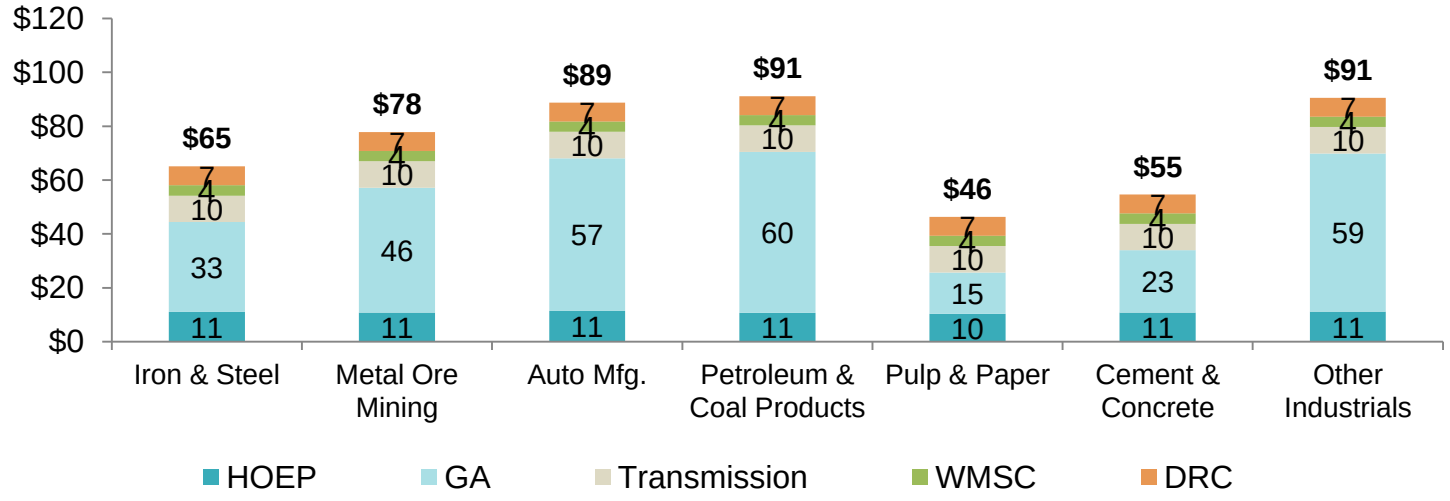

**Note:** 2016 represents May 2016 for residential after-tax and YTD June 2016 for commercial and industrial.

# Industrial Electricity Prices Vary by Sector

- While Class A (industrial consumers) benefit from participation in the ICI program, there is a significant amount of variability in the ability to shift away from peak periods across customer classes, impacting the savings achieved.

- The below chart shows the prices paid in 2015 across a number of industrial sectors. Consumers in the north that receive rebates under the Northern Industrial Electricity Rate Program (NIERP) achieve rates that are $20/MWh lower than the below.

**Average all-in Class A, Transmission-connected Electricity Prices by Industrial Sector (estimated $/MWh), Year-to-Date June 2016**




**Note:** HOEP = Hourly Ontario Energy Price, GA = Global Adjustment, WMSC = Wholesale Market Service Charges, DRC = Debt Retirement Charge

# Recent Actions to Bend the Cost Curve

- Since 2013, a number of actions have been taken to reduce overall electricity system costs:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

# Rate Mitigation

- The 2016 Budget committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) committed $1.3 billion from the Greenhouse Gas Reduction Account (GGRA) over the first compliance period (2017-2020).

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:

  - **Tax-based Lever:**
    - Provide an on-bill rebate funded from the tax-base to all consumers or specific classes of consumers (i.e., the Ontario Clean Energy Benefit (OCEB) provided a rebate for eligible electricity consumers).

  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.

  - **Cap and Trade Proceeds Lever:**
    - Redirect cap and trade proceeds to offset the cost of existing initiatives that help reduce greenhouse gas (GHG) emissions (i.e., the CCAP committed to offset the impact of cap and trade and to keep electricity rates affordable).

# Rate Mitigation Proposal

- The Ministry of Energy is proposing to implement the following electricity price mitigation initiatives. The approach identified below would provide relief across all electricity consumer classes:

  1) Provide an 8% rebate equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms) and update the Rural or Remote Rate Protection (RRRP) program, to provide relief to rural customers; and

  2) Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial) and redirect cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

- The following slides provide additional information on the above initiatives.

***Note:** Eligibility for the 8% rebate would be similar to OCEB and include some customers not on the Regulated Price Plan (RPP), such as Independent Power Authority consumers and consumers that have opted-out of RPP.

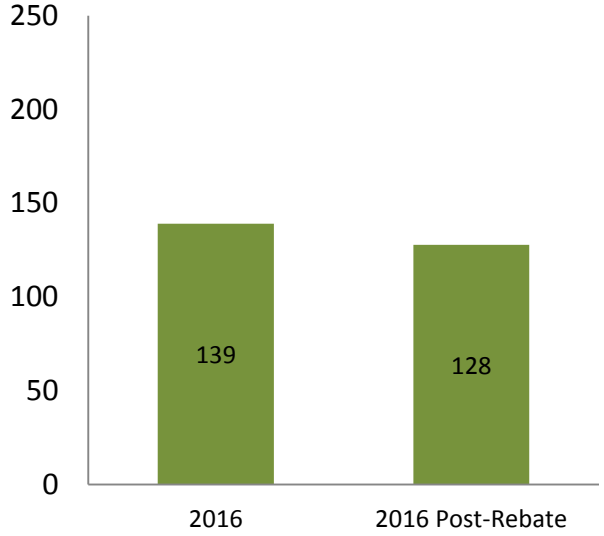
# Rate Mitigation Proposal – Illustrative Benefits*

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Benefit | | Class B (Commercial) Benefit | Class A (Industrial) Benefit | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br><br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br><br>(-8%) | -$45/ month<br><br>(-20%) | -$3/MWh<br><br>(-2%) | -$3/ MWh<br><br>(-3%) | Up to -$52/MWh<br><br>(-34%) |

*** Notes:** The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

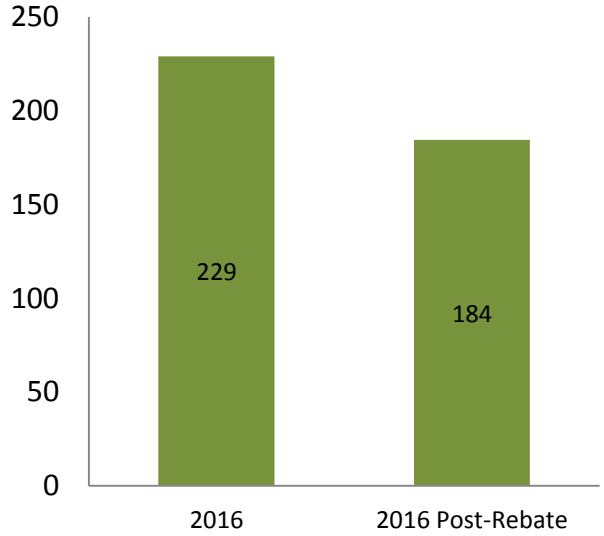
# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class

**Typical Residential Bill**
**750kWh per month, 8% only**




The benefit is a 8% reduction.

**Rural (R2) Residential Bill**
**1,000kWh per month, 8% and RRRP Update**

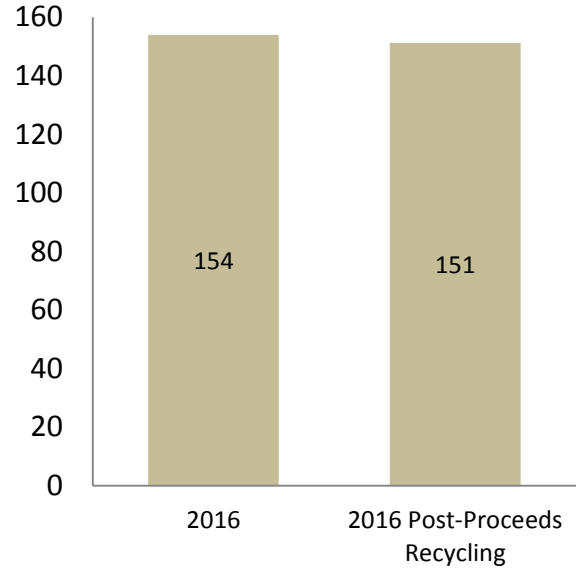



The benefit is a 20% reduction.

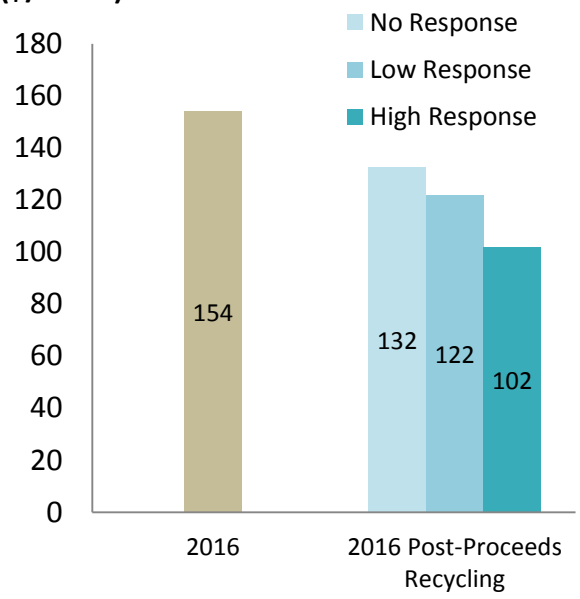
**Note:** The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh).

# Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class (cont'd)

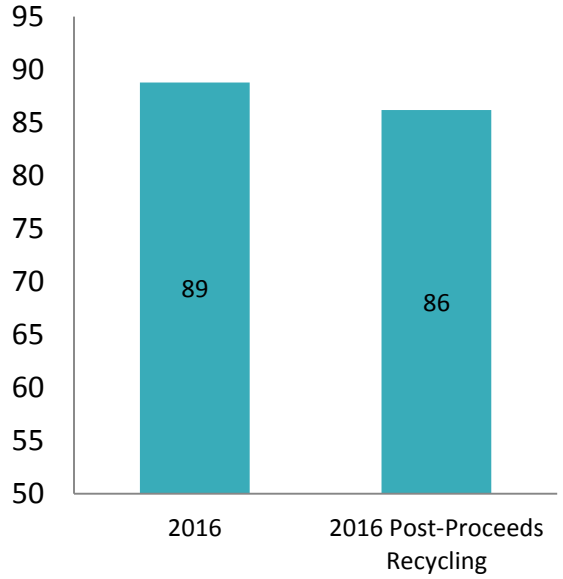
**Typical Class B (Commercial) Price ($/MWh)**




**Typical New Class A Price ($/MWh)**




**Typical Class A (Industrial) Price ($/MWh)**




**Class B:** The benefit is a 2% reduction.

**New Class A:** The benefit is a reduction of 14% to 34%.

**Existing Class A:** The benefit is a 3% reduction.

**Notes:** The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

# 1) Regulated Price Plan Eligible Consumers and Rural or Remote Rate Protection Update

# 8% Rebate to Regulated Price Plan Eligible Consumers

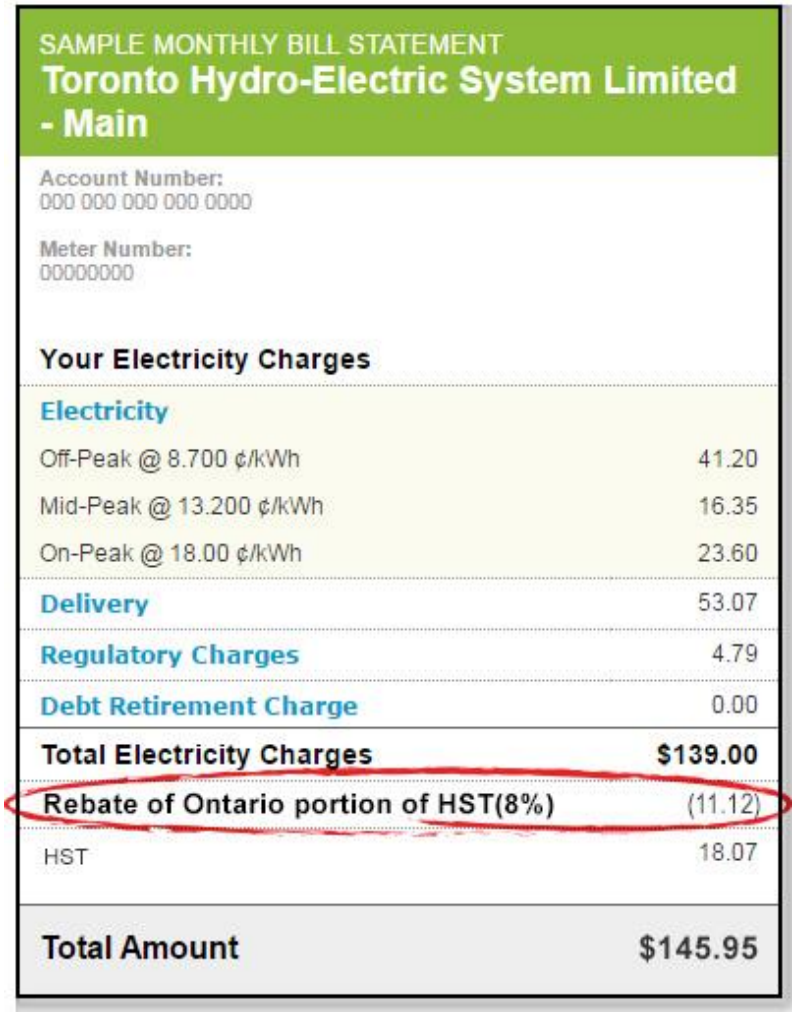
- Legislation/regulation will be introduced to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit.
  - This would be equivalent to the provincial portion of the HST*.

| **Eligible for the 8% rebate**<br>(< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate**<br>(> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>  – Coffee / snack retailer<br>  – Convenience store<br>  – Apparel store<br>  – Hair salon<br>  – Small insurance office | • Class A consumers<br>  – Manufacturer<br>  – Large grocery store<br>  – Mines<br>  – Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>  – Commercial offices (low rise)<br>  – Hotel<br>  – General warehousing |

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).

***Note:** An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

# Illustrative Electricity Bill Mock-Up



SAMPLE MONTHLY BILL STATEMENT

**Toronto Hydro-Electric System Limited - Main**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| **Rebate of Ontario portion of HST(8%)** | (11.12) |
| HST | 18.07 |
| **Total Amount** | **$145.95** |

**Note:** Final bill presentment pending submission to LRC.

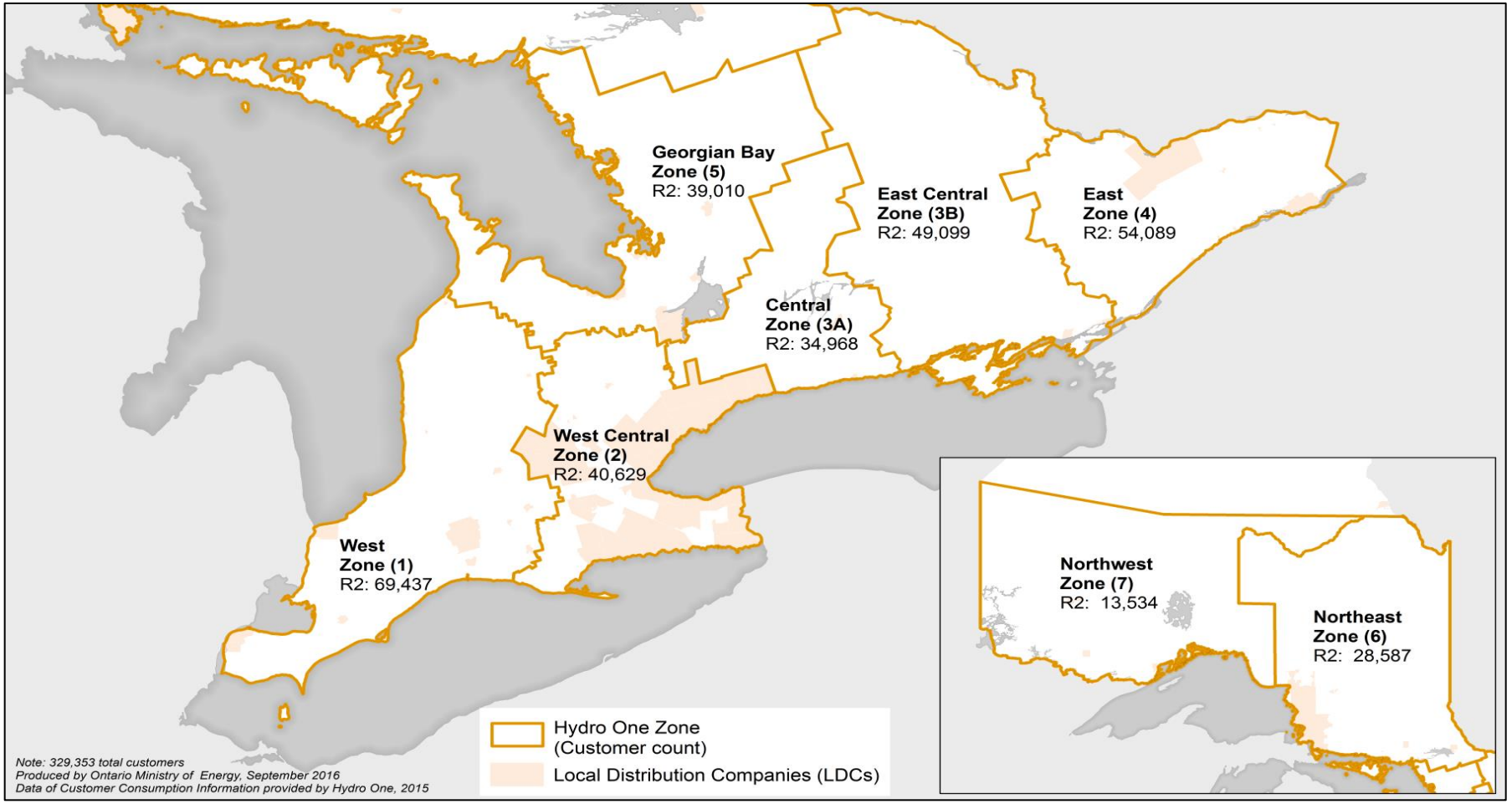
# Rural or Remote Rate Protection (RRRP) Update

- ENERGY is proposing to amend O.Reg 442/01 to provide an additional $110 million in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

- RRRP is a rate-based funded program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.
  - Today, RRRP is a $175-million program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
  - The majority of the program funding ($125.5 million) is provided to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a rebate of $31.50. The proposed update to the program would increase the benefit to $60/month.
  - RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

- An additional $110 million in program funding would see an increased benefit for eligible rural customers, including the 8% rebate, of $45/month. This would help bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.
  - This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
  - The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the benefit remains constant.

# Rural or Remote Rate Protection (RRRP) Update – R2 Customers by Region



## 2) Expand Industrial Conservation Initiative and Redirect Cap and Trade Proceeds

# Industrial Conservation Initiative (ICI) Expansion

- ENERGY is proposing to amend O. Reg. 429/04 to expand ICI eligibility. The base setting period for the expanded program would begin in 2017, with the benefit seen by consumers starting in 2018.

- Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers).
  - Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

- ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:
  - Reduce electricity peak demand and electricity system costs by incenting more consumers to lower their electricity demand during peak periods;
  - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
  - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

# ICI Expansion – Projected Impact

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

- The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility
  - Short-term refers to the expected impact once ICI billing begins for new Class A consumers (one year after expanded eligibility takes place).
  - Long-term is the expected impact once new Class A consumers have had time to significantly change their behaviour and investment decisions in response to the ICI.

- The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating.

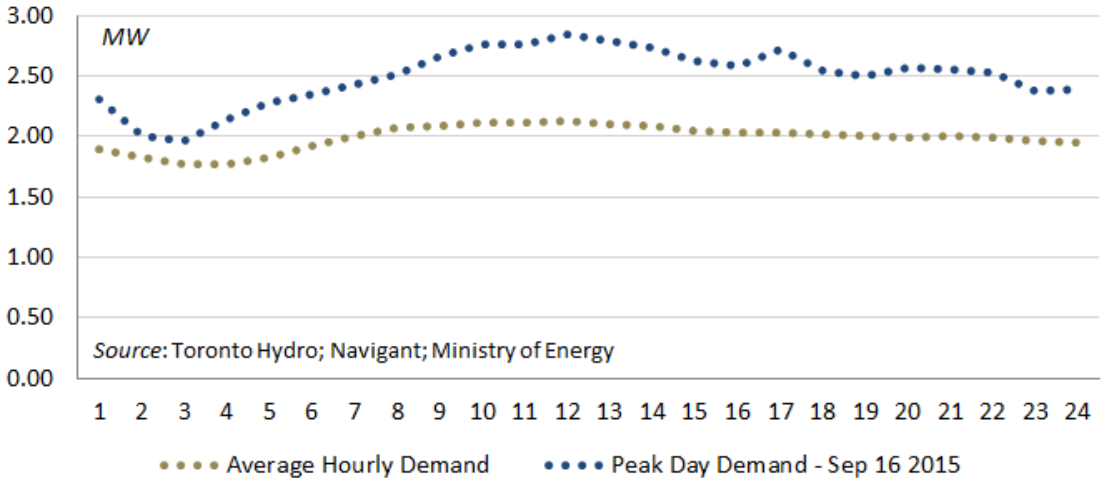
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.

# ICI Expansion – Illustrative Example of Newly Eligible Consumer

- Plastics manufacturers, such as Poly Five Plastics in Toronto, are among the consumers that would become eligible if the threshold was lowered.
- Such manufacturers fall under NAICS* code 32 and have relatively flat load profiles, reflecting around the clock production. This means they would be beneficiaries of ICI even with no change in consumption behaviour.
- Companies like Poly Five Plastics could expect to see greater savings if they are willing and able to respond to the higher prices during high demand hours.

**Typical Demand Profile, 2-3 MW Consumer**

*Manufacturer, NAICS Code 32 - Nov 2014 to Oct 2015*




**Illustrative Bill Savings, 2-3 MW Consumer**

| | *Status Quo* | *No Price Response* | *Short Term Response* | *Long Term Response* |
|---|---|---|---|---|
| | **Class B** | **Class A** | **Class A** | **Class A** |
| GA | 75.26 | 58.06 | 43.55 | 32.03 |
| Total bill | **126.28** | **109.09** | **94.58** | **83.06** |
| *Savings* | | *-14%* | *-25%* | *-34%* |

Source: Navigant; Ministry of Energy

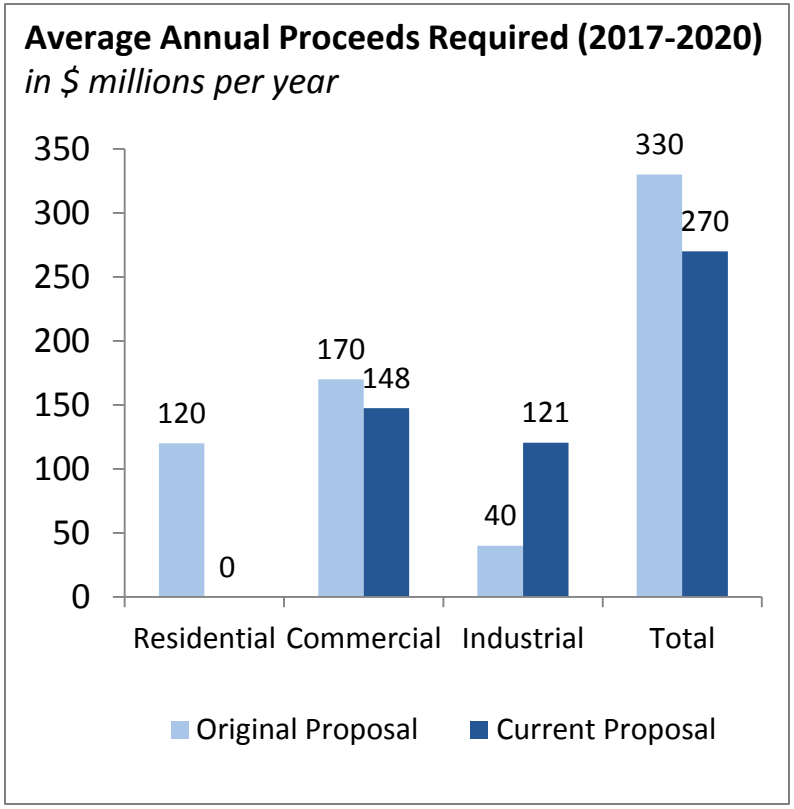
*** Note:** North American Industry Classification System (NAICS) is the standard used by statistical agencies in classifying business establishments.

# Redirect Cap and Trade Proceeds Recycling

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.
  - To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).

- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

- The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $0.24 billion over the first compliance period).




**Note:** The original proposal was to offset the impact of cap and trade via GA to the average industrial, and would provide a benefit to commercial and residential consumers. Current proposal would recycle proceeds volumetrically to industrial and commercial consumers.

# Redirect Cap and Trade Proceeds Recycling

- Redirecting cap and trade auction proceeds to lower the cost of electricity would offset consumers' contributions to non-emitting generation.

- Redirecting helps pay for committed investments/initiatives which reduce GHGs (e.g., non-emitting generation and conservation programs).
  - Due to the long-term nature (typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period. These costs will continue well beyond the timelines described in the CCAP.

- Redirecting cap and trade auction proceeds volumetrically to Class B (commercial) and Class A (industrial) consumers maintains the incentive to shift consumption from on-peak to off-peak hours.

- Using cap and trade auction proceeds to lower the cost of electricity would make it more competitive with traditionally cheaper fossil fuels.

- By using the proceeds to lower the cost of electricity, there is potential to incent fuel-switching away from fossil fuels toward much cleaner grid-connected electricity and support CCAP goals of electrification.

# Considerations

# Implementation

- On September 15, 2016, ENERGY is proposing to introduce the *Ontario Rebate for Electricity Consumers Act, 2016*.
  - If passed, the legislation would require a general regulation.
  - Amendments would also be required to various regulations to expand ICI and RRRP.

- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. ENERGY (possibly through Ontario Energy Board) will consult with LDCs to accurately assess these impacts once the program has been announced.
  - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - Timing concerns may be alleviated by allowing LDCs to provide retroactive rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.

- Detailed messaging on bills (for "low-volume" consumer bills ) could be implemented by amending O. Reg. 275/04 (made under the Ontario Energy Board Act, 1998).
  - The rebate would not be directly linked to HST.
  - With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.

- While the impact of cap and trade would be added to electricity bills as of January 2017, the offsetting effect of proceeds recycling may not occur immediately depending on implementation and potential alignment with the first auction expected in March 2017.
  - Should there be low demand for carbon allowances, auction proceeds would be less than the amount projected in the CCAP. This could mean a short-fall for proceeds recycling as proposed. However, natural gas utilities are expected to purchase allowances quarterly equal to their emissions.

- ENERGY will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

# Fiscal

- The Climate Change Action Plan (CCAP) committed about $1.3 billion over four years for electricity mitigation for industrial, commercial and residential consumers from GGRA proceeds.
  - The current rate mitigation proposal requires approximately 20% less in proceeds, saving approximately $0.24 billion relative to the CCAP commitment over the first compliance period (2017-2020).

- The 8% rebate is expected to cost about $1 billion per year (i.e., $4 billion from 2017-2020), representing an additional pressure on the fiscal plan.
  - Consideration could be given to allocating the $0.24 billion in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset.
  - If cap and trade auctions are under-subscribed, the $0.24 billion may not be available for reallocation to the fiscal plan.

- In the absence of any offset strategies, the full cost of the rate mitigation approach would add to the pressures and risks that need to be managed in order for the government to balance the budget in 2017-18 and stay balanced in 2018-19 and beyond.

# Legal

- In order to avoid characterization as an unconstitutional tax, a non-tax levy must have a sufficient nexus between those who pay and the regulatory scheme in the sense that those who pay have caused the need for or benefit from the regulatory scheme. Although the case law is not developed on the extent to which some regulated actors can be required to subsidize others, risk is reduced to the extent that any cross-subsidization serves true regulatory goals rather than revenue re-distribution goals.

- 8% Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):
  - Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

- ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):
  - Shifting costs to some consumers to lower rates for others without more carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

- RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):
  - Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

- Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):
  - To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

# Communications

- A series of high-profile announcements around introduction of legislation (September 2016).
  - Keynote speech and two public events pre-introduction
  - News release at introduction
  - Full media availability province-wide
  - Regional echo events post-introduction
  - Early engagement of EDA, CEOs of LDCs
  - Stakeholder outreach/technical briefings with Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.
- **Positioning:**
  - An unprecedented plan to benefit all ratepayers in a lasting, meaningful way.
  - Rural customers will receive the largest single rate relief ever.
  - Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.
- **Issues Considerations:**
  - Significant benefit for rural and remote residential customers; net gain for all residential customers.
  - Consistent with cap-and-trade commitment that no business sector will be left worse off.

# Key Messages

- We are taking unprecedented action to help people in their everyday lives.
- Residential ratepayers and other RPP eligible ratepayers will receive an eight per cent rebate on their electricity bill, equivalent to the provincial portion of the HST.
- Modernizing the RRRP will benefit 330,000 families in rural Ontario with significant reductions to their electricity bills ($45 a month).
- Over a thousand more Ontario businesses will be eligible to benefit from the ICI program, helping them stay competitive and grow.
- These actions will assist over five million families, farms and small businesses across Ontario.
- These actions today join our many existing initiatives too help keep electricity in Ontario clean, reliable and affordable.

# Proposed Cabinet Minute

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

    i. Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

    ii. Increase the total amount of rate protection available to R2 low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2003.

    iii. Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

    iv. Expand eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

# Proposed Cabinet Minute (cont'd)

2. ENERGY seek necessary TB/MBC approvals.

3. ENERGY seek approvals for the proposed *Ontario Rebate for Electricity Consumers Act, 2016* which would, subject to the Legislature's approval of the Act, include the following elements:
   i. The rebate would be available starting January 1, 2017;
   ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
   iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers' electricity bills;
   iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way in which electricity vendors providing the rebate are to be reimbursed;
   v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;
   vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments; and
   vii. The legislation would include consequential amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*; and
   viii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date

# Proposed Cabinet Minute (cont'd)

4. ENERGY to report back to LRC and Cabinet for approval of any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments.

5. ENERGY notes the following amendments:

   i. Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the Electricity Act, 1998 to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

   ii. Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density electricity customers and provide for a periodic adjustment mechanism.

6. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

7. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan

# Proposed Cabinet Minute (cont'd)

Cabinet approved version of the proposed *Ontario Rebate for Electricity Consumers Act, 2016* for introduction, subject to the following:

1. The Office of Legislative Counsel is authorized to prepare a French version and to make minor adjustments to the English version, for the purpose of ensuring consistency between the two versions and making other improvements or correcting mistakes discovered in the translation process.

# Appendix

# Illustrative Benefits

| | Current Bill ( before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $139 /month | N/A | 8% pre-tax rebate: - $11 | $128 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $229 /month | RRRP: –$32 | 8% pre-tax rebate + Updated RRRP: - $45 | $184 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $101 /month | OESP: -$38 | 8% pre-tax rebate: - $8 | $93 /month |
| Small Business (Toronto – 403,200 kWh/month) | $149 /MWh | N/A | 8% pre-tax rebate: - $12/MWh | $137 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $203 /MWh | N/A | 8% pre-tax rebate: - $16/MWh | $187 /MWh |

**Notes:**

***** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as $1,332 per year for a family.

** income of less than $28,000, family of 4.

The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Totals may not add due to rounding.

# Illustrative Benefits (cont'd)

| | Current Rate | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Rate |
|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | $105 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI + NIERP: -$69/MWh | Proceeds Recycling: -$2.60/MWh | $66 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling + ICI: Up to -$52/MWh | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $149 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $151 /MWh |

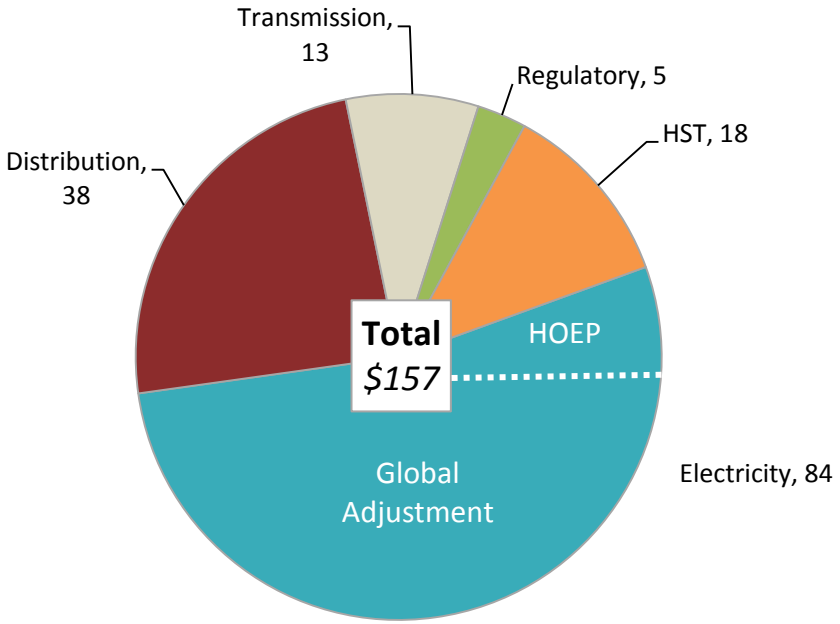
**Notes:**
The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of May 1, 2016 (750 kWh/month)*




*Source*: OEB, Toronto Hydro

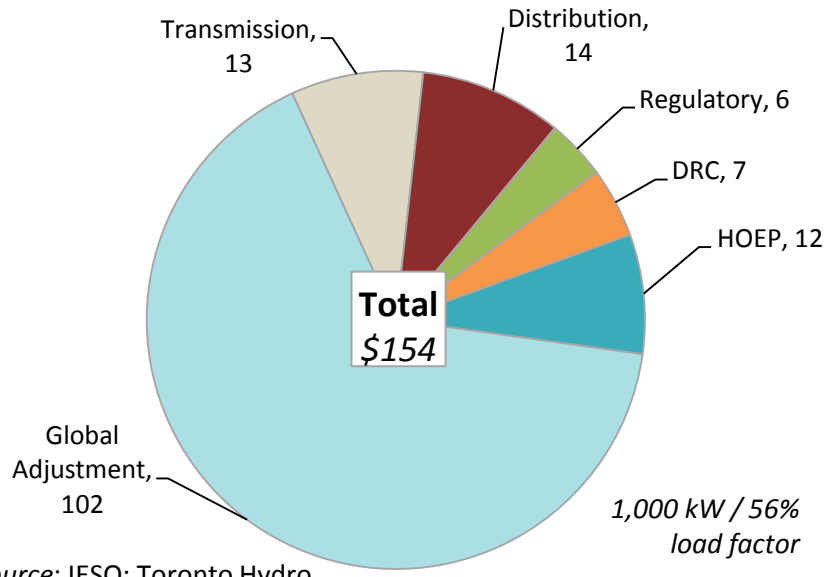
# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.

- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




*Source*: IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.

- Targeted pricing programs are currently not available for Class B consumers.

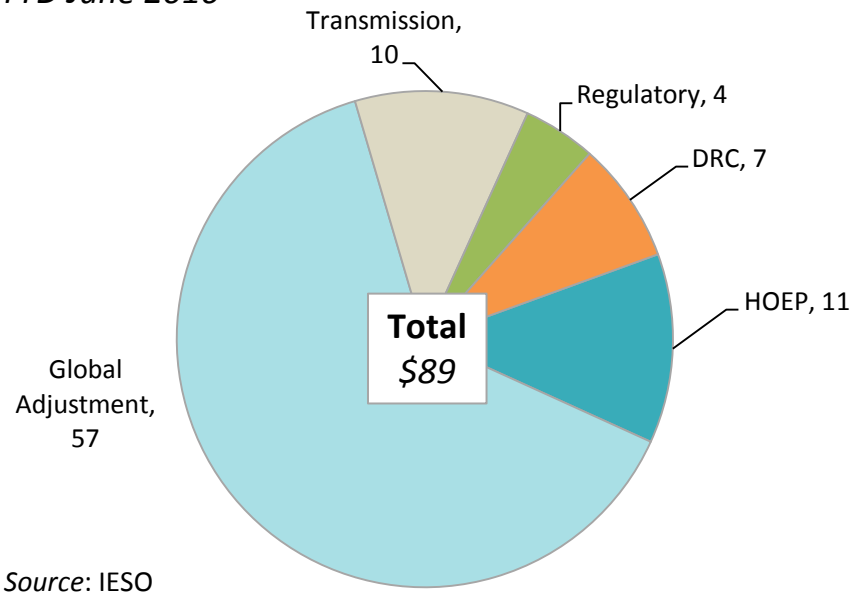
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*




*Source*: IESO

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Sales Tax Treatment in Other Jurisdictions

| Jurisdiction | Tax | Tax Paid by Business Consumers | Tax Paid by Residential Consumers | Comment |
|---|---|---|---|---|
| **British Columbia** | PST | Yes – 7% | No | • PST does not apply to residential energy, including electricity, acquired solely for residential use in a residential dwelling<br>• BC's carbon tax does not apply to electricity bills. |
| **Alberta** | None | N/A | N/A | • Alberta does not have a provincial sales tax. |
| **Saskatchewan** | PST | Yes – 5%<br>Except for electricity purchased to heat a building. | No | • PST does not apply to electricity purchased for use in a residential dwelling.<br>• PST does not apply to electricity purchased for use in heating a building that is heated solely by the electricity. |
| **Manitoba** | PST | Yes – 8%<br>Reduced rate of 1.6% applies to electricity used by a qualifying business to operate machinery | Yes – 8%<br>Electricity purchased for mixed use, 80% of which is home heating, has a reduced rate of 1.4%. Electricity solely to heat the purchaser's home is exempt. | • Winnipeg also applies a tax of 2.5% on residential and 5% on commercial. |
| **Ontario** | HST | Yes (less ITC (input tax credits)) | Yes – 8% | |
| **Quebec** | QST | Yes (less ITCs) | Yes – 9.975% | |
| **Nova Scotia** | HST | Yes (less ITCs) | Yes – 10% less provincially administered rebate. | • Rebate is equal to the provincial portion of the HST, and is administered similar to OCEB, but applies to many energy sources. |
| **New Brunswick** | HST | Yes (less ITCs) | Yes – 10% | |
| **Prince Edward Island** | HST | Yes (less ITCs) | Yes – 9% (10% beginning Oct 1, 2016) | |
| **Newfoundland and Labrador** | HST | Yes (less ITCs) | Yes – 10% | • Had a provincially administered Home Heating Rebate program until July 2015. |
| **Federal** | GST | Yes (less ITCs) | Yes – 5% | |

**From:** Gavin He
**To:** John Kim
**Subject:** Fw: Rate Mitigation - H1 Options
**Date:** Saturday, January 14, 2017 3:37:33 PM
**Attachments:** 2017 01 13 Rate Mitigation - H1 Options v02_CEFD_markup2.pptx

---

Hi John,

Is this the deck you were referring to? This was related to the DTB for Hydro One.

Let me know if you were referring to something else.

Regards,
Gavin He

---

**From:** Francisco Chinchon
**Sent:** Friday, January 13, 2017 5:00:05 PM
**To:** Ronald Kwan
**Cc:** Gavin He; Darren Scanlan; John Kim
**Subject:** RE: Rate Mitigation - H1 Options

Hi Ron,

Looks good. One colour version is attached.

Thanks,

Francisco

---

**From:** Ronald Kwan
**Sent:** Friday, January 13, 2017 4:24 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: Rate Mitigation - H1 Options

Hi Francisco,

Thanks. I had similar concerns and added in some additional suggested edits.

Ron

---

**From:** Francisco Chinchon
**Sent:** January 13, 2017 2:35 PM
**To:** Ronald Kwan
**Cc:** Gavin He; Darren Scanlan; John Kim
**Subject:** RE: Rate Mitigation - H1 Options

Hi Ron,

A few comments and edits. I must say we are a bit fussed with the tone of the slide (our deck was way more neutral), in particular with respect to option 3 as it assumes a lot.

Thanks,

Francisco

---

**From:** Ronald Kwan
**Sent:** Friday, January 13, 2017 1:47 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation - H1 Options

Hi,

Please review ASAP.

Thanks,
Ron

---

**From:** Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
**Sent:** January-13-17 13:12
**To:** Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** Rate Mitigation - H1 Options

Hi Nancy, Ron,

The attached responds to a request from the SoC for options dealing with the Hydro One deferred tax benefit. This doesn't include a lot by way of pre-amble, as I think we have spent a fair bit of time discussing the issue. Ron, we attempted to take the key elements from your presentation, as well as the note that ENE prepared before the holidays. Please let me know if you have any edits / comments. Apologies for short notice, but I have been asked to share a draft with ENE DMO by EOD.

Thanks,

Scott

# Rate Mitigation Options
# Hydro One-Related Options

# Purpose

- The following presentation considers the following three options in the context of electricity rate mitigation, and the Ontario Energy Board's upcoming transmission rate decision that will include treatment of Hydro One's Deferred Tax Benefit:

    1. Dedicate the Departure Tax to ratepayers
    2. Allocate Trillium Trust Funds to Energy Projects
    3. Await OEB Decision (Status Quo)

# Context: Tax Benefit and the Ontario Energy Board Review

- Hydro One paid a one time Departure Tax of $2.6 B to the Ontario Electricity Financial Corporation (OEFC) towards stranded debt ~~Province~~ prior to exiting the payments-in-lieu of tax regime and then recorded a Deferred Tax Benefit (DTB) of ~$2.8 B, as it entered the income tax regime, post-IPO
  - The Province recorded increased revenues of ~$2.4B due to the DTB, which it has allocated to the Trillium Trust
- The Ontario Energy Board (OEB) is currently reviewing Hydro One's 2017-18 transmission rate application to determine whether the DTB should be allocated to the benefit of ratepayers rather than shareholders
  - There is no clear precedent, has been ~~as it is~~ rare; however, could arise in future in the case of transactions of municipally-owned electricity utilities
    - The OEB may consider the impact of a precedent that could also negatively affect LDC consolidation by reducing value and transaction prices~~for the seller to benefit from tax collections~~
  - Hydro One believes it has a strong argument to keep the DTB, as Hydro One paid the departure tax, investors purchased shares on the basis that the value of the tax shield would flow to their benefit, and ratepayers are no worse off as a result of the transaction
    - This argument is complicated by the Province's equity injection of $2.6 B to Hydro One pre-IPO, which was done to mitigate the negative financial consequences arising from the Departure Tax payment. A shareholder equity injection is consistent with the departure tax being funded by equity holders, not ratepayers, so that an associated DTB should be for the benefit of shareholders as well.
  - Hydro One and the IPO lead bookrunners reached out to regulatory experts in 2015 for an assessment and although outlined as a risk in the prospectus, this was viewed as an unlikely outcome at the time of the IPO
- In the event the OEB requires the benefit from the DTB to flow to ratepayers, the lead bookrunners calculated an earnings impact of ~$1 B on a present value basis (~$1.85 per share). Further impacts to share value could arise depending on whether analysts and investors reconsider regulatory risk
- OEB's transmission rate decision is expected in late winter / early spring 2017, and a similar decision on distribution rates is expected at the end of 2017

# Option 1: Dedicate Departure Tax to Ratepayers

- Dedicate the $2.6B Departure Tax to ratepayers over 5-10 years

- Prior to the OEB's decision on the Hydro One transmission rate application, the Province could commit to providing value equivalent to the tax payment to ratepayers
- This may ~~would~~ reduce the likelihood that OEB would require providing the DTB to ratepayers

| | |
|---|---|
| **Ratepayer Impact** | • Typical Residential ratepayers would save $2.79/month if allocated over 5 years or $1.39/month if allocated over 10 years<br>• Relief would be temporary and could result in a spike in electricity bills following the conclusion of the mitigation initiative<br>• This benefit could apply to all Ontario ratepayers, or be conveyed as targeted relief |
| **Fiscal Impact** | • The tax payment did not result in a net fiscal benefit to the Province as it was offset upon consolidation by the tax expense on Hydro One's financial statements<br>• Dedicating the departure tax to ratepayers would have a negative fiscal impact on a dollar per dollar basis as the Province would record an annual expense of $520M (5yrs) or $260M (10yrs)<br>• Reallocating the departure tax from OEFC to ratepayers would also cause an equivalent increase to the unfunded liability of OEFC (or "stranded debt") |
| **Other** | • Discussions with OEB would be required to ensure this tradeoff is acceptable. Otherwise, there may be an additional fiscal impact ~~risk~~ pending an OEB decision on the treatment of the DTB<br>• This decision may lead to pressure for the Province to adopt a similar policy for future departure tax payments (e.g. municipal utility transactions)<br>• Implementation mechanisms require further consideration, including legal considerations with respect to any involvement from OEFC as its main objective is to reduce stranded debt. |

# Option 2: Allocate Trillium Trust Funds to Energy Projects

- Allocate a portion of the Trillium Trust to investments in electricity sector projects

- In advance of OEB's decision on Hydro One's rate application, the Province could expand the Trillium Trust project types ~~by allocating a portion of the benefit that the Province received from the broadening of ownership of Hydro One,~~ to also include electricity infrastructure projects. However, this would crowd-out Moving Ontario Forward projects already internally identified as Trillium Trust recipients.
- While it is not certain that this would ~~In addition to~~ mitigat~~eing~~ the risk of an adverse regulatory decision, this would help defray the ratepayers' cost of investments that are made to modernize the province's electricity infrastructure, shifting the cost to the tax base. (Potential projects could include transmission connection to remote communities and natural gas expansion)

| | |
|---|---|
| **Ratepayer Impact** | • The ratepayer impact may be small and/or deferred until projects are in-service<br>• Benefits may accrue to a select group of ratepayers depending on the location and type of projects that are funded |
| **Fiscal Impact** | • If invested in Provincially-owned assets, the fiscal cost would be spread over the life of the asset but would be incremental to the amounts included in the current infrastructure plan. If spent on non-provincially-owned assets, the fiscal impact would be upfront as funds are transferred [accounting TBC].<br>• Incremental interest costs associated with funding incremental electricity projects, assuming Moving Ontario Forward projects continue to be funded/financed from another source (debt)<br>• There would be indirect fiscal impacts as there would be fewer infrastructure projects available for electricity sector companies where the Province has a stake and earns a rate of return (OPG, Hydro One).<br>• This could also decrease the value of Hydro One shares if investors consider such measure affects the long-term prospects of Hydro One (i.e., as it would have fewer areas/projects where it could invest). |
| **Other** | • Discussions with OEB would be required to ensure this trade-off is acceptable. Otherwise, there would ~~may~~ be additional fiscal risk pending an OEB decision on the treatment of the DTB<br>• This represents a policy shift, as the asset optimisation amounts have been fully allocated to go to Moving Ontario Forward projects<br>• Depending on structuring, the Province would ~~may~~ have expenses (upfront or over time) associated with electricity infrastructure spending without a mechanism for cost recovery (if the Province owned the rate-regulated or contracted electricity infrastructure with rate recovery, while there may be no fiscal impact, there would be no (or little) ratepayer rate reduction – could raise questions on one rationale for selling Hydro One shares)<br>• Implementation mechanisms require further consideration |

# Option 3: Await OEB Decision (Status Quo)

- Take no action and let the OEB decide, as part of Hydro One's rate filing, whether the DTB should benefit ratepayers or shareholders

- The following table highlights considerations assuming the OEB rules in favour of ratepayers. However, this is not to suggest that there is evidence that this would be the most likely outcome and with respect to some or all of the amount of the DTB.

| | |
|---|---|
| **Ratepayer Impact** | • Residential customers could benefit from a small reduction in rates (~8 cents/month for transmission customers), potentially continuing over several years<br>• Assuming a similar decision is applied to the distribution application, typical medium density Hydro One customers would experience a reduction of ~78 cents/month. However, this benefit would flow only to Hydro One customers and only if the OEB allocates the full amount. |
| **Fiscal and Shareholder Impact** | • Share price could decline by ~$1.85 per share, due in part to the reduction in expected future earnings, and also because this surprise decision would affect perceived regulatory risk<br>• Hydro One may also write down the DTB, which could trigger a negative fiscal impact from a write down of the Province's $2.4B portion of this benefit that has already credited to the Trillium Trust and recognized in the 2015-16 Public Accounts.<br>• As a result of both the decline in share price, and write down of the tax benefit, the Province may have difficulty in achieving its asset optimization target. ~~reaching its objective of $4B in net gains from the broadening of ownership of Hydro One to be dedicated to the Trillium Trust~~ |
| **Other** | • This option would allow for targeted benefits to flow to Hydro One customers, but the Province would not control the size or timing of those benefits<br>• The Province would not be credited for any rate mitigation resulting from this outcome, although the Province could emphasize the OEB's role in protecting consumers<br>• Some of the downside would be absorbed by private investors<br>• If the OEB allows Hydro One to keep the DTB, as is expected by Hydro One, the Province would still be able to introduce rate mitigation measures. |

**From:** John Kim
**To:** Gavin He
**Subject:** Fwd: A call from OPCD
**Date:** Friday, January 13, 2017 4:49:25 PM

---

FYI. Consider adding this point

Begin forwarded message:

> **From:** "Veinot, Cindy (TBS)" <Cindy.Veinot@ontario.ca>
> **Date:** January 13, 2017 at 4:38:09 PM EST
> **To:** "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Kim, John (OFA)" <John.Kim@ofina.on.ca>
> **Subject: RE: A call from OPCD**
>
> We are providing a briefing note to our Associate DM by EOD today.
>
> Cindy
>
> ---
>
> **From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
> **Sent:** January-13-17 4:28 PM
> **To:** Kim, John (OFA)
> **Cc:** Veinot, Cindy (TBS)
> **Subject:** Re: A call from OPCD
>
> Thanks John. Have a good weekend and recover from your jet lag
>
> Copying Cindy, as neither Gadi nor I, as non-accountants admittedly, could see how this could not have a fiscal impact either, and for the same reasons.
>
> Cindy, are you providing comments directly back to Energy, and, if so, when? Sooner rather than later would seem appropriate to me.
>
> Ron
>
> ---
>
> **From:** John Kim
> **Sent:** January 13, 2017 4:13 PM
> **To:** Ronald Kwan
> **Subject:** A call from OPCD
>
> Hi Ron,
>
> Helen Graham and Cindy Veinot gave me a call. Helen called first and then asked me to a call with Cindy.

So DM of Energy appears to have engaged DM of TBS which is how OPCD received the deck. Energy asked for comments from an accounting perspective which is how OPCD seemed to have gotten engaged.

They wanted mostly clarification on Global Adjustment and what it covers. Cindy's comments were to the point that she would not see how this will not lead to a fiscal hit. That you cannot create a receivable/asset , unless there is a counterparty or unless it is a rate regulated entity.

I'm running out of steam so will be heading out shortly but will try to provide you with a note this weekend.

Thanks,

John.

Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

---

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| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | John Kim |
| **Subject:** | Fwd: Cost Shifts in the Electricity Sector |
| **Date:** | Saturday, November 19, 2016 1:30:18 PM |
| **Attachments:** | Cost Shifting - Sent to MO on 2016-11-18.pptx<br>ATT00001.htm |

---

Hey John,

Not sure what timing Ron's expecting for this and what you're thinking.

Could this wait til Monday to regroup and action on, otherwise I might be free tomorrow evening if it's needed first thing in the AM.

Shajee

Sent from my mobile device, please excuse any typos or brevity.

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** November 18, 2016 at 6:11:28 PM EST
> **To:** John Kim <John.Kim@ofina.on.ca>, Emily Kerr <Emily.Kerr@ofina.on.ca>, Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
> **Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> **Subject: FW: Cost Shifts in the Electricity Sector**
>
> Hi All,
>
> FYI. I think we need to do our own version in order to provide better balance and a more complete picture.
>
> How long do you think it might take?
>
> Ron
>
> -----Original Message-----
> From: Ronald Kwan
> Sent: November-18-16 18:09
> To: Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>
> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> Subject: RE: Cost Shifts in the Electricity Sector
>
> Hi,
>
> While they list some tax-based programs that are not cost shifts, they do not list NIER nor the recent 8% rebate, and they only show to 2016, prior to the latter and the expansion of RRRP. I would have thought it would be helpful to show those.

On slide 5, it would be helpful to show, for context, the cost of electricity programs already on the tax base, such as historically OCEB and the 8% going-forward, as well as NIER, OEPTC, NOEC, and ending the DRC early too.

Ron

-----Original Message-----
From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
Sent: November-18-16 17:48
To: Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
Subject: FW: Cost Shifts in the Electricity Sector

FYI both.

---

From: Imbrogno, Serge (ENERGY)
Sent: Friday, November 18, 2016 5:26:11 PM (UTC-05:00) Eastern Time (US & Canada)
To: Orsini, Steve (CAB)
Cc: Bromm, William (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF)
Subject: Fw: Cost Shifts in the Electricity Sector

Hi Steve,
The attached shows costs shifts within the electricity sector which are the result of rate mitigation programs which benefit some consumers. It also shows the total cost of these programs. This was produced in response to a request from Ed.
Serge

Ontario

MINISTRY OF
ENERGY

# Cost Shifts in Ontario's Electricity Sector

## Working Draft

November 2016

CONFIDENTIAL DRAFT

# Context

- Necessary investments in Ontario's electricity system have led to increased prices, prompting government to introduced a number of price mitigation programs for all consumer types.
  - In addition to existing rate mitigation programs, the 2016 Throne Speech announced a package of rate mitigation initiatives to address electricity prices for residential, commercial and industrial consumers.

- Ontario has a number of programs in place to manage residential electricity prices, including:
  - Ontario Electricity Support Program (OESP);
  - Rural or Remote Rate Protect (RRRP);
  - Northern Ontario Energy Credit (NOEC); and
  - Ontario Energy and Property Tax Credit (OEPTC).

- Ontario also has a number of programs in place to manage industrial electricity prices, including:
  - Industrial Conservation Initiative (ICI);
  - Industrial Electricity Incentive (IEI);
  - Industrial Accelerator Program (IAP);
  - saveONenergy for Business Program; and
  - Demand Response.

# Context (cont'd)

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in Ontario's Electricity Sector

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in Ontario's Electricity Sector (cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

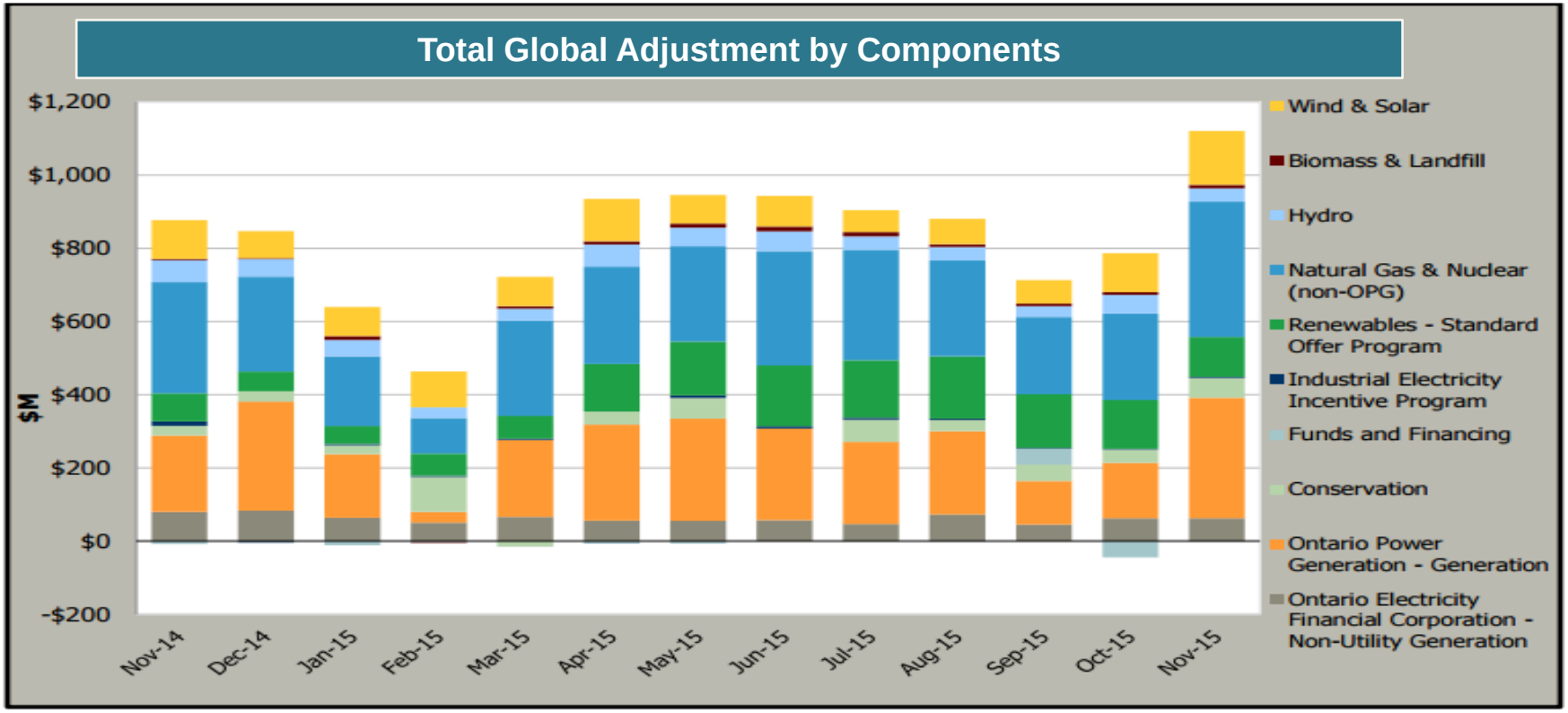
| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

**From:** John Kim
**To:** Ronald Kwan
**Subject:** Fwd: Draft BN for Monday TB/MBC Meeting
**Date:** Sunday, September 11, 2016 11:14:27 AM

---

FYI, ???

Begin forwarded message:

> **From:** "Strang, James (TBS)" <James.Strang@ontario.ca>
> **Date:** September 11, 2016 at 10:52:05 AM EDT
> **To:** "Kim, John (OFA)" <John.Kim@ofina.on.ca>
> **Cc:** "Fung, Felix (TBS)" <Felix.Fung@ontario.ca>, "Morgenstern, Madeleine (TBS)" <Madeleine.Morgenstern@ontario.ca>, "Kathirgamanathan,Shajee (OFA)" <Shajee.Kathirgamanathan@ofina.on.ca>
> **Subject: RE: Draft BN for Monday TB/MBC Meeting**
>
> Yes, sent along their edits, updating future years. Could be being conservative?
>
> Felix, I'm thinking we should put it back to the previous numbers. Let me know.
>
> -----Original Message-----
> From: John Kim [mailto:John.Kim@ofina.on.ca]
> Sent: September 11, 2016 7:51 AM
> To: Strang, James (TBS)
> Cc: Fung, Felix (TBS); Morgenstern, Madeleine (TBS); Kathirgamanathan,Shajee (OFA)
> Subject: Re: Draft BN for Monday TB/MBC Meeting
>
> Hi James, Felix, Madeleine,
>
> Noticing the amounts have changed to 1.1 and 1.2. What was the basis of the amounts? Was there an update from Energy?
>
> Thanks,
>
> John
>
> > On Sep 10, 2016, at 6:49 PM, Strang, James (TBS) <James.Strang@ontario.ca> wrote:
> >
> > Attached is the draft briefing note for TB/MBC on Monday. We followed the minute for OCEB then refined it for this item.

James

<RAN Electricity Price Mitigation v11 2016 09 10.doc>

---

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| | |
|---|---|
| **From:** | John Kim |
| **To:** | Ronald Kwan |
| **Cc:** | Tomasz Bugajski; Shajee Kathirgamanathan |
| **Subject:** | Fwd: Draft BN for Monday TB/MBC Meeting |
| **Date:** | Saturday, September 10, 2016 6:52:01 PM |
| **Attachments:** | RAN Electricity Price Mitigation v11 2016 09 10.doc<br>ATT00001.htm |

---

FYI

Begin forwarded message:

> **From:** "Strang, James (TBS)" <James.Strang@ontario.ca>
> **To:** "Keley Katona (ENERGY)" <Keley.Katona@ontario.ca>
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> **Subject: Draft BN for Monday TB/MBC Meeting**
>
> Attached is the draft briefing note for TB/MBC on Monday. We followed the minute for OCEB then refined it for this item.
>
> James

**TREASURY BOARD / MANAGEMENT BOARD OF CABINET**
**REQUEST ASSESSMENT NOTE**

| | | |
|---|---|---|
| **Ministry:** | Energy | |
| **Meeting Date:** | September 12, 2016 | |
| **Agenda Class:** | Major | |
| **Last reviewed by:** N/A | | **Tracking to:** Cabinet - September 12, 2016 |

| **SUBMISSION TITLE:** | Electricity Price Mitigation |
|---|---|

## I. DECISION BEFORE THE BOARD

The Ministry of Energy is requesting approval of a suite of initiatives providing relief to various electricity consumer classes.

## II. RECOMMENDATIONS:

| | |
|---|---|
| • Approve a suite of initiatives to provide relief to various electricity consumer classes (pending Cabinet policy approval):<br>– Providing an 8% rebate to Regulated Price Plan consumers;<br>– Expanding the Industrial Conservation Initiative;<br>– Updating the Rural or Remote Rate Protection program; and,<br>– Using $270M in cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade by providing a modest reduction in rates. Balance of proceeds intended for electricity relief through the Climate Change Action Plan ($60M), could provide some fiscal offsets.<br>• Approve $300M in Supplementary Estimates for electricity price mitigation.<br>• Direct the Ministry to report back to TB/MBC through the annual planning process with updated future year impacts, and obtain any required TB/MBC approvals to implement the initiatives<br>• Recommend proceeding to Cabinet with the proposed legislation amendments to existing regulations to implement the initiatives. | *Board Judgment* |

## III. FINANCIAL SUMMARY

| **$ Millions** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|
| Initiative cost requested | 300.0 | 1100.0 | 1100.0 |
| Initiative cost recommended | 300.0 | 1100.0 | 1100.0 |
| Recommended program base | 300.0 | 1100.0 | 1100.0 |
| Offset Recommended – Applies if cap and trade proceeds diverted to in-plan initiatives | 0.0 | (60.0) | (60.0) |
| Total Fiscal Impact | 300.0 | 1040.0 | 1040.0 |

## IV. KEY COMMENTS AND CONSIDERATIONS

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online. Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period. Appendix C provides supporting background information.

As part of the 2016 Budget, the government committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the Budget commitment and additional price mitigation, while delivering on the Province's climate change objectives, the Ministry of Energy has developed price mitigation initiatives that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

The Ministry is proposing the following to mitigate electricity prices for consumers (Appendix D provides more information on each item below):

- Provide an 8% rebate on the pre-tax cost of electricity to consumers eligible for the Regulated Price Plan (i.e., residential, small business and farms), equivalent to the provincial portion of HST.
- Expand Industrial Conservation Initiative (ICI) eligibility by lowering the threshold to 1 MW, to provide support to Class B eligible electricity consumers (i.e., commercial, institutional and small industrial).
- Update the Rural or Remote Rate Protection (RRRP) program, to provide relief to rural customers.
- Use cap and trade proceeds to provide a modest rate reduction for commercial and industrial electricity consumers.

Public high-profile communications would coincide with introduction of legislation (September 2016). Currently, the 8% rebate would be available starting January 1, 2017, along with updating the RRRP. Expanding ICI won't be added to bills until 2018 due to the time required to implement the expansion and for billing changes. The impact of cap and trade would not be added to electricity bills until 2017.

The following tables provide an overview of the four initiatives, recipients, projected financial impact, grouping them based on whether taxpayers or ratepayers cover the costs:

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Taxpayers cover the costs (Potential to impact the Province's Fiscal Plan)** | | | |
| **1.** | 8% Rebate to Regulated Price Plan | Fiscal $1100M | Residential, small business and small farms, and other small users |
| **2a.** | Use cap and trade proceeds to provide a modest reduction in rates for commercial and industrial electricity consumers. (Implementation details under development). | ($270M) in cap and trade proceeds to offset $270M in costs for reducing rates<br><br>No Fiscal Impact | The CCAP allocated up to $330M/year in cap and trade proceeds for electricity price mitigation.<br><br>See item 2b. regarding the residual amount of cap and trade proceeds ($330M - $270M = $60M) |
| **2b.** | While CCAP anticipated $330M/year was required to keep electricity affordable, the residential portion of this commitment is met by the 8% rebate. As such, some of the CCAP allocated proceeds can be redirected to other GHG reduction initiatives already in the fiscal plan. | Fiscal ($60M) | Provides fiscal plan flexibility of $60M/year if these proceeds are diverted to offset costs of other existing in-plan initiatives that reduce GHG emissions. |
| | **Total Fiscal Impact** | $1040M | Matches Financial Summary on page 1 for 2017-18 |

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Ratepayers cover the costs (No impact to the Province's Fiscal Plan)** | | | |
| **3** | Expanding ICI eligibility to customers above 1MW in all sectors | Rate base ($47M/$82M)** | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors |
| **4.** | Updating Rural or Remote Rate Protection | Rate base ($110M) | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. |

** Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.

Due to the nature of the ICI Global Adjustment mechanism and cost recovery of RRRP, the rate base proposals (#3 and #4) above benefit the targeted recipients, but come at a cost to all other electricity rate payers in Ontario.

The following table from the Ministry highlights the benefits by electricity consumer class.

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Benefit | | Class B (Commercial) Benefit | Class A (Industrial) Benefit | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br>(-8%) | -$45/ month<br>(-20%) | -$3/MWh<br>(-2%) | -$3/ MWh<br>(-3%) | Up to -$52/MWh<br>(-34%) |

**Notes:** * The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

See Appendix E for more illustrative bill impacts. See Appendix F for an electricity bill mock-up.

Fiscal Impact

The Ministry estimates proceeding with an 8% Regulated Price Plan (RPP) rebate without a cap would cost an estimated $1.1 billion per year. The Ministry's estimate of $300M needed for 2016-17 (to cover the first three months of 2017 when the 8% rebate applies) will be addressed through Supplementary Estimates. The Ministry will use the annual planning process to update future year impacts.

The Ministry also indicates the current proposal would use cap and trade proceeds to eliminate carbon price impacts/ grid emission reductions to ratepayers, as was established through the CCAP. This proposal does not require the full $330M/year notionally allocated through the CCAP, which could provide fiscal plan flexibility of about $60M per year to commit to other GHG reduction initiatives in the fiscal plan.

Cap and Trade Proceeds

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers (on average). While residential and other consumers would benefit from the 8% pre-tax rebate, this does not apply to non-Regulated Price Plan eligible consumers (larger industrial, commercial, and other consumers). As such, the Ministry is proposing to direct a portion of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to provide a modest rate reduction. This proposal fulfills the policy objective established in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to electricity ratepayers.

To be characterized as a regulatory charge under the cap and trade program, auction proceeds need to be spent on programs that are reasonably likely to reduce or support the reduction of greenhouse gases. The Ministry has indicated that their proposal would use proceeds to offset

the costs of committed investments that reduce greenhouse gases (e.g., non-emitting generation and conservation programs) and could incent fuel-switching away from fossil fuels.

Considerations – Implementation

At this point, the Ministry has presented a high level overview of major implementation pieces:

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010. If passed, the legislation would require a general regulation. Amendments would also be required to various regulations to expand ICI and RRRP.
- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. The Ministry indicates it will consult with LDCs (possibly through the Ontario Energy Board) to accurately assess these impacts once the program has been announced. In the past, LDCs have asked for at least six months' notice when implementing billing system changes. Timing concerns may be alleviated by allowing LDCs to provide retroactive payments rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- Detailed messaging on bills could be implemented. The rebate would not be directly linked to HST. With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.
- The Ministry will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

Legal Considerations

8% Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):

- Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):

- To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):

- Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on

both sides).

Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):

- To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

Other Considerations

- This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets for the 8% rebate.
- The 8% rebate would provide a typical residential consumer about an $11 per month benefit on average, exceeding the Budget 2016 $2 per month on average cap and trade commitment. The proposal to offer a modest rate reduction for industrial and commercial consumers also exceeds the Budget commitment to simply offset the impact of cap and trade on these consumers.
- Reduction in electricity prices that do not consider consumption amounts (e.g., without the cap in the previous OCEB program) does not promote electricity conservation and may be seen as unaligned with climate change objectives.
- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
  - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
  - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
  - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

| | | | |
|---|---|---|---|
| **Name of analyst:** | James Strang<br>With input from TPD and OFA | **Phone number:** | 416-327-2071 |
| **Date:** | September 9, 2016 | **Log number:** | |
| **Branch / Division:** | GGPR/ PEMD/ Treasury Board Secretariat<br>Tax Policy Division/ Ministry of Finance<br>Ontario Financing Authority/ Ministry of Finance | | |

## APPENDIX A: PROPOSED MINUTE

Approve electricity price mitigation for residential, commercial and industrial consumers.

In this regard:

i) Approve a suite of initiatives to provide relief to various electricity consumer classes:

   a) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor, starting January 1, 2017.

   b) Increase the total amount of rate protection available to R2 low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2003.

   c) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

   d) Expand eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

   e) Provide a modest rate reduction to commercial and industrial electricity consumers using cap and trade auction proceeds to offset the cost.

ii) Recommend to Cabinet the proposed Ontario Rebate for Electricity Consumers Act, 2016 and that the Ministry proceed to Legislation and Regulations Committee before the end of 2016 with supporting regulations under the proposed Ontario Rebate for Electricity Consumers Act, 2016.

iii) Approve the implementation details associated with the suite of initiatives:

   a) Approve:

      1. The creation of a new item entitled "Ontario Rebate for Electricity Consumers" in the Electricity Price Mitigation Program (Vote/Item 2905-3).

      2. The creation of a new Transfer Payment entitled "Ontario Rebate for Electricity Consumers" in Rebate for Electricity Consumers (Vote/Item 2905-3).

      3. An expenditure increase in the amount of $300,000,000 in 2016-17 in the Transfer Payment entitled "Rebate for Electricity Consumers[1]" in Rebate for Electricity Consumers (Vote/Item 2905-3). Direct the Ministry to return any under-spending to the Treasury Board Contingency Fund.

[1] Pending approval of the proposed Ontario Rebate for Electricity Consumers Act, 2016

b) Note:

1. Funding for 2016-17 will be implemented through Supplementary Estimates in the Fall of 2016.

2. Future year impacts of $1,100,000,000 in 2017-18 and $1,100,000,000 in 2018-19, and $1,200,000,000 in 2019-20 and ongoing.

c) Direct the Ministry to report back to Treasury Board/Management Board of Cabinet in the 2017-18 Program Review, Renewal, and Transformation process on updated future year impacts, and a potential offset strategy for resource requirements to support program implementation

iv) Note the reallocation of cap and trade auction proceeds from the up to $1,320,000,000 that was previously allocated through the Climate Change Action Plan for electricity price mitigation, as follows:

a) The Ministry of Energy to work with the Ministry of the Environment and Climate Change to invest an estimated amount of up to $1,080,000,000, from 2017-18 to 2020-21, of cap and trade auction proceeds for non- Regulated Price Plan commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

b) The remaining up to $240,000,000, from 2017-18 to 2020-21, which was previously allocated in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to ratepayers, to be used for other existing initiatives within the fiscal plan that reduce greenhouse gas emissions.

In this regard:

1) Direct the Ministry of the Environment and Climate Change to work with Treasury Board Secretariat and Ministry of Finance to identify other existing initiatives within the fiscal plan that reduce greenhouse gas emissions that can be funded with the remaining up to $240,000,000, from 2017-18 to 2020-21, which was allocated in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to ratepayers.

v) To support implementation of electricity price mitigation, the Ministry is proceeding with the following amendments to existing regulations:

a) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the Electricity Act, 1998 to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

b) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural or Remote Rate Protection Plan to R2 low density electricity customers and provide for a periodic adjustment mechanism.

vi) Direct the Ministry to work with the Premier's Office and Cabinet Office on the development and implementation of an integrated communications strategy.

# APPENDIX B: FINANCIAL TABLES

| FINANCIAL IMPACTS: CHANGES TO EXPENSE AND REVENUE | | | | | TABLE B1 |
|---|---|---|---|---|---|
| | | *Fiscal Plan Basis* | | | *Appropriations Basis* |
| **$ Millions** | | **2016-17** | **2017-18** | **2018-19** | **2016-17** |
| Initiative cost recommended | | 0.0000 | 0.0000 | 0.0000 | |
| *Expense changes:* | | | | | |
| Operating item (Supplementary Estimates inclusion for 2016-17 amount) | Oper | 300.0000 | 1100.0000 | 1100.0000 | 0.0000 |
| Operating Offset | Oper | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | | | | | |
| | | | | | |
| *Revenue changes:* | | | | | |
| Revenue Increase/ Offset - Applies if cap and trade proceeds diverted to in-plan initiatives | | 0.0000 | (60.0000) | (60.0000) | |
| Revenue decrease | | 0.0000 | 0.0000 | 0.0000 | |
| **Total Fiscal Impact (draw from c-funds)** | | **300.0000** | **1040.0000** | **1040.0000** | **0.0000** |

## APPENDIX C: ELECTRICITY SECTOR BACKGROUND

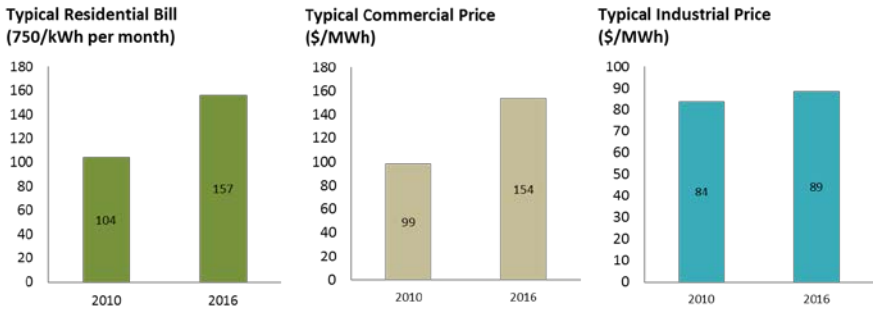
The Ministry has provided the following information to provide electricity sector context this item.

There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

*** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period.




**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

Existing Rate Mitigation efforts are on-going:

- Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs.
  - For example, Northern Ontario residential electricity consumers receive tax credits in recognition of higher electricity costs in the north and rural consumers receive a subsidy funded through the rate-base due to the higher cost of delivering power to rural areas.
  - As of 2016, the government removed the Debt Retirement Charge (DRC) from residential electricity bills. While this saves a typical residential electricity ratepayer about $60 per year, it is less than the benefit previously provided through the Ontario Clean Energy Benefit (OCEB).
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers.

  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- Because electricity costs must be fully recovered from electricity consumers, rate mitigation funded through the rate-base often represents a shifting of costs from one consumer group to another (i.e., industrial to residential and commercial consumers).
  - Rate-based initiatives are generally associated with incenting changes in behaviour that provide electricity system benefits (i.e., shifting electricity consumption from on-peak to off-peak periods).

The table below shows the estimated cost shifts in the province's electricity system that result from three existing government programs (i.e., ICI, RRRP and OESP):

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

Since 2013, a number of actions have and are being taken to reduce overall electricity system costs. Despite these actions to reduce system costs, electricity rates continue to increase for consumers:

- Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
- Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
- Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
- Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
- Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.

## APPENDIX D: FURTHER INFORMATION SUPPORTING PROPOSED INITIATIVES

The following information has been provided by the Ministry.

**1. Provide an 8% rebate to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms), equivalent to the provincial portion of HST**

The Ministry is proposing to introduce legislation/regulation to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit. This would be equivalent to the provincial portion of the HST.

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).
- An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

| **Eligible for the 8% rebate** (< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate** (> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Farms eligible for Regulated Price Plan (Including Class B farms that opted out of the Regulated Price Plan)<br>• Small businesses<br>  – Coffee / snack retailer<br>  – Convenience store<br>  – Apparel store<br>  – Hair salon<br>  – Small insurance office | • Class A consumers<br>  – Manufacturer<br>  – Large grocery store<br>  – Mines<br>  – Auto assembly plants<br>• Class B consumers<br>  – Commercial offices (low rise)<br>  – Hotel<br>  – General warehousing |

**2. Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial)**

Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers). Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would (the benefit would be seen by consumers starting in 2018):

- Reduce electricity peak demand and electricity system costs by incenting more consumers to lower their electricity demand during peak periods;
- Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
- Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| Short-term | Up to 21% | 80 | 47 | Increase of $0.42/month |
| Long-term | Up to 34% | 165 | 82 | Increase of $0.74/month |

The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility. The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating. Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.

## 3. Update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers

The Ministry is proposing to provide an additional $110M in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

RRRP is a rate-based funded program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.

- Today, RRRP is a $175M program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
- The majority of the program funding ($127M) provided to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a rebate of $31.50. The proposed update to the program would increase the benefit to $60/month
- RRRP funding supporting R2 customers has been capped at the current level since 2003. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

An additional $110M in program funding would see an increased benefit of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.

- This would increase the R2 portion of the RRRP to $237 million with a monthly impact on an average residential consumer of ~$0.60.
- The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the benefit remains constant.

## 4. Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.

- To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).
- However, providing an 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other GHG reduction initiatives in the fiscal plan.

The rate reduction proposal would provide additional benefit to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $240M over the first four year compliance period).

# APPENDIX F: ILLUSTRATIVE BILL IMPACTS

The Ministry has provided the following illustrative bill impacts:

| | Current Bill ( before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $139 /month | N/A | 8% pre-tax rebate: - $11 | $128 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $229 /month | RRRP: –$32 | 8% pre-tax rebate + Updated RRRP: - $45 | $184 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $101 /month | OESP: -$38 | 8% pre-tax rebate: - $8 | $93 /month |
| Small Business (Toronto – 403,200 kWh/month) | $149 /MWh | N/A | 8% pre-tax rebate: - $12/MWh | $137 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $203 /MWh | N/A | 8% pre-tax rebate: - $16/MWh | $187 /MWh |

**Notes:**

***** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as $1,332 per year for a family.

** Income of less than $28,000, family of 4.

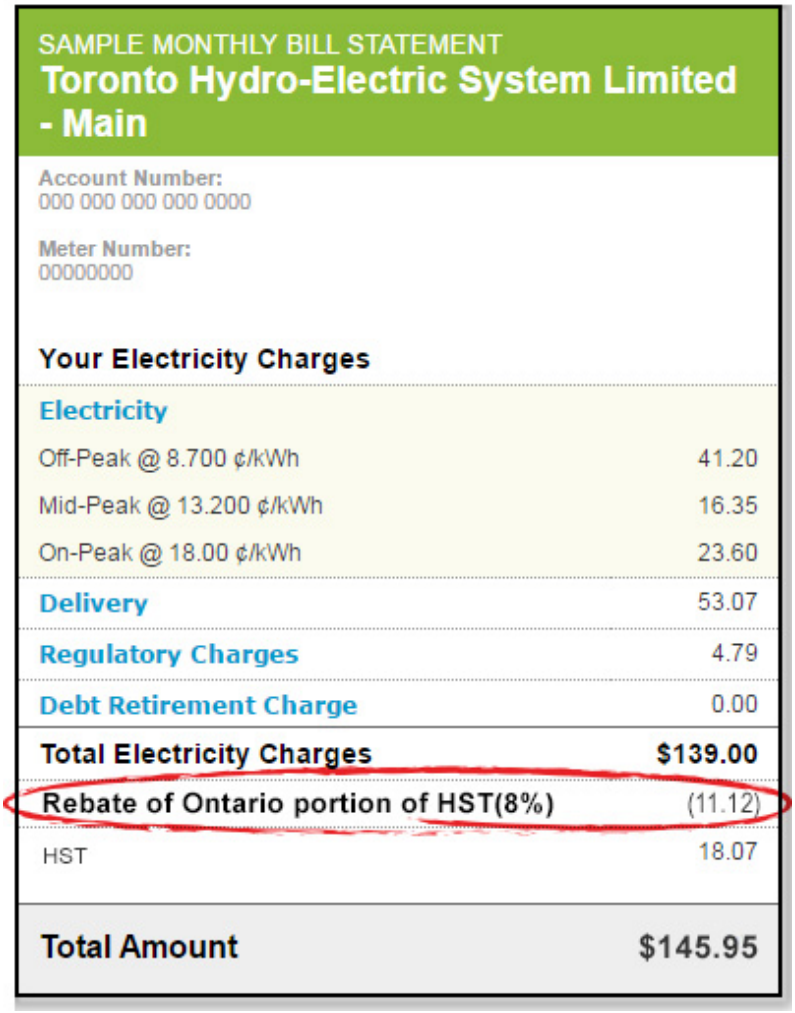
The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Totals may not add due to rounding.

| | Current Rate | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Rate |
|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | $105 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI + NIERP: -$69/MWh | Proceeds Recycling: -$2.60/MWh | $66 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling + ICI: Up to -$52/MWh | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $149 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $151 /MWh |

**Notes:**

The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

## APPENDIX E: ILLUSTRATIVE BILL MOCK-UP



SAMPLE MONTHLY BILL STATEMENT

**Toronto Hydro-Electric System Limited - Main**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| **Rebate of Ontario portion of HST(8%)** | (11.12) |
| HST | 18.07 |
| **Total Amount** | **$145.95** |

**Note:** Final bill presentment pending submission to LRC.

**From:** John Kim
**To:** Ronald Kwan
**Cc:** Tomasz Bugajski; Shajee Kathirgamanathan
**Subject:** Fwd: Draft BN for Monday TB/MBC Meeting
**Date:** Sunday, September 11, 2016 12:18:50 PM

---

FYI

Begin forwarded message:

> **From:** "Fung, Felix (TBS)" <Felix.Fung@ontario.ca>
> **Date:** September 11, 2016 at 12:17:55 PM EDT
> **To:** "Strang, James (TBS)" <James.Strang@ontario.ca>, "Kim, John (OFA)" <John.Kim@ofina.on.ca>
> **Cc:** "Morgenstern, Madeleine (TBS)" <Madeleine.Morgenstern@ontario.ca>, "Kathirgamanathan,Shajee (OFA)" <Shajee.Kathirgamanathan@ofina.on.ca>
> **Subject: Re: Draft BN for Monday TB/MBC Meeting**
>
> Yes let's go back to the original numbers now that Keley has confirmed the original numbers are ok. Thanks James. I will tell Patrick as well.
>
> Sent from my BlackBerry 10 smartphone on the Rogers network.
> Original Message
> From: Strang, James (TBS)
> Sent: Sunday, September 11, 2016 10:52 AM
> To: Kim, John (OFA)
> Cc: Fung, Felix (TBS); Morgenstern, Madeleine (TBS); Kathirgamanathan,Shajee (OFA)
> Subject: RE: Draft BN for Monday TB/MBC Meeting
>
> Yes, sent along their edits, updating future years. Could be being conservative?
>
> Felix, I'm thinking we should put it back to the previous numbers. Let me know.
>
> -----Original Message-----
> From: John Kim [mailto:John.Kim@ofina.on.ca]
> Sent: September 11, 2016 7:51 AM
> To: Strang, James (TBS)
> Cc: Fung, Felix (TBS); Morgenstern, Madeleine (TBS); Kathirgamanathan,Shajee (OFA)
> Subject: Re: Draft BN for Monday TB/MBC Meeting
>
> Hi James, Felix, Madeleine,
>
> Noticing the amounts have changed to 1.1 and 1.2. What was the basis of the amounts? Was there an update from Energy?

Thanks,

John

> On Sep 10, 2016, at 6:49 PM, Strang, James (TBS) <James.Strang@ontario.ca> wrote:
>
> Attached is the draft briefing note for TB/MBC on Monday. We followed the minute for OCEB then refined it for this item.
>
> James
>
> <RAN Electricity Price Mitigation v11 2016 09 10.doc>

---

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | John Kim; Emily Kerr |
| **Cc:** | Gavin He |
| **Subject:** | Fwd: ENERGY"s PRRT Submission |
| **Date:** | Tuesday, November 29, 2016 9:08:10 AM |
| **Attachments:** | ENERGY 2017-18 PRRT Submission (TBS).zip<br>ATT00001.htm |

---

Hi,

See attached.

Thanks,
Ron

Begin forwarded message:

> **From:** "Strang, James (TBS)" <James.Strang@ontario.ca>
> **To:** "Ronald Kwan" <Ronald.Kwan@ofina.on.ca>
> **Subject: ENERGY's PRRT Submission**
>
> Good Morning Ron,
>
> Attached is Energy's PRRT Submission. It includes elements related to H1, Electricity Rate Mitigation, and Cap & Trade (GGRA). Not sure who gets what over at the OFA, so I've just sent the zip file to you.
>
> I'll share a draft of PRRT assessment note later today. We're scheduled to brief Karen this Friday.
>
> James

# Ministry of Energy

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# Ministry of Energy Overview

Deputy Minister (signature)

NOV 23, 2016
Date

Minister (signature)

NOV 23, 2016
Date

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# About the Ministry

- The Ministry of Energy is a policy development and implementation ministry. It delivers the government's top energy priority – providing Ontarians with a clean, reliable and affordable supply of energy through the implementation of the Long-Term Energy Plan (LTEP).

- With just over 200 FTEs, the Ministry oversees a complex energy portfolio with a $20 billion Electricity Sector, and a Natural Gas sector with about 3.5 million residential, commercial and industrial natural gas consumers.

- The Ministry delivers the majority of its energy policies and initiatives through its ratepayer funded agencies and entities.



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# Ministry Objectives and Activities

- The Ministry's commitment to the development of a diverse supply mix, including more renewable energy sources, and putting energy conservation first are cornerstones of Ontario's balanced plan to provide clean and reliable energy system for all Ontarians.

- The Ministry develops and advises on all aspects of energy policy for Ontario, including:
  - the development and implementation of the Long Term Energy Plan;
  - rate mitigation measures for residential electricity consumers, such as the Ontario Electricity Support Program and the Ontario Rebate for Electricity Consumers;
  - helping to support a dynamic and competitive business climate through industrial electricity rate mitigation programs and initiatives;
  - investing in conservation and energy efficiency before building new generation, transmission and distribution infrastructure, where cost-effective;
  - helping to develop a strong renewable energy sector, including over 30 solar and wind manufacturers;
  - modernizing the province's transmission and distribution grids;
  - upgrading and refurbishing existing nuclear generation assets;
  - working with other provinces to explore potential opportunities that meet Ontario system needs and provide ratepayer value;
  - supporting the expansion of natural gas infrastructure to service more communities;
  - engaging Indigenous communities to play an active role in the energy sector; and
  - facilitating future tranches of Hydro One shares.

- The Ministry also oversees the Ontario Energy Board (OEB) and the Independent Electricity System Operator (IESO), and represents the shareholder, the provincial government, in dealings with Hydro One and Ontario Power Generation (OPG).



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# Ministry of Energy Revenue Contributions

The Ministry has also achieved significant revenue generation to contribute to the fiscal plan:

- In November 2015, the Province completed the Hydro One Ltd. IPO and raised approximately $1.83 billion in gross proceeds and approximately $116 million from related share sales.

- The secondary share offering of Hydro One was completed in April 2016, generating approximately $1.97 billion in gross proceeds.

- Net revenue gains from the offerings in April 2016 is credited to the Trillium Trust for infrastructure projects in the future. To date, the Trillium Trust has been credited with approximately $3.2 billion from transactions in 2015.

- Ontario remains on track to generate approximately $9 billion in gross proceeds and other revenue benefits. This includes $4 billion in net revenue gains that will be invested in infrastructure and $5 billion to reduce debt.

- $236 million of net income generated from Hydro One attributed to the Province in 2015-16*.

- $463 million of net income generated from OPG attributed to the Province in 2015-16.

* Includes other elements including Provincial benefit from Deferred Tax Asset, payment of departure tax, etc.



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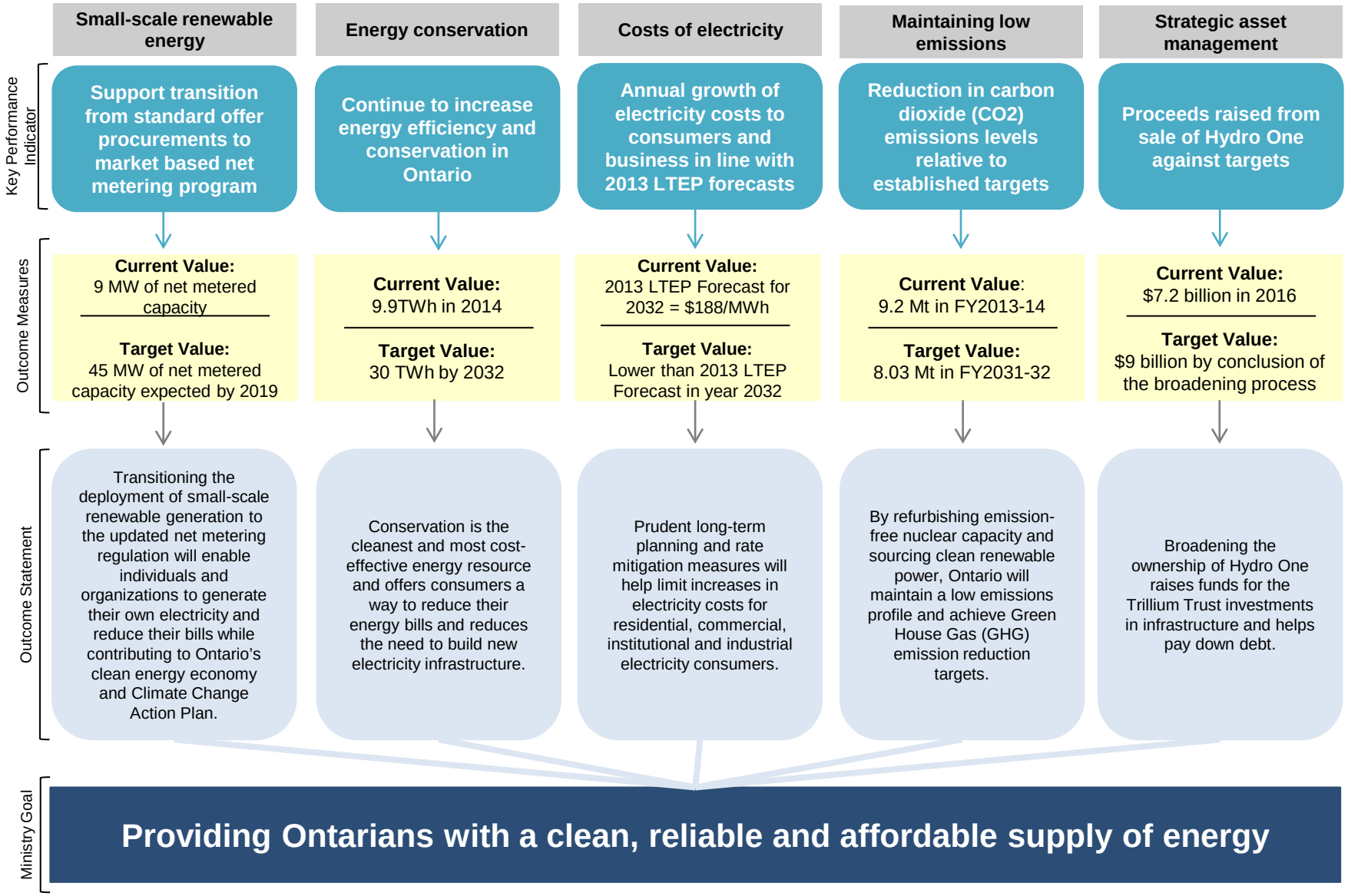
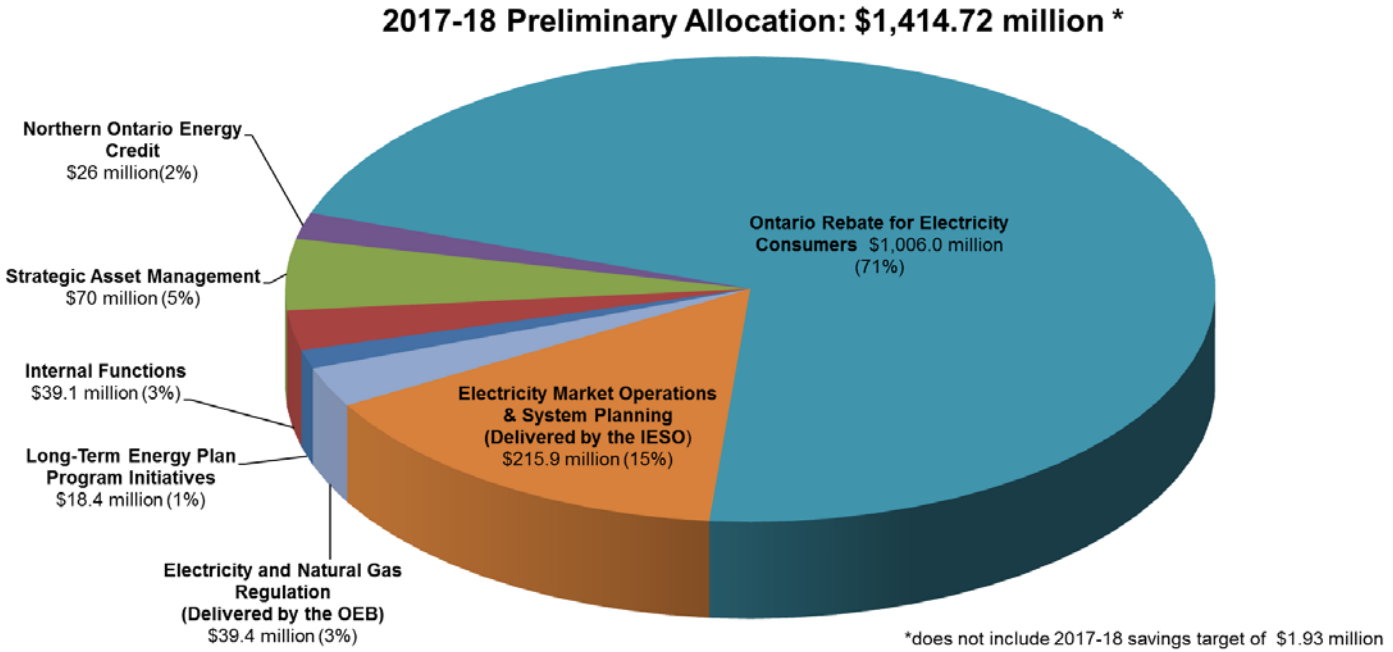
# Ministry-Level Key Performance Indicators



# Current State of Ministry Preliminary Allocation (2017-18)




- Only 9% of the allocation is for the Ministry's own spending to deliver on its mandate and commitments. The Ministry is highly effective at running its activities on a small budget and with just over 200 FTEs.

- The largest component of the Ministry's allocation is its rate mitigation initiative for residential, farms and small business consumers – the Ontario Rebate for Electricity Consumers and Northern Ontario Energy Credit account for 73% of the Ministry's allocation. These programs are demand-driven entitlement programs and spending is non-discretionary; the Ministry does not have control over this allocation.

- The consolidation of fiscally neutral agencies – the Independent Electricity System Operator (IESO) and the Ontario Energy Board (OEB) – account for 18% of the Ministry's allocation. Realizing operating savings on these entities would have no impact on the government's fiscal plan since expenses are fully cost recovered from the rate base.



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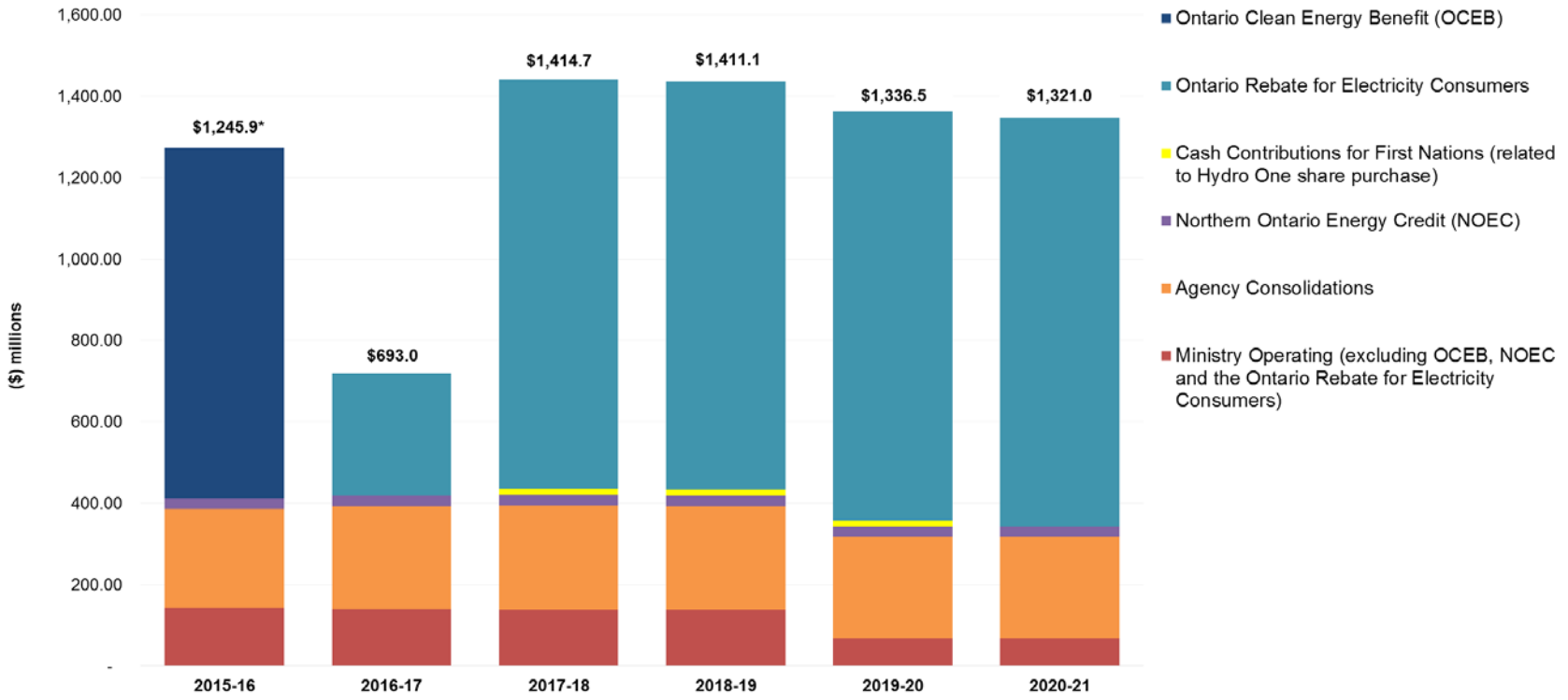
# Preliminary Multi-Year Allocation (2015-16 to 2020-21)




* The Ministry's 2015-16 allocation also included a $2.6 billion expense for a capital contribution to Hydro One Limited that is not shown here.

- The Ministry already received the following as part of its preliminary allocation:
  - Increase of $1,006 million for the implementation of the Ontario Rebate for Electricity Consumers; and
  - Increase of $45 million over three years to First Nations, as a cash contribution, related to Hydro One share purchase.
- These expenses are under executive control and as such, cannot be re-allocated to deliver Ministry spending to deliver its other mandates and commitments.



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# Achieving 2017-18 Savings Target

- The preliminary allocation for 2017-18 requires the Ministry to achieve a saving of $1.9 million.

- To meet the $1.9 million saving target, the Ministry will seek to achieve internal efficiencies within its allocation in Vote 2902, Energy Development and Management, through:

  – Prioritizing project delivery and implementation of certain Ministry initiatives;
  – Evaluating the delivery model on policy implementation; and
  – Reducing operating expenses by re-aligning Ministry resources.

- Historically, the Ministry has strategically managed underspending to:
  – offset additional pressures related to government priorities (e.g., the Ministry was directed to manage from within its existing allocation in 2015-16 for resources related to Hydro One);
  – fund pressures that are unforeseen and unavoidable (e.g., energy legal challenges including, NAFTA and Windstream); and
  – Reallocate to high priority program spending (e.g., the Ministry was able to fund Smart Grid Fund Round 3 using underspending in 2015-16).



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# Key Decision: Ontario Rebate for Electricity Consumers

**Request: (1) Additional funding, based on updated forecast, for the Ontario Rebate for Electricity Consumers*;**
**(2) 4 permanent FTEs to support program administration; and**
**(3) Funding to support program delivery.**

- In October 2016, legislation passed that would provide an 8% rebate, the provincial portion of the HST, from electricity bills as of January 1, 2017. This will result in an average savings of about $130 annually or $11 each month, for about five million residential consumers, farms and small businesses.

- The Ministry requires additional funding in 2017-18 to effectively deliver the Ontario Rebate for Electricity Consumers

- An increase of $94 million in operating expense for program delivery based on updated forecast; this will bring the total expenditure in 2017-18 to $1.1 billion for the program.

  – The initial forecast was subsequently revised based on updated methodology and improved data inputs, leading to an increase in the estimated cost of administering the program in all years.

| Millions ($) | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|
| Preliminary Allocation | 1,006 | 1,004 | 1,004 | 1,004 |
| Updated Forecast | 1,100 | 1,100 | 1,200 | 1,200 |

* The Ministry was directed to report back during the 2017-18 PRRT process on updated future year impacts.



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# Key Decision: Ontario Rebate for Electricity Consumers (con't)

- An increase of $3.11 million in operating expense for permanent staffing resources and operational costs, including $0.41 million in salary and wages and $2.5 million in program delivery costs in 2017-18 and onwards.
  - The Ministry is requesting 4 permanent FTEs that will cover a variety of positions critical to program delivery development of the Ontario Rebate for Electricity Consumers, including:
    - Policy and program development, providing direction to 72 local distribution companies (LDCs) and 10 Independent Power Authorities to develop specific payment and billing mechanisms, in addition to managing the relationships with service providers to ensure that any identified issues are addressed and resolved.
    - Financial support to track and monitor up to 400 data elements each month in order to know how much funding has been provided and to what entities, and tracking LDC payments and settlement statements based on information received from the IESO.
    - Communications support to handle internal and external program stakeholders.
- The Ontario Rebate for Electricity Rebate program does not have an end date and requires permanent resources (funding and staffing) in out-years.



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# Key Decision: Hydro One Report Back

**Request: (1) Additional funding to support future share sales of Hydro One;**
**(2) Permanency of the 5 FTEs the Ministry received during the 2016-17 PRRT process to support the Investment and Governance Secretariat;**
**(3) Increase funding to provide full cash contributions to First Nations in 2017-18;**
**(4) Appropriation increase to book the conferred benefit amount to First Nations.**

- In 2016, the Ministry successfully continued the broadening of Hydro One through a careful, staged approached, generating $1.83 billion in revenue for the government and increasing publically held shares to approximately 30%.

- The Ministry requires additional out-year funding to continue delivering on the Province's assets management and transformation strategy related to Hydro One, including;

| Item | Request |
|---|---|
| Secondary offering costs (including underwriting costs, consulting costs and other services) | $70 million increase (the Ministry has an existing allocation of $70 million for 2017-18, this request brings the total allocation to $140 million for 2017-18) |
| Staffing and operational costs | Permanency of 5 FTES and associated costs of $0.93 million |
| Cash contributions for First Nations Note: Ministry will decrease its allocation for the cash contributions to First Nations in 2018-19 and 2019-20 by $15 million each year | $30 million increase in 2017-18 |
| Conferred benefit to First Nations | $135 million increase in 2017-18 |



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# Key Decision: Hydro One Report Back (con't)

- $70 million expenditure increase in 2017-18 is required to provide the Ministry with flexibility related to its share sale strategy. This will bring the allocation in 2017-18 to $140 million for this program.
  - The government may be in a position to complete the broadening of Hydro One in 2017-18 and will require the appropriate allocation to support this effort, in the event of a larger sale.
  - Expenses related to the Ministry's share sale strategy is fiscally neutral and will be offset from the proceeds of future offerings of Hydro One.

- Permanency of the 5 FTEs the Ministry received during the 2016-17 PRRT process for 2017-18 and onwards to support the government's asset strategy.
  - The Secretariat was created in order to support the Minister on both financial and governance matters. While some of that role relates to temporary initiatives, such as facilitating the share sale strategy, the Secretariat is required to provide ongoing advice and support related to:
    - Exercising shareholder rights including participating in shareholder meetings, election of directors etc., ensuring the Province operates in accordance with its rights and obligations under the Governance Agreement;
    - Effective management of holdings; ensuring the Province operates in accordance with the Registration Rights Agreement;
    - Ongoing administration of any agreements relating to the broadening of ownership of Hydro One such as potential agreements with Chiefs of Ontario and/or Metis Nations of Ontario; and
    - The Province's role and responsibilities as the shareholder of OPG, including analysis of OPG's business plans, and conducting due diligence and analysis on new OPG initiatives (e.g., borrowing platform).
  - The Secretariat requires technical skill sets with specialized knowledge in areas such as capital markets, corporate finance and financial analysis. The Ministry requires permanent FTEs to be able to compete for talent.
  - The Ministry received funding for these FTEs until 2018-19, permanent funding of $0.93 million in operating expense for staffing and operational costs for the Investment and Governance Secretariat is being requested from 2019-20 and onwards.



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# Key Decision: Hydro One Report Back (con't)

- $30 million in operating expense in order to accelerate the full cash contribution of up to $45 million to First Nations in 2017-18.
  - As part of its 2017-18 preliminary allocation, the Ministry received a $45 million transfer payment over three years to First Nations, as a cash contribution. Timing of payments was recently renegotiated and the revised timing contemplates a one-time contribution of up to $45 million.

- $135 million in operating expense for conferred benefit amounts to First Nations.
  - The difference between the purchase price for First Nations ($18 per share) and the market value of shares at the time of closing. Treasury Board Secretariat is in the process of obtaining a regulation prescribing a new class of non-cash expense, intended to best serve public interest for transparency and accountability.

- The Ministry is creating new Transfer Payment lines to support these transactions.



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# Key Decision: Greenhouse Gas Reduction Account (GGRA)

**Request: (1) Funding for the Cap and Trade Proceeds Recycling to Keep Electricity Prices Affordable Initiative; and**
**(2) Funding for the Electric Vehicle Overnight Charging Rebate Program.**

- In September 2016, the Ministry completed, and submitted to MOECC, the GGRA Intake Form and Scorecard for its initiatives.

- These initiatives were included in Tranche 1 for approval by MOECC.

- The Ministry requires out-year funding, offset from GGRA, to deliver these initiatives:

  - **Cap and Trade Proceeds Recycling to Keep Electricity Prices Affordable Initiative**
    - Total CCAP funding requirement: $1,107 million (between 2017-18 to 2020-21)
    - Funding estimate for 2017-18: $249 million

  - **Electric Vehicle Overnight Charging Rebate Program**
    - Total CCAP funding requirement: $15 million (between 2017-18 to 2021-22)
    - Funding estimate for 2017-18: $2.15 million

- The Ministry will be creating Transfer Payment lines to support the above initiatives.



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# Key Decision: Other Housekeeping Items

**Natural Gas Access Loans**

- The Ministry of Energy requires the creation of the following Operating Asset and Operating Expense items, with $1,000 placeholders, for the establishment of the Natural Gas Loan program:
  - An Operating Asset items for Natural Gas Loan disbursements; and
  - An Operating Expense, and a new Transfer Payment line, for Natural Gas Loan interest incentives.
- The Ministry has an existing Bad Debt Expense item in Vote 2902, Energy Development and Management.
- Cost incurred by the Ministry of Energy for the Natural Gas Loan program will be offset by the Ministry of Infrastructure or the Contingency Fund.

**Temporary FTE transfer to MAG**

- The Ministry of Energy will continue with the temporary transfer of 1 FTE in 2017-18 to the Ministry of the Attorney General to provide legal services support.
- The FTE will return to the Ministry of Energy on April 1, 2018.

**Temporary FTE transfer to MGCS**

- The Ministry of Energy will temporarily transfer 2 FTEs to the Ministry of Government and Consumer Services to support the Energy and Water Reporting and Benchmarking Project.
- The FTEs will return to the Ministry of Energy on April 1, 2018.

**IT-Rationalization Initiative transfer to MGCS**

- The Ministry of Energy will transfer $9,700 in 2017-18 and ongoing to the Ministry of Government and Consumer Services for the IT-Rationalization Initiative.
- As a consumptive service, the IT-Rationalization Initiative recovers base budget from clients/partners to ensure cost reductions remain net neutral to all parties.



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# Stakeholder Management / Engagement Plans

| Key Stakeholder Groups | Issues / Considerations | Stakeholder Engagement / Communications Strategy |
|---|---|---|
| **Residential, Farms and Small Businesses Consumers** | • Necessary investments in modernizing our electricity system have lead to increases in the cost of electricity service for residential, farm and small business electricity consumers.<br>• Concerns about cost and safety of nuclear generation projects compared to other supply alternatives. | • Extensive province-wide consultations for the updated Long-Term Energy Plan.<br>• Ensure engagement of stakeholders and communication regarding existing and new conservation initiatives as they are developed and implemented.<br>• Communication about the implementation of new electricity price mitigation initiatives for all consumers; the new 8% rebate and expansion of existing programs will provide some relief. |
| **Commercial and Industrial Consumers** | • Necessary investments in modernizing our electricity system have lead to increases in the cost of electricity service for commercial and industrial electricity consumers. | • Extensive province-wide consultations for the updated Long-Term Energy Plan.<br>• Existing programs provide some relief to large industrials. Recently announced ICI program expansion will extend relief to some smaller consumers.<br>• One-off meetings with industry associations and large consumers. |
| **General Public** | • Conferred benefit amounts to First Nations, being able to purchase shares at a reduced price compared to market value.<br>• Accelerating cash contributions to First Nations from up to three annual payments to one full payment. | • Conferred benefit amounts are disclosed to best serve public interest for transparency and accountability.<br>• Purchase price is above the Province's book value for the shares as a result this has no fiscal impact.<br>• Does not impact the Province's expectation to raise up to $9 billion to support infrastructure investment and pay down debt.<br>• No changes to amounts have been contemplated, only timing of payments. |
| **Shareholders / Investors** | • Increases in costs associated with potentially accelerating share sales. | • The Ministry requires flexibility to maximize value. |



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# TPAM BOULDER – MINISTRY IMPACTS

## A. Request:

As part of the Transfer Payment Administrative Modernization (TPAM) Boulder, ministries are contributing towards the 2017-18 savings target of $25M. In addition, ministries are contributing base funding for the Grants Ontario system and the Transfer Payment Common Registration System which support the TPAM initiative.

| Docket #D0042340 | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|
| Total operating expense impact - TPAM Savings: Vote/Item 2902-01, ENERGY ($M) | 0.516 | 0.516 | 0.516 | 0.516 |
| Total operating expense impact: Grants Ontario Funding – Vote/Item 2902-01, ENERGY ($M) | (0.500) | (0.500) | (0.500) | (0.500) |
| Total financial impact: Vote/Item 2902-01, ENERGY ($M) | 0.016 | 0.016 | 0.016 | 0.016 |
| **Total financial impact ($M):** | 0.016 | 0.016 | 0.016 | 0.016 |

## B. Background:

The TPAM initiative has been assigned total savings targets of $25,000,000 in 2017-18, $50,000,000 in 2018-19, $75,000,000 in 2019-20 and $100,000,000 in 2020-21. Through 2016-17 PRRT, $25M in savings for 2017-18 was minuted, with each ministry absorbing a share of the savings target based on what was known about their transfer payment administration costs at the time. However, a third party review of ministry administrative costs undertaken by KPMG found that total administrative costs are less than had been assumed during the 2016-17 PRRT process, and that those costs are distributed proportionately differently across ministries than had been assumed. Therefore the 2017-18 savings targets have been adjusted in accordance with the findings. Ministries are required to increase or decrease their portion of the savings target as determined based on the review findings.

Also, as part of the TPAM initiative, the Grants Ontario system and the Transfer Payment Common Registration System have been developed for enterprise wide use. In order to provide ongoing sustainment funding for these technology solutions, funding will be transferred from ministries to Ministry of Government and Consumer Services (MGCS). MGCS will be the business owner these systems effective April 1, 2017.

## C. Financial Analysis / Request

The Ministry of Energy 2017-18 savings target for TPAM was originally minuted at $51,600. The revised savings target for the Ministry of Energy for 2017-18 is $0.

The Ministry of Energy will contribute $50,000 in 2017-18 and ongoing to support Grants Ontario and the Transfer Payment Common Registration system.

## D. Human Resource Implications

N/A

## E. Proposed Minute

As part of the Transfer Payment Administrative Modernization Boulder, approve the increase of the Grants Ontario business line from Treasury Board Secretariat to Ministry of Government and Consumer Services to better align enterprise service responsibilities:

In this regard, the Board:

i) Approve decrease in savings of $51,600 for 2017-18 and ongoing.

ii) Approve a decrease of $50,000 in 2017-18 and ongoing in the Ministry of Energy's Vote/Item 2902-01, Energy Development and Management, to provide permanent base funding for Grants Ontario.

**Ministry INTERNAL Working Template***

**This is a template to assist ministries in collecting the KPI and program-level performance measures information to be submitted in ORBIT. It is intended to be an INTERNAL working document for ministries and will not be accepted as an attachment in ORBIT. The template has been designed to match the data specifications and requirements of the ORBIT submission, and facilitate internal information sharing and/or review. Ministries may choose not to use this template.**

***ALL INFORMATION MUST BE ENTERED INTO ORBIT, IN ACCORDANCE WITH THE SUBMISSION GUIDELINES AND PRRT DUE DATES. THIS TEMPLATE WILL NOT BE ACCEPTED IN ORBIT.**

Please refer to the KEY PERFORMANCE INDICATORS AND PROGRAM OUTCOME AND EFFICIENCY MEASURES GUIDELINES FOR SUBMISSION for details pertaining to the submission requirements.

## Ministry KPI Information

| | |
|---|---|
| Ministry | Energy |
| Measure | Support transition from standard offer procurements to market based net metering program for customer sited renewables. |
| Outcome Statement | Transitioning the deployment of renewable generation to the updated net metering regulation will enable individuals and organizations to generate their own electricity and reduce their bills while contributing to Ontario's clean energy economy and Climate Change Action Plan. |

### Data Quality and Management

| | |
|---|---|
| Data Ownership | Other organization |
| Frequency of Data Collection | |
| Data Sources | OEB |
| Statistical Methods | Total installed renewables capacity |
| Unit of Measurement Type | Cumulative installed capacity |
| Unit of Measurement | Megawatts |

### Results

Statement of Result: In 2015 a total of 9MW of net metered renewable energy generation capacity was installed in the province. Progress will be assessed in the next reporting cycle.

| | Year | Value | Comment |
|---|---|---|---|
| Target | 2019 | 45 | As of 2019 a total of 45MW of cumulative net metered capacity is expected to be installed in the province. |
| Baseline Year | 2005 | | Prior to 2005, LDCs offered Net Metering agreements at their option. Therefore, there were exisiting net metered facilities before the 2005 regulation was implemented. |
| Trend Value | 2010 | 6.4 | There was no reporting requirement for LDCs to the OEB until 2010 for net metering. Data to 2015 is as reported to the OEB by LDCs.<br><br>Numbers in each year reflect total cumulative capapcity installed in the province. Numbers have declined in the past due to the ability to opt into microFIT and FIT programs beginning in 2009. |
| Trend Value | 2011 | 4.7 | |
| Trend Value | 2012 | 4 | |
| Trend Value | 2013 | 6.8 | |
| Trend Value | 2014 | 7.1 | |
| Trend Value | 2015 | 9.1 | In 2015 a total of 9MW of net metered capacity is installed in the province. |
| Trend Value | 2016 | 14.1 | Figures from 2016 on are projections based on best available data. Numbers could change based on a variety of factors including electricity prices, equipment prices and other government initiatives. |
| Trend Value | 2017 | 21.1 | |
| Trend Value | 2018 | 32.1 | |
| Trend Value | 2019 | 45.3 | |

## Ministry KPI Information

| | |
|---|---|
| Ministry | Energy |
| Measure | Continue to increase energy efficiency and conservation in Ontario. |
| Outcome Statement | Conservation is the cleanest and most cost-effective energy resource and offers consumers a way to reduce their energy bills and reduces the need to build new electricity infrastructure. |

### Data Quality and Management

| | |
|---|---|
| Data Ownership | Other organization |
| Frequency of Data Collection | Annual |
| Data Sources | Conservation data from the IESO and OEB |
| Statistical Methods | Cumulative reduction in electricity consumption (in reference to a forecasted baseline) due to the impact of electricity conservation programs and codes and standards |
| Unit of Measurement Type | Index |
| Unit of Measurement | Terawatt Hours (TWh) |

### Results

Statement of Result: From 2005 to 2014, Ontarians conserved 9.9 TWh of electricity - enough to power the cities of Ottawa and Windsor in 2014.

| | Year | Value | Comment |
|---|---|---|---|
| Target | 2031-2032 | 30 | Note that these savings are expected to be achieved in 2032. Also note that the baseline for the forecast is 2005 (the excel spreadsheet does not allow an entry before 2007-08). |
| Baseline Year | 2007-08 | | |
| Trend Value | 2014 | 9.9 | |
| Trend Value | 2013 | 8.9 | |
| Trend Value | 2012 | 7.8 | |
| Trend Value | 2011 | 6.7 | |
| Trend Value | 2010 | 5.4 | |
| Trend Value | 2009 | 4.9 | |
| Trend Value | 2008 | 4 | |
| Trend Value | 2007 | 3.5 | |
| Trend Value | 2006 | 1.6 | |
| Trend Value | | | |

## Ministry KPI Information

| | |
|---|---|
| Ministry | Energy |
| Measure | Minimize annual growth of electricity costs to consumers and business. |
| Outcome Statement | Through energy conservation efforts and support from government regulation, citizens, particularly in rural and First Nation communities, will prosper when they are not burdened by rising electricity costs. |

### Data Quality and Management

| | |
|---|---|
| Data Ownership | Other organization |
| Frequency of Data Collection | Annual |
| Data Sources | Independent Electricity System Operator |
| Statistical Methods | Average Energy Costs to consumers/business by Region / Demographic |
| Unit of Measurement Type | Index |
| Unit of Measurement | Dollars ($) spent by the average consumer in the electricity sector |

### Results

Statement of Result

Subject to changes to Long Term Energy Plan in 2017. Target value and metricis will be refined and progress will be assessed in the next reporting cycle.

| | Year | Value | Comment |
|---|---|---|---|
| Target | 2031-2032 | 188 | Value = lower than 2013 LTEP Forecast in year 2032 |
| Baseline Year | 2015-16 | | |
| Trend Value | 2015-16 | 141.5 | Weighted average of actual 2015 and forecast 2016 (OPO B) |
| Trend Value | 2014-15 | 132.5 | |
| Trend Value | 2013-14 | 126.2 | |
| Trend Value | 2012-13 | 116.3 | |
| Trend Value | 2011-12 | 111.8 | |
| Trend Value | 2010-11 | 108.7 | |
| Trend Value | 2009-10 | 104.3 | |
| Trend Value | 2008-09 | 96.6 | |
| Trend Value | 2007-08 | 91.3 | |

## Ministry KPI Information

| | |
|---|---|
| Ministry | Energy |
| Measure | Maintaining low electricity sector emissions in support of the province's climate change targets. |
| Outcome Statement | By refurbishing emission-free nuclear capacity and sourcing clean renewable power, Ontario will maintain a low emissions profile and help achieve the province's Greenhouse Gas (GHG) emission reduction targets |

### Data Quality and Management

| | |
|---|---|
| Data Ownership | More than one source |
| Frequency of Data Collection | Annual |
| Data Sources | Environment Canada (EC), MOECC and IESO |
| Statistical Methods | Levels of CO2 emissions |
| Unit of Measurement Type | Count (i.e. number of) |
| Unit of Measurement | CO2 levels in Megatonnes (Mt) |

### Results

Statement of Result: Greenhouse gas emissions from Ontario's electricity sector is expected to be about 7.96Mt by 2032

| | Year | Value | Comment |
|---|---|---|---|
| Target | 2031-2032 | 8.03 | 7.96 Mt represents the forecast electricity sector emissions for 2032 under the 2013 LTEP; not weighted to reflect the fiscal year. Weighted average of 2031 (75%) and 2032 (25%) = 8.03 Mt |
| Baseline Year | 2007-08 | | |
| Trend Value | 2016-17 | | Note: Annual reports from EC typically revise historic numbers due to changes in methodology or updates in reported data. Most of these figures represent old EC reports and are for calendar year rather than fiscal year. |
| Trend Value | 2015-16 | 7 | Preliminary IESO estimate for calendar year 2015 is 7 Mt. |
| Trend Value | 2014-15 | 6.4 | Weighted average of actual 2014 from EC and preliminary IESO estimate |
| Trend Value | 2013-14 | 9.2 | Weighted average of 2013 (75%) and 2014 (25%) |
| Trend Value | 2012-13 | 13.2 | Weighted average of 2012 (75%) and 2011 (25%) |
| Trend Value | 2011-12 | 14.2 | Weighted average of 2011 (75%) and 2012 (25%) |
| Trend Value | 2010-11 | 18.4 | Weighted average of 2010 (75%) and 2011 (25%) |
| Trend Value | 2009-10 | 16.7 | Weighted average of 2009 (75%) and 2010 (25%) |
| Trend Value | 2008-09 | 24.3 | Weighted average of 2008 (75%) and 2009 (25%) |
| Trend Value | 2007-08 | 31.2 | Weighted average of 2007 (75%) and 2008 (25%) |

## Ministry KPI Information

| | |
|---|---|
| Ministry | Energy |
| Measure | Proceeds raised from sale of Hydro One against targets |
| Outcome Statement | Broadening the ownership of Hydro One raises funds for the Trillium Trust investments in infrastructure and helps pay down debt. |

### Data Quality and Management

| | |
|---|---|
| Data Ownership | Ministry |
| Frequency of Data Collection | More often than annual |
| Data Sources | Ministry |
| Statistical Methods | Proceeds calculated by the province = negotiated price * number of shares sold |
| Unit of Measurement Type | Rate/Ratio |
| Unit of Measurement | Dollar ($) |

### Results

Statement of Result: Ontario remains on track to generate approximately $9 billion in gross proceeds and other revenue benefits. This includes $4 billion in net revenue gains that will be invested in infrastructure and $5 billion to reduce debt.

| | Year | Value | Comment |
|---|---|---|---|
| Target | 2018-2019 | 9 | cumulative number in billions |
| Baseline Year | 2014-15 | | |
| Trend Value | 2016-17 | 7.3 | cumulative number in billions |
| Trend Value | 2015-16 | 1.8 | billions |
| Trend Value | 2014-15 | 0 | |
| Trend Value | 2013-14 | 0 | |
| Trend Value | 2012-13 | 0 | |
| Trend Value | 2011-12 | 0 | |
| Trend Value | 2010-11 | 0 | |
| Trend Value | 2009-10 | 0 | |
| Trend Value | 2008-09 | 0 | |
| Trend Value | 2007-08 | 0 | |

**MINISTRY OF ENERGY**
**External Programs**

| Ministry Acronym | Program Name | Issue/Need | Program Description | Major Program | Government Multi-Year Priority Outcome | Strategy | Ministry Linkages | Program Type | Delivery Mode (1st selection) | Delivery Mode (2nd selection) |
|---|---|---|---|---|---|---|---|---|---|---|
| ENERGY | **Long-Term Energy Plan Program Initiatives (TP)** | The successful implementation of the Long-Term Energy Plan requires the participation and engagement of a diverse group of energy stakeholders (e.g. energy consumers, Aboriginal communities, municipalities and other broader public sector organizations, businesses, industry associations, Broader Public Sector, etc.). Providing support and fostering innovation among the stakeholders is crucial for the advancement of Ontario's energy sector. | The group of Long-Term Energy Plan programs represent a small portion of the ministry's allocation but directly engages and impacts important ministry stakeholders. It is an important delivery mechanism to deliver on the Government's energy priorities, including:<br>- Assisting community-based conservation planning and outreach, along with the delivery of conservation education initiatives to effect change in consumer behaviour.<br>- Support and encourage Aboriginal community participation in the development of energy and conservation projects.<br>- Engaging energy industry stakeholders and groups in knowledge sharing, helping the broader public sector develop and implement conservation plans, and supporting the development of energy efficiency standards to be adopted by regulation.<br>- Support the grid connection of remote Northwestern Ontario First Nation communities or explore other options to reduce diesel use where connection isn't economical. | Long-Term Energy Plan Implementation | Leader on Environmental Sustainability & Climate Change Mitigation | N/A | N/A | Supporting | Direct-OPS | |
| ENERGY | **Ontario Clean Energy Benefit Program (TP) (Sunsets 2015-16)** | Residential electricity bills are forecasted to rise in future years at an annual average of 6.9% per year between 2014 and 2018, and 2.4% until 2032. Helping consumers manage their electricity cost is one of the key government priorities outlined in the 2014 Ontario Budget. | The program provides a benefit equal to 10% of the total cost of electricity on eligible consumers' bills, including tax, limited to the first 3,000 kWh of electricity consumed each month. The benefit helps over 4 million residential consumers and over 400,000 farms and small businesses with their electricity costs. The program is scheduled to end on December 31, 2015. | | Reduced Poverty, Inequality and Exclusion | N/A | N/A | Supporting | For-profit business | |
| ENERGY | **Ontario Rebate for Electricity Consumers (TP) (Starts Jan. 1, 2017)** | Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure. Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecasted to continue to increase as additional generation comes online. Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables. This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%. Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems | This program provides a rebate of 8% to consumers eligible for the Regulated Price Plan. Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc). | | Reduced Poverty, Inequality and Exclusion | N/A | N/A | Supporting | For-profit business | |
| ENERGY | **Northern Ontario Energy Credit Program (TP)** | Residential electricity bills are forecasted to rise in future years at an annual average of 6.9% per year between 2014 and 2018, and 2.4% until 2032. Helping consumers manage their electricity cost is one of key government priorities outlined in the 2014 Ontario Budget. Helping northern Ontarians with their home energy cost is especially important, as the costs are often higher in the North due to more severe winters. | Helps low-to-moderate income individuals and families living in northern Ontario with their home energy costs, which are often higher in the North due to more severe winters. For the 2014-15 benefit year, qualifying individuals can receive up to $141 and qualifying families (including single parents) can receive up to $216. | | Reduced Poverty, Inequality and Exclusion | N/A | MOF | Assisting | Other level of government | |
| ENERGY | **Electricity and Natural Gas Sector Regulation (Delivered by the OEB)** | Protection of energy consumers and ensuring that reliable and affordable energy is delivered in the gas and electricity section requires the Province to oversee prices and regulate the conduct of energy utilities. | The Ontario Energy Board oversees the Province's electricity and natural gas sectors through effective, fair and transparent regulation and in accordance with the objectives set out in the governing statutory framework. Its mission is to promote a viable, sustainable and efficient energy sector that serves the public interest and assists consumers to obtain reliable energy services at reasonable cost.<br><br>Key functions:<br>• Setting gas and electricity rates and prices<br>• Monitoring the financial and operating performance of natural gas and electrical utilities<br>• Providing consumers with the information they need to better understand energy matters<br>• Protecting energy consumers' interests<br>• Developing regulatory policy to meet emerging energy trends and challenges | | Modernized Infrastructure and Transportation Networks | N/A | N/A | Regulating | Classified Agency | |
| ENERGY | **Electricity Market Operations & System Planning (Delivered by the IESO)** | Ontarians demand that sufficient electricity is available whenever and wherever it's needed. Ensuring there is enough energy to meet the demand is an ongoing and highly complex process, requiring the close coordination of all parts of the electricity system.<br><br>Ontario is transforming its electricity system to ensure a reliable, modern and sustainable power supply for the people of Ontario now and well into the future. Doing so requires significant, prudently managed investment in Ontario's electricity system. Electricity system planning requires Ontario's energy agencies, transmitters, local distribution companies and stakeholders to work together in this transformation by advising the government on electricity integrated regional resource plans (IRPPs), helping Ontarians to conserve energy and contracting for the various sources of supply. | The IESO balances the supply and demand for electricity in Ontario and then directs its flow across the province's transmission lines. Every five minutes, the IESO forecasts electricity demand throughout the province and directs generators to provide the required amount of electricity to meet that demand. It can also reduce demand by calling on large volume users to cut back on consumption. This process of balancing supply and demand repeats itself 24 hours a day, seven days a week. The IESO maintains reliability in real time and into the future, while supporting Ontario's green energy policies for the integration of renewable sources of energy. The IESO works at the heart of Ontario's power system, connecting all participants –generators that produce electricity, transmitters that send it across the province, retailers that buy and sell it, industries and business it that use it in large quantities, and local distribution companies that deliver it to people's homes.<br><br>The IESO also is the agency that plans the power system and makes sure Ontario has enough electricity over the long term. It also coordinates conservation efforts across the province. The IESO is responsible for procuring new electricity resources, both generation and conservation. The IESO also provides advice to the government on province-wide electricity system plans, and works with transmitters and local distributors and other electricity agencies and stakeholders to develop integrated regional resource plans (IRRPs). The IESO signs contracts with power generators to ensure that long-term investments are made in generation facilities that otherwise would not get built. These contracts guarantee set prices to generators, enabling investors to finance and build these new projects in order to achieve government policy objectives. Coordinating province-wide conservation efforts is another key role of the IESO, including working with local distribution companies to help consumers manage their electricity use and costs | | Leader on Environmental Sustainability & Climate Change Mitigation | N/A | N/A | Public Good | Other non-profit organization | |
| ENERGY | **Strategic Asset Management and Transformation** | In order to help support unprecedented investments in transit, transportation and other priority infrastructure projects, Ontario is broadening ownership of Hydro One, so that taxpayers would realize net proceeds. This approach could generate an estimated net gain of approximately $4 billion (gain amount will be subject to market conditions). | The Province is moving forward with the Premier's Advisory Council on Government Assets recommendations to broaden the ownership of Hydro One through an initial public offering (IPO) and the sale of Hydro One Brampton to a merged entity of three other large utilities – PowerStream, Enersource and Horizon.<br><br>This approach could generate an estimated net gain of approximately $4 billion (gain amount will be subject to market conditions). Any net proceeds from the sale of shares in Hydro One would be set aside in the Trillium Trust to help fund the government's $31.5 billion Moving Ontario Forward plan to invest in infrastructure, transportation and transit across the province.<br><br>The Ministry of Energy received approval in August 2015 from TB/MBC for a new program called Strategic Asset Management & Transformation. This program is required to facilitate the ministry and government objectives regarding its assets management and transformation strategy related to Hydro One. | | Modernized Infrastructure and Transportation Networks | N/A | Finance | Public Good | For Profit Business | |
| **SUBTOTAL EXTERNAL PROGRAMS** | | | | | | | | | | |

**Internal Functions**

| Ministry Acronym | Organizational Unit | Function Type |
|---|---|---|
| ENERGY | Ministry Admin (MO, DMO) | Policy |
| ENERGY | Energy Policy Development and Implementation | Policy |
| ENERGY | Ministry Admin (Corporate Services Division) | Service Mgmt/ Other |
| ENERGY | Ministry Admin (Legal Services Branch) | Legal |
| ENERGY | Ministry Admin (Communication Services Branch) | Communications |
| | | |
| **SUBTOTAL INTERNAL FUNCTIONS** | | |
| **TOTAL PROGRAMS** | | |

**ADDITIONAL ADJUSTMENTS: INTER-MINISTRY TRANSFERS**
**Temporary Transfer of 1 FTE from ENERGY to MAG**
**Permanent Transfer of 10 FTEs and associated cost allocation from ENERGY to MEDEI**

**MINISTRY OF ENERGY**
**External Programs**

| Ministry Acronym | Program Name | End Beneficiary: Type | Age | Geographic | Demographic (1st selection) | Demographic (2nd selection) | Operating Expense, $M: 2013-14 (Actuals) | 2014-15 (Actuals) | 2014-15 (Estimates) | 2015-16 (Estimates) | 2016-17 (Estimates) | 2017-18 (Estimates) | Capital Expense, $M: 2013-14 (Actuals) | 2014-15 (Actuals) | 2015-16 (Actuals) | 2015-16 (Estimates) | 2016-17 (Estimates) | 2017-18 (Estimates) | Assets, $M: 2013-14 (Actuals) | 2014-15 (Actuals) | 2015-16 (Estimates) | 2015-16 (Actuals) | 2016-17 (Estimates) | 2017-18 (Estimates) | Revenues, $M: 2013-14 (Actuals) | 2014-15 (Estimates) | 2014-15 (Actuals) | 2015-16 (Estimates) | 2016-17 (Estimates) | 2017-18 (Estimates) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENERGY | **Long-Term Energy Plan Program Initiatives (TP)** | Collective | All | All | All | | 11.4826 | 11.4279 | 15.5724 | 15.5724 | 3.4474 | 18.3958 | | | | | | | | | | | | | | | | | | |
| ENERGY | **Ontario Clean Energy Benefit Program (TP) (Sunsets 2015-16)** | Individual - Persons/Families | All | All | All | | 1,006.2011 | 1,077.9607 | 1,100.0000 | 560.0000 | 0.0000 | 0.0000 | | | | | | | | | | | | | | | | | | |
| ENERGY | **Ontario Rebate for Electricity Consumers (TP) (Starts Jan. 1, 2017)** | Individual - Persons/Families | All | All | All | | | | | | 300.0000 | 1,006.0000 | | | | | | | | | | | | | | | | | | |
| ENERGY | **Northern Ontario Energy Credit Program (TP)** | Individual - Persons/Families | All | North | Low Income | | 25.2649 | 24.3339 | 25.5000 | 26.0000 | 26.0000 | 26.0000 | | | | | | | | | | | | | | | | | | |
| ENERGY | **Electricity and Natural Gas Sector Regulation (Delivered by the OEB)** | Collective | All | All | All | | 32.9226 | 34.9850 | 32.1834 | 32.8942 | 33.5706 | 38.0141 | 1.1127 | 0.8906 | 0.7950 | 0.6218 | 0.4404 | 1.3841 | | | | | | | | 34.4270 | | 34.8690 | 35.3640 | |
| ENERGY | **Electricity Market Operations & System Planning (Delivered by the IESO)** | Collective | All | All | All | | 186.4974 | 202.1153 | 194.1315 | 191.8636 | 192.8814 | 195.0209 | 21.4396 | 24.7200 | 21.9716 | 27.8263 | 30.1518 | 20.8321 | | | | | | | | 235.5980 | | 236.6150 | 239.4480 | |
| ENERGY | **Strategic Asset Management and Transformation** | Collective | Adults & Seniors | All | All | | | | | 2,663.0000 | | 70.0000 | | | 44.1703 | | | | | | | | | | | | | | | |
| **SUBTOTAL EXTERNAL PROGRAMS** | | | | | | | **1,262.3685** | **1,350.8227** | **1,367.3873** | **3,489.3302** | **555.8994** | **1,353.4308** | **22.5523** | **25.6106** | **66.9369** | **28.4481** | **30.5922** | **22.2162** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | | **0.0000** | **270.0250** | | **271.4840** | **274.8120** | |

**Internal Functions**

| Ministry Acronym | Organizational Unit | Operating Expense, $M: 2013-14 (Actuals) | 2014-15 (Actuals) | 2014-15 (Estimates) | 2015-16 (Estimates) | 2016-17 (Estimates) | 2017-18 (Estimates) | Capital Expense, $M: 2013-14 (Actuals) | 2014-15 (Actuals) | 2015-16 (Actuals) | 2015-16 (Estimates) | 2016-17 (Estimates) | 2017-18 (Estimates) | Assets, $M: 2013-14 (Actuals) | 2014-15 (Actuals) | 2015-16 (Estimates) | | 2016-17 (Estimates) | | Revenues, $M: 2013-14 (Actuals) | 2014-15 (Estimates) | | 2015-16 (Estimates) | 2016-17 (Estimates) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENERGY | Ministry Admin (MO, DMO) | 2.7004 | 2.5504 | 2.5689 | 2.5689 | 2.5689 | 2.5689 | | | | | | | | | | | | | | | | | | |
| ENERGY | Energy Policy Development and Implementation | 17.6373 | 17.2103 | 23.3687 | 23.3687 | 22.9937 | 23.9237 | | | | | | | | | | | | | | | | | | |
| ENERGY | Ministry Admin (Corporate Services Division) | 5.9152 | 5.5776 | 6.4877 | 6.4877 | 6.4877 | 5.2065 | 0.0000 | 0.0020 | | 0.0020 | 0.0020 | 0.0020 | 0.0000 | 0.0010 | 0.0010 | | 0.0010 | | | | | | | |
| ENERGY | Ministry Admin (Legal Services Branch) | 3.2968 | 3.5362 | 3.2549 | 3.2549 | 3.2549 | 3.2549 | | | | | | | | | | | | | | | | | | |
| ENERGY | Ministry Admin (Communication Services Branch) | 3.8188 | 3.4029 | 4.1186 | 4.1186 | 4.1186 | 4.1186 | | | | | | | | | | | | | | | | | | |
| **SUBTOTAL INTERNAL FUNCTIONS** | | **33.3685** | **32.2775** | **39.7988** | **39.7988** | **39.4238** | **39.0726** | **0.0000** | **0.0020** | **0.0000** | **0.0020** | **0.0020** | **0.0020** | **0.0000** | **0.0010** | **0.0010** | | **0.0010** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | |
| **TOTAL PROGRAMS** | | **1,295.7370** | **1,383.1002** | **1,407.1861** | **3,529.1290** | **595.3232** | **1,392.5034** | **22.5523** | **25.6126** | **66.9369** | **28.4501** | **30.5942** | **22.2182** | **0.0000** | **0.0010** | **0.0010** | | **0.0010** | | **0.0000** | **270.0250** | | **271.4840** | **274.8120** | |
| | **Budget/Estimates/Public Accounts** | **1,295.7370** | | **1,407.1861** | **3,529.1290** | **321.3232** | | **22.5523** | **25.6126** | | **28.4501** | **30.5942** | | **0.0000** | **0.0010** | **0.0010** | | **0.0010** | | **0.0000** | **270.0250** | | **271.4840** | **274.8120** | |
| | **Reconciles?** | **YES** | | **YES** | **YES** | **NO** | **NO** | **YES** | **YES** | | **YES** | **YES** | | **YES** | **YES** | **YES** | | **YES** | | **YES** | **YES** | | **YES** | **YES** | |

**ADDITIONAL ADJUSTMENTS: INTER-MINIST**
**Temporary Transfer of 1 FTE from ENERGY to**
**Permanent Transfer of 10 FTEs and associate**

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | **-1.2662** | **-1.2662** | | | | | | | | | | | | | | | | | | | |

**MINISTRY OF ENERGY**
**External Programs**

| Ministry Acronym | Program Name | FTEs, # | | | | Operating Expense | | | Capital Expense | | | Assets | | | Revenues | | | FTEs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2013-14 (Actuals) | 2014-15 (Allocation) | 2015-16 (Allocation) | 2016-17 (Allocation) | $ Change, $M (2014-15 Estimates Vs 2009-10 Actuals) | % Change | Avg Ann % Change | $ Change, $M | % Change | Avg Ann % Change | $ Change, $M | % Change | Avg Ann % Change | $ Change, $M | % Change | Avg Ann % Change | Change (2014-15 Estimates vs 2009-10 Actuals) | % Change | Avg Ann % Change |
| ENERGY | **Long-Term Energy Plan Program Initiatives (TP)** | | | | | | | | | | | | | | | | | | | |
| ENERGY | **Ontario Clean Energy Benefit Program (TP) (Sunsets 2015-16)** | | | | | | | | | | | | | | | | | | | |
| ENERGY | **Ontario Rebate for Electricity Consumers (TP) (Starts Jan. 1, 2017)** | | | | | | | | | | | | | | | | | | | |
| ENERGY | **Northern Ontario Energy Credit Program (TP)** | | | | | | | | | | | | | | | | | | | |
| ENERGY | **Electricity and Natural Gas Sector Regulation (Delivered by the OEB)** | | | | | 3.0107 | 10.3% | 2.1% | -1.0646 | -54.5% | -14.0% | | | | | | | | | |
| ENERGY | **Electricity Market Operations & System Planning (Delivered by the IESO)** | | | | | 1.6765 | 0.9% | 0.2% | -0.3386 | -9.0% | 0.4% | | | | | | | | | |
| ENERGY | **Strategic Asset Management and Transformation** | | | | | | | | | | | | | | | | | | | |
| **SUBTOTAL EXTERNAL PROGRAMS** | | **0.00** | **0.00** | **0.00** | **0.00** | | | | | | | | | | | | | | | |

**Internal Functions**

| Ministry Acronym | Organizational Unit | FTEs, # | | | | Operating Expense | | | Capital Expense | | | Assets | | | Revenues | | | FTEs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2013-14 (Actuals) | 2014-15 (Allocation) | 2015-16 (Allocation) | 2016-17 (Allocation) | $ Change, $M (2014-15 Estimates Vs 2009-10 Actuals) | % Change | Avg Ann % Change | $ Change, $M | % Change | Avg Ann % Change | $ Change, $M | % Change | Avg Ann % Change | $ Change, $M | % Change | Avg Ann % Change | Change (2014-15 Estimates vs 2009-10 Actuals) | % Change | Avg Ann % Change |
| ENERGY | Ministry Admin (MO, DMO) | 22.00 | 21.00 | 21.00 | 21.00 | -1.2310 | 32.4% | 6.5% | 0.0000 | 0.0% | 0.0% | 0.0000 | 0.0% | 0.0% | 0.0000 | 0.0% | 0.0% | | | |
| ENERGY | Energy Policy Development and Implementation | 119.00 | 129.00 | 129.00 | 129.00 | 6.1339 | 35.6% | 7.2% | | | | | | | | | | 23.00 | 21.7% | 4.5% |
| ENERGY | Ministry Admin (Corporate Services Division) | 35.00 | 35.61 | 36.61 | 36.61 | 1.4584 | 29.0% | 5.8% | 0.0000 | 0.0% | 0.0% | 0.0000 | 0.0% | 0.0% | 0.0000 | 0.0% | 0.0% | | | |
| ENERGY | Ministry Admin (Legal Services Branch) | 0.00 | 0.00 | 0.00 | 0.00 | 0.5472 | 20.2% | 4.0% | 0.0000 | 0.0% | 0.0% | 0.0000 | 0.0% | 0.0% | 0.0000 | 0.0% | 0.0% | | | |
| ENERGY | Ministry Admin (Communication Services Branch) | 28.00 | 28.00 | 28.00 | 28.00 | 0.0015 | 0.0% | 0.0% | 0.0000 | 0.0% | 0.0% | 0.0000 | 0.0% | 0.0% | 0.0000 | 0.0% | 0.0% | | | |
| **SUBTOTAL INTERNAL FUNCTIONS** | | **204.00** | **213.61** | **214.61** | **214.61** | | | | | | | | | | | | | | | |
| **TOTAL PROGRAMS** | | **204.00** | **213.61** | **214.61** | **214.61** | | | | | | | | | | | | | | | |
| | | **204.00** | **213.61** | **214.61** | **214.61** | | | | | | | | | | | | | | | |
| | | **YES** | **YES** | **YES** | **YES** | | | | | | | | | | | | | | | |
| **ADDITIONAL ADJUSTMENTS: INTER-MINIST** | | | | | | | | | | | | | | | | | | | | |
| **Temporary Transfer of 1 FTE from ENERGY t** | | | | **-1.0** | | | | | | | | | | | | | | | | |
| **Permanent Transfer of 10 FTEs and associate** | | | | **-10.0** | **-10.0** | | | | | | | | | | | | | | | |

# Program Review, Renewal & Transformation

MINISTRY OF ENERGY

**ONTARIO REBATE FOR ELECTRICITY CONSUMERS**

## Assessment Workbook

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# PROGRAM BACKGROUND

**Program:** Ontario Rebate for Electricity Consumers

## Issue / Need

Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online. Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.

Electricity costs have increased as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables. This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%. Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

## Program Description

To mitigate electricity prices, the Ministry of Energy has implemented an 8% rebate, equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan - this includes about five million residential consumers, small businesses and farms.

The Rebate is automatically be added to every eligible consumer's bill beginning January 1, 2017.

# Section 1: PROGRAM ASSESSMENT

## Relevance

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Supports Government Priority | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | |
| Addresses Specific Need | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | |
| Critical that Need be Addressed | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | |
| Clear and Stable Objectives | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | |
| Necessary Government Role | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | |
| Necessary Provincial Role | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | |

**In the box below, provide sufficient details to support the ratings assigned. Make sure the following considerations have also been addressed:**

- **Which government multi-year priority outcome does the program support and why?**
- **How do we know there is 'need'? Who are the end-beneficiaries? How has the need been identified, verified and measured?**
- **What are the consequences of not addressing the need?**
- **What are the program's objectives/desired outcome(s) and how they have evolved in recent years?**
- **Is it necessary for any government, and in particular Ontario government, to fund this program and why?**

The ministry's deliverables are outlined in the 2013 Long-Term Energy Plan (LTEP), which includes: ensuring a clean, reliable and affordable electricity system; building a culture of conservation in Ontario; and building Ontario's clean energy economy. The Ministry's 2016 mandate letter from the Premier also tasks the Minister with taking further action to mitigate the impact of electricity prices on consumers and businesses.

In 2016, the Ministry introduced the Ontario Rebate for Electricity Consumers which provides an 8% rebate, equal to the provincial portion of HST, to eligible residential, small businesses and farms electricity bills. The Rebate is automatically be added to every eligible consumer's bill beginning January 1, 2017.

Since 2010, electricity prices have risen considerably, particularly for households and small businesses as the government has rebuilt and cleaned up Ontario's electricity system. Prices are forecast to continue to increase as additional generation comes online. Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.

Unlike the Ontario Electricity Support Program (OESP), which assists low-income residential

consumers, the Ontario Rebate for Electricity Consumers applies to all RPP-eligible consumers (residential, small businesses and farms) regardless of income, status or location.

The Ontario Rebate for Electricity Consumers is a legislative entitlement program.

## Effectiveness

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Success Defined | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | |
| Plan in Place to Measure Success | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | |
| Effectiveness Assessed | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ |
| Progress in Achieving Outcomes | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ |
| Progress Benchmarked | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ |

**In the box below, provide sufficient details to support the ratings assigned. Make sure the following considerations have also been addressed:**

- **What long-term outcome measures have been established for the program?**
- **What short-term and intermediate outcome measures have been established for the program and how they lead to the long-term outcome measures?**
- **What accountability systems are in place to monitor performance?**
- **Has the program undergone independent third party evaluations? What were the findings/recommendations and how they have been implemented?**
- **What evidence is available that demonstrates progress towards long-term outcomes?**
- **How is the program benchmarked against comparable programs? (What are comparable programs; what do the comparisons show?)**

The Ontario Rebate for Electricity Consumers is a legislated entitlement program. It was developed as a way to provide financial relief to Ontario families, small businesses and farms on their electricity bills.

The Ontario Rebate for Electricity Consumers applies to all RPP-eligible consumers (residential, small businesses and farms) regardless of income, status or location and will provide an 8% rebate, equal to the provincial portion of HST.

Electricity utilities provide eligible consumers with a rebate directly on their bills, making the payment timely, i.e., paid at the same time the expense is incurred.

Eligible electricity consumers receive the 8% benefit directly on their bill from their electricity vendor, making the payment timely (i.e., paid at the same time the expense is incurred).

Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs, including the Northern Ontario Energy Credit and the Ontario Electricity Support Program. With the program set to begin January 1, 2017, the Ontario Rebate for Electricity Consumers complements existing programs to provide additional rate mitigation measures for all consumers.

The Ontario Rebate for Electricity Consumers is a $1 billion program expected to be effective in mitigating the impact of rising electricity prices for families, small businesses, and farms.

## Efficiency

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Efficiency Defined | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | |
| Efficiencies Assessed | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ |
| Efficiencies Achieved | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ |
| No Overlap in Ontario Government | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | |
| No Overlap outside Government | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | |

**In the box below, provide sufficient details to support the ratings assigned. Make sure the following considerations have also been addressed:**

- **What efficiency measures are in place for the program? What other programs, organizations, industry standards are identified for benchmarking?**
- **How is efficiency being evaluated/assessed/monitored? How regularly?**
- **What efficiencies/savings/service improvements have been achieved in recent years?**
- **Is this program unique or are there similar programs (i.e., addressing the same need and focusing on the same target group) delivered by the Ontario government, other levels of government, not-for-profit or private sector organizations?**
- **What are those programs, their target groups and ministries/agencies/ other organizations involved?**
- **What efforts have been undertaken to integrate similar programs, reduce duplication and increase efficiencies and outcomes? What has been achieved?**

Eligible electricity consumers receive the 8% benefit directly on their bill from their electricity vendor, making the payment timely.

The Ministry designed the flow of the Ontario Rebate for Electricity Consumers funds in an efficient manner.

- With a goal of providing an 8% credit per month for eligible consumers, the delivery of the Ontario Rebate for Electricity Consumers via customer bills is efficient and does not lag consumption and the incurrence of the electricity expense.
- Electricity utilities are reimbursed by submitting and receiving claims which are netted against their other monthly transactions from the IESO, and the IESO submits and receives one monthly amount from the Ontario Financing Authority on behalf of the Ministry of Energy – this process is streamlined and leverages an already existing reimbursement process, thereby minimizing costs.

The Ministry of Finance will audit the Ontario Rebate for Electricity Consumers as part of its other regularly scheduled audits. Any administration costs local distribution companies (LDC) incur related to adding the Ontario Rebate for Electricity Consumers to consumer bills would be recovered through the rate base. Any LDC administrative costs incurred as a result of the

Ontario Rebate for Electricity Consumers by the rate base are also subject to the review by the OEB, which is an open and public format.

The Ontario Rebate for Electricity Consumers is unique as it assists a large number of customers (this includes about five million residential consumers, small businesses and farms), and provides the benefit directly on the electricity bill. There are other programs that provide more targeted assistance, such as the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit, although they are delivered through the tax system, and eligibility for these programs is not associated directly with electricity consumption and the incurrence of electricity expenses.

As part of the 2017-18 PRRT process, Treasury Board Secretariat provided the Ministry of Energy with preliminary funding to deliver the Ontario Rebate for Electricity Consumers as legislated in 2016. Based on updated forecasts, the Ministry will be requesting additional out-year funding for this program.

## Sustainability

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rate of Expense Growth | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ |
| Ability to Control Expense Changes | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
| | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Trends and Future Expense Growth | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
| | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | |
| Ability to Cost Recover | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
| | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ |

**In the box below, provide sufficient details to support the ratings assigned. Make sure the following considerations have also been addressed:**

- **What are key cost drivers for the program and what is the relevant indicator (e.g. CPI)? Have the program's costs been growing faster or slower than the indicator?**
- **Is this a demand-driven/entitlement program? Which components of the program costs can be controlled?**
- **What are current/future trends that can impact the cost curve for the program?**
- **Is the program currently fully cost-recovered? If not, can full cost-recovery be achieved?**

This is a legislated entitlement program and spending is not discretionary. The program provides an 8% rebate, equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan - this includes about five million residential consumers, small businesses and farms

The Ontario Rebate for Electricity Consumers program was created through the *Ontario Rebate for Electricity Consumers Act, 2016*. The key cost drivers for the program are electricity demand and price. The cost curve of this program will be determined by these two factors. Consumption can alter from estimates based on different causes, including weather (e.g., a cold winter or hot summer would increase consumption), economic factors, and population.

The program is funded by the tax base and is not cost recoverable. The program is scheduled to begin January 1, 2017, an complements existing tax-based and rate-based programs,

As part of the 2017-18 PRRT process, Treasury Board Secretariat provided the Ministry of Energy with preliminary funding to deliver the Ontario Rebate for Electricity Consumers as legislated in 2016. Based on updated forecasts, the Ministry will be requesting additional out-year funding for this program.

# Section 2: PROGRAM SPECIFIC OPPORTUNITIES

| **Overview / Context** | |
|---|---|
| **In the space below, outline and describe in general the types of improvement opportunities which can be considered and that you have identified through the program assessment, as well as the overlaying context (e.g. transformation currently underway that is impacting this program, historical transformation, etc.).** | |
| This is a new program. The Ministry revisit program opportunities once the program is underway. | |
| **Relevance** | This is a new program. The Ministry revisit program opportunities once the program is underway. |
| **Effectiveness** | This is a new program. The Ministry revisit program opportunities once the program is underway. |
| **Efficiency** | This is a new program. The Ministry revisit program opportunities once the program is underway. |
| **Sustainability** | This is a new program. The Ministry revisit program opportunities once the program is underway. |

| Opportunity Questions | Y/N | Opportunity #(s) |
|---|---|---|
| **Relevance** | | |
| Is there an opportunity to discontinue the program (if no longer relevant)? | **N** | |
| Is there an opportunity to redesign the program to better achieve government priorities and program objectives? | **N/A** | |
| Is there an opportunity to transfer responsibility (funding) of the program in whole or in part to another level of government or non-government entity? | **N** | |
| Other… | **N** | |
| **Effectiveness** | | |
| Are there opportunities to improve the effectiveness of the program for better outcomes? | **N** | |
| Is there additional data to be captured and/or analyzed to help assess the programs' effectiveness in achieving outcomes? | **N** | |
| Does further work need to be done to confirm desired outcomes, and to establish baselines, targets and performance measures? | **N** | |
| Other… | **N** | |
| **Efficiency** | | |
| Are there efficiency opportunities to reduce costs or improve services (e.g., new technologies or digitization, procurement, etc.)? | **N** | |
| Are there opportunities to realign resources with other programs the government delivers to improve outcomes for Ontarians? | **N** | |
| Are there opportunities to generate efficiencies through partnerships (e.g., intergovernmental integration, public/private partnerships)? | **N** | |
| Are there opportunities to reduce overlap or duplication by increasing the coordination or integration of delivery with other Ontario ministries or agencies (e.g., horizontal opportunities)? | **N** | |

| | | |
|---|---|---|
| Does the provincial government need to deliver the program and can it be provided more efficiently by alternative means? | **N** | |
| Other… | **N** | |
| **Sustainability** | | |
| Are there any opportunities to add and/or increase revenues, for example, full cost recovery; user fees; loan recuperation; and income generation? | **N** | |
| Could this program be income tested to both increase equity and improve sustainability? | **N** | |
| Can program eligibility be redefined to provide more targeted benefits / shared costs? | **N** | |
| Other… | **N** | |

# Section 3: PROGRAM PERFORMANCE MEASURES

## Available Data

The Ontario Rebate for Electricity Consumers is a legislated entitlement program that is delivered through customer bills.

On an annual basis, it provides about $1 billion dollars to residential consumers, small businesses, and farms in the form of an 8% rebate, equal to the provincial portion of HST.

The Ministry collects data from the IESO each month on the amount delivery agents, such as electricity utilities claim.

As with other Ministry tax-based programs, the Ministry of Finance will conduct audits of local distribution companies to ensure they are administering the Ontario Rebate for Electricity Consumers correctly and on a timely basis.

## Efficiency Measures

| **Efficiency Measure #1:** Transaction time (in days) to process claims and reimburse local distribution companies (LDC) and sub-metering providers. | Baseline | Target | Current |
|---|---|---|---|
| | 0 | 5 business days per claim | 0 |

**Describe the measure**

The IESO submits monthly reports to the Ministry which reflect total claims from LDCs and sub-metering providers of benefits that have been distributed to qualified electricity consumers. These reports are processed within 2 business days by the Ontario Financing Authority on behalf of the Ministry, and the IESO in turn reimburses the LDCs and sub-metering providers within the subsequent 2 business days.

**Describe the data that is being collected to support this specific measure, how frequently it is collected, and opportunities to collect / use additional data in supporting the measure.**

N/A

**Describe the rationale for choosing this measure (i.e., how it is relevant), what it is capturing and how the measurement is conducted, when the measure/baseline was established and provide other applicable considerations.**

The empirical measure chosen for this program ensure the entitlements reach the total number of eligible residential, farms and small business consumers in Ontario.

| |
|---|
| Processing claim application and providing re-imbursement within 5 business days minimizes interruptions to daily business for service providers. |
| **Describe existing use of benchmarks and potential opportunities where benchmarking could be improved**<br>N/A |

## Short-Term Outcome Measures

| **Short-Term Outcome Measure #1:** Number of Rebates applied to eligible electricity consumers including household, small business, and farms | Baseline | Target | Current |
|---|---|---|---|
| | 0 | 5 Million | 0 |
| **Describe the measure**<br>The empirical measure chosen for this program ensure the entitlements reach the total number of eligible residential, farms and small business consumers in Ontario.<br><br>The total number of customers may fluctuate as it is possible that the final eligible customer number could be over/under the 5 million target through no fault of the program. The aim is to ensure all eligible customers in Ontario receive their respective entitlement. | | | |
| **Describe the data that is being collected to support this specific measure, how frequently it is collected, and opportunities to collect / use additional data in supporting the measure.**<br>Monthly claims reflect the total number of consumers who are eligible for this Rebate. | | | |
| **Describe the rationale for choosing this measure (i.e., how it is relevant), what it is capturing and how the measurement is conducted, when the measure/baseline was established and provide other applicable considerations.**<br>The outcome measures is the total number of residential, farms and small business consumers who will benefit from this Rebate, against estimated targets, if the program is delivered effectively by the Province, the IESO, LDCs and sub-metering providers. | | | |
| **Describe existing use of benchmarks and potential opportunities where benchmarking could be improved**<br>N/A | | | |

## Intermediate-Term Outcome Measures

| **Intermediate-Term Outcome Measure #1:** Average reduction to electricity bills to residential consumers, farms and small businesses | Baseline | Target | Current |
|---|---|---|---|
| | 0% rebate | Min 8% savings | 0% rebate |

**Describe the measure**

The intermediate outcome measure for the Ontario Rebate for Electricity Consumers is the amount saved by eligible recipients each year. This amount will be an 8% rebate, equal to the provincial portion of HST, applied to consumers eligible for the Regulated Price Plan – this includes approximately five million residential consumers, small businesses and farms. The 8% rebate target applies to same year bill-to-rebate savings only.

**Describe the data that is being collected to support this specific measure, how frequently it is collected, and opportunities to collect / use additional data in supporting the measure.**

This data is collected monthly from the IESO.

**Describe the rationale for choosing this measure (i.e., how it is relevant), what it is capturing and how the measurement is conducted, when the measure/baseline was established and provide other applicable considerations.**

This outcome was chosen because it reflects that all eligible customers have received their entitlement from the Ontario Rebate for Electricity Consumers. This Rebate will help ensure consumers are able to manage electricity costs that have risen as Ontario transitioned to a cleaner, modern electricity system.

**Describe existing use of benchmarks and potential opportunities where benchmarking could be improved**

N/A

The OCEB is an entitlement program with a purpose of improving affordability of electricity for Ontarians January 2017.

## Long-term Outcome Measures

| **Long-Term Outcome Measure #1:** Successful program delivery limits increases in electricity costs to consumers relative prior years | Baseline | Target | Current |
|---|---|---|---|
| | $143.48/MWh in 2015 (average unit cost of delivered electricity) | Increases below the rate of inflation over the long-term | $143.48/MWh in 2015 (average unit cost of delivered electricity) |

**Describe the measure**

The measure chosen is an index of the annual growth of electricity costs to all residential and industrial consumers Ontario.

**Describe the data that is being collected to support this specific measure, how frequently it is collected, and opportunities to collect / use additional data in supporting the measure.**

Data collected by the IESO for growth rate for average energy costs to residential and industrial consumers by region / demographic.

**Describe the rationale for choosing this measure (i.e., how it is relevant), what it is capturing and how the measurement is conducted, when the measure/baseline was established and provide other applicable considerations.**

The long-term outcome measures the impact of the Ontario Rebate for Electricity Consumers program on the cost of electricity in Ontario. Based on the current annual average cost growth, the program is expected to assist in reducing average growth in cost of electricity post 2016-17 levels, when no Rebate existed.

**Describe existing use of benchmarks and potential opportunities where benchmarking could be improved**

N/A

## Opportunities in Performance Measurement

| Measures |
| --- |
| **Understanding the current gaps in measurement (e.g., measures are not available, or measures which are currently in use not providing objective/quantifiable evidence of the performance of the program, etc.), outline what opportunities exist and what steps the ministry will take (with timelines) to improve the measures.**<br><br>**Address each type of measure (output, short-term outcome, intermediate outcome, long-term outcome).**<br><br>**Identify new/additional measures where known.**<br><br>N/A |
| **Data** |
| **Identify opportunities to collect and use additional data sources to measure program effectiveness and efficiency.**<br>N/A |

## Reduced Poverty, Inequality and Exclusion

# Ontario Rebate for Electricity Consumers – ENERGY

**Issue/Need:**

- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.
- Electricity costs have increased as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

**Program Description:**

- To mitigate electricity prices, the Ministry of Energy has implemented an 8% rebate equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan - this includes about five million residential consumers, small businesses and farms.
- The rebate is automatically be added to every eligible consumer's bill beginning January 1, 2017.

**PROGRAM TYPE:** Supporting

**MAJOR PROGRAM:** N/A

**STRATEGY:** None

**DELIVERY MODE:** For-profit | Choose an item.

**MINISTRY LINKAGES:** MOF

**END BENEFICIARY:**

| | |
|---|---|
| Type: | Collective |
| Age: | All |
| Demographic 1: | All |
| Demographic 2: | All |
| Geographic: | All |

| $M | 2015-16 | 2016-17 | 2017-18 | 2018-19 | Last 5-Years | | |
|---|---|---|---|---|---|---|---|
| | Prior Inputs | Current Inputs | Minuted Inputs | | $ Change | % Change | Avg Ann % Change |
| Operating Expense | N/A | 300.0 | 1,006.0 | 1,004.0 | N/A | N/A | N/A |
| Capital Expense | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Assets (Op/Cap) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Revenues | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| *FTEs* | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

| | OUTPUTS | | | SHORT-TERM OUTCOMES | | | INTERMEDIATE OUTCOMES | | | LONG-TERM OUTCOMES | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Key Measure 1 | Ontario Rebate for Electricity Consumers claims | | | Number of rebates applied to eligible electricity consumers including household, small business, and farms | | | Average reduction to electricity bills to residential consumers, farms and small businesses | | | Successful program delivery limits increases in electricity costs to consumers relative prior years | | |
| | Baseline | Target | Current | Baseline | Target | Current | Baseline | Target | Current | Baseline | Target | Current |
| | 8% rebate | 8% rebate | 8% rebate | 0 | 5 million | 0 | 0% rebate | Min 8% savings | 0% rebate | $143.48/MWh in 2015 (average unit cost of delivered electricity) | Increases below the rate of inflation over the long-term | $143.48/MWh in 2015 (average unit cost of delivered electricity) |
| Key Measure 2 | | | | | | | | | | | | |
| | Baseline | Target | Current | Baseline | Target | Current | Baseline | Target | Current | Baseline | Target | Current |
| | XX% | XX% | XX% | | | | | | | | | |

## Reduced Poverty, Inequality and Exclusion

# Ontario Rebate for Electricity Consumers – ENERGY

| RELEVANT | | EFFECTIVE | | EFFICIENT | | SUSTAINABLE | |
|---|---|---|---|---|---|---|---|
| Supports Government Priority | 10 | Success Defined | 10 | Efficiency Defined | 10 | Rate of Expense Growth | N/A |
| Addresses Specific Need | 10 | Plan in place to measure success | 10 | Efficiency Assessed | 10 | Ability to control Expense Changes | 1 |
| Critical that Need be Addressed | 10 | Effectiveness Assessed | 10 | Efficiencies Achieved | N/A | Trends and Future Expense Growth | 8 |
| Clear and Stable Objectives | 10 | Progress in achieving outcomes | 10 | No Overlap in Ont. Government | 10 | | |
| Necessary Government Role | 10 | Benchmarked | N/A | No Overlap outside Government | 10 | Ability to Cost Recover | N/A |
| Necessary Provincial Role | 10 | | | | | | |

| Addressing Gaps in Effectiveness | Opportunities to Improve Effectiveness |
|---|---|
| N/A | N/A |

| Opportunities – Relevance/Efficiency/Sustainability | Key Considerations | Desired Outcome |
|---|---|---|
| [Opportunity and brief description] | [Gaps, Feasibility, Timing, Decision Points] | [How would this opportunity improve outcomes] |
| | | |
| | | |
| | | |

| | | Risk Name | Description | Offset Code | Risk Type | Risk Classification | Vote Item | % Likelihood | Impact | 2017-18 | | 2018-19 | | 2019-20 | | 2020-21 | | Implications of Risk | Mitigating Strategies |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Division(s) | Provide a short name for the risk | Describe your risk in detail, and provide an explanation of what the risk is and its underlying source or cause | Available offset codes:<br>VI: Vote/Item<br>R: Revenue<br>NOF: No Offset | See tab 'Risk Types' for available codes | A: New - One Time<br>B: New - Ongoing<br>C: Existing - One Time<br>D: Existing - Ongoing | Identify the VOTE/ITEM that is affected by the risk | Determine the likelihood in percentage terms | Indicate if impact of risk is:<br>H: high<br>M: medium<br>L: low | Min ($M) | Max ($M) | Min ($M) | Max ($M) | Min ($M) | Max ($M) | Min ($M) | Max ($M) | Describe the rationale for the likelihood and impact on government operations, services, strategic policy, and stakeholders if the initiative does not proceed or the financial risk is not funded. | Describe the strategy to reduce the impact of the identified risk. |
| 001 | **CRED** | Energy Demand Model | Energy demand model to develop independent, unbiased, and enhanced in-house analytical capability to aid conservation policy development in quick turn-around times within current staff levels and a modest increase in annual budget. | VI | SPD | Existing - Ongoing | 290201 | 100% | H | 0.4000 | 0.4000 | 0.1000 | 0.1000 | | | | | If the Ministry does not proceed with procuring energy demand modelling software (multi-fuel), it would not have the necessary tools to:<br>• Gain greater control and flexibility over planning analysis;<br>• Ensure staff are adequately equipped to explain policy recommendations and analysis;<br>• Ensure inputs are sufficiently precise to differentiate and evaluate the scenarios required to inform ministry decision-making;<br>• Provide management with the information needed to make decisions in a timely manner;<br>• Quickly make requested changes to scenario assumptions; and<br>• Develop multi-fuel conservation and demand management policies based on analysis of alternative scenarios. | |
| 002 | **CRED** | Green Button Technical Adoption of Standard | Technical advisory services to develop/update a "Reference Architecture" and also update and develop a test-lab environment for Green Button in Ontario as well as provide additional technical advisory services as required. | VI | SPD | Existing - Ongoing | 290201 | 100% | H | 0.7300 | 0.7300 | | | | | | | Lack of technical guidance documents and test lab would significantly reduce the likelihood of a successful roll out of Green Button in Ontario. | |
| 003 | **CRED** | Renewable Energy Legal Charges | Funding to support Ontario's defence of the Windstream NAFTA arbitration. Canada and Ontario will have to discuss arrangements for award of $28M owed to Windstream (it is possible that Ontario will have to pay 50% of the cost for a total of $14M). It is assumed that the $14 M in costs will be further equally split between MOE, MNRF and MOECC, that would bring it to approx. $4.7M from each Ministry. Risk identified is the ENERGY`s share.<br><br>Also, Mesa is requesting a set aside of the NAFTA Tribunal's decision in favour of Canada and Ontario that will take place in early 2017. Funds are required for the US law firm that is defending the case in US court. If legal action to enforce award is necessary, it would take place next FY2017-18 with an estimated amount of $425,000. | VI | LCE | Existing - Ongoing | 290201 | 100% | H | 0.4250 | 0.4250 | | | | | | | Without this funding, Ontario would not be able to defend against the allegations made against ENERGY, MNRF and MOECC under NAFTA. Ontario has a MOU with Canada whereby the two governments share the costs of the arbitration equally.<br><br>Also, Mesa is requesting a set aside of the NAFTA Tribunal's decision in favour of Canada and Ontario. Funds are required for the US law firm that is defending the case in US court. | |
| 004 | **CRED** | Energy & Water Reporting and Benchmarking (EWRB) - Customer Relationship Management<br>and Implementation Proposal | Procure customer relationship management software for the implementation of the EWRB Regulation as well as professional services to support implementation of the software technology solution(s), interface creation and go-live technical support for CRM software, database/analytics tools and other interfaces (e.g. to Portfolio Manager). | VI | SPD | New - Ongoing | 290201 | 100% | H | 3.2500 | 3.8000 | 1.2300 | 1.5300 | 0.9800 | 1.2800 | 0.9300 | 1.2300 | Having funds available to select the right technology and to procure professional services to support implementation of the software technology solution(s) will be crucial for performing mandatory reporting under the proposed EWRB initiative that could require approximately 18,000 private buildings to report their building's energy and water use annually. | |
| 005 | **ESP** | Study on Default Emissions Factors for Electricity Imports | Report developed by expert third party that: (1) outlines a methodology to calculate factors to determine greenhouse gas emissions associated with electricity imports into Ontario and (2) provides factors to be applied to imports under Ontario's cap and trade program. | VI | SPD | New - Ongoing | 290201 | 15% | M | 0.0300 | 0.0900 | 0.0300 | 0.0900 | 0.0300 | 0.0900 | 0.0300 | 0.0900 | Government has committed to providing updated emissions factors as per the environmental reporting guidelines. | Funds are not likely to be needed until FY 17-18. Beyond that, familiarity with the topic should bring down consultant costs to undertake the study. |

| | | Risk Name | Description | Offset Code | Risk Type | Risk Classification | Vote Item | % Likelihood | Impact | 2017-18 | | 2018-19 | | 2019-20 | | 2020-21 | | Implications of Risk | Mitigating Strategies |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Division(s) | Provide a short name for the risk | Describe your risk in detail, and provide an explanation of what the risk is and its underlying source or cause | Available offset codes:<br>VI: Vote/Item<br>R: Revenue<br>NOF: No Offset | See tab 'Risk Types' for available codes | A: New - One Time<br>B: New - Ongoing<br>C: Existing - One Time<br>D: Existing - Ongoing | Identify the VOTE/ITEM that is affected by the risk | Determine the likelihood in percentage terms | Indicate if impact of risk is:<br>H: high<br>M: medium<br>L: low | Min ($M) | Max ($M) | Min ($M) | Max ($M) | Min ($M) | Max ($M) | Min ($M) | Max ($M) | Describe the rationale for the likelihood and impact on government operations, services, strategic policy, and stakeholders if the initiative does not proceed or the financial risk is not funded. | Describe the strategy to reduce the impact of the identified risk. |
| 006 | **ESP** | Energy East | Procurement of 4 experts to support NEB hearings for the Energy East Project:<br>• Expert Services on Pipeline Environmental Protection<br>• Expert Services on Pipeline Safety<br>• Expert Services on Natural Gas Prices, Tolls and Reliability<br>• Expert Services on Economic Impact Analysis | VI | SPD & PCD | Existing - Ongoing | 290201 | 100% | M | 0.6210 | 0.6210 | | | | | | | | |
| 007 | **SNAP** | OEB Mandate Review | Costs related to the requirement for Ministry to complete a mandate review of the OEB in 2016-17. (The launching of the review is pending Ministry approval) | VI | GAOD/ SPD | New - One Time | 290201 | 50% | L | 0.3000 | 0.3000 | | | | | | | Not proceeding with the review would impact the Minister's ability to meet the requirement of the Agencies and Appointment Directive for good agency governance as required by TBS. The review provides assurance that mandate of the OEB is being delivered fully and in alignment with government priorities. | If scope of the review is expanded and requires funding exceeding $100K, there is potential financial offset from other projects from SNAP. |
| 008 | **IGS** | Resources to Oversee investments in OPG and Hydro One | The Ministry is looking to secure permanent FTEs and support resources to continue to manage the Province's investment and governance responsibilities related to its interest in OPG and Hydro One | NOF | SPD | Existing - Ongoing | 290201 | 100% | M | | | | | 5.9300 | 5.9300 | 5.9300 | 5.9300 | Without appropriate funding, the Ministry would lack the resources to continue to manage and oversee the government's investments in Hydro One and OPG. | Ministry is request funding during 2017-18 PRRT. |
| 009 | **IGS** | Flexibility for Share Sale Strategy | The Ministry is seeking additional funding to provide flexibility to the Province related to its share sale strategy. Most expenses will be offset by proceeds from the sale. | R | PCD | Existing - One Time | 290601 | 100% | H | 70.0000 | 70.0000 | | | | | | | Without appropriate funding, the Ministry would be restricted in the timing of its share sale strategy. | Ministry is request funding during 2017-18 PRRT. |
| 010 | **IGS** | First Nation Agreement-in-Principle Seed Capital | The Ministry is providing First Nations a cash contribution of up to $45 million in 2017-18. The Ministry received $45 million over 3 year for this cash contribution, but the timing was accelerated. | NOF | PCD | New - One Time | 290603 | 100% | H | 45.0000 | 45.0000 | | | | | | | The Ministry has committed through negotiations and opens itself up to risks if not funded. | Ministry is request funding during 2017-18 PRRT. |
| 011 | **IGS** | First Nation Agreement-in-Principle Conferred Benefit | The Ministry is required to determine a conferred benefit amounts for First Nations. This would be the difference between the purchase price for First Nations ($18 per share, above book value for the Province) and current market value. | | PCD | New - One Time | 290604 | 100% | H | 135.0000 | 135.0000 | | | | | | | The Ministry has obligations under a negotiation agreement and opens itself up to risks if not funded. | Ministry is request funding during 2017-18 PRRT. |

## Non-Financial Risks

Non-financial risks encompass a variety of risks, e.g. risks to the reputation of the government, ability to retain, sustain or develop an expert workforce, the level of employee engagement or quality of information.

| Risk Name | Description | Mitigating Strategies |
|---|---|---|
| Provide a short name for the risk | Describe your risk in detail, including implications and/or impacts to areas such as government operations, services, strategic policy, stakeholders if the risk should materialize | Describe the strategy to reduce the impact of the identified risk. |
| **First Nation Concerns** | Risk that First Nations (FN) will not agree with subsequent share offerings. | Plan to mitigate by engaging with FN communities and working to facilitate FN ownership in Hydro One. |
| **Métis Concerns** | Risk that Métis will not agree with subsequent share offerings. | Plan to mitigate by engaging with Métis communities and working to facilitate Métis ownership in Hydro One. |
| **Market Conditions** | The Ministry's ability to meet financial targets, as set out by Treasury Board and/or the Ministry of Finance, will be largely impacted by the state of the market. | The Ministry will seek to develop share sale plans and maintain on-going relationships with key investors to maximize returns and minimize costs. |
| **Public Concerns** | There have been many public requests to stop the privatization of Hydro One. The Ministry will likely feel similar pressure with each subsequent share sale. | The Ministry will seek to ensure the public is aware of the protections in place (e.g., Ownership restrictions, OEB rate setting process, Hydro One Ombudsman, etc.). |
| **Investor Concerns** | Investors will want certainty that the Province will not interfere or attempt to manage Hydro One in any way. | The Ministry has put a Governance Agreement in place to ensure all parties are aware of their rights and to set out the Province's role as an investor rather than a manager.<br><br>The Ministry will need to ensure that its messaging balances the need to ensure the public knows that protections are in place with ensuring investors don't perceive government interference as this would result in downward pressure on price and ultimately reduce value for the Province. |

## Risk Types (for completing Column E)

| Category | Definition | Code |
|---|---|---|
| Strategic/Policy/Performance Risk | Risks related to implementing (or not implementing) new policies or changes to existing policies (e.g. delays in passing legislation). The risk that strategies and policies fail to achieve required/targeted results. The risk of not providing value for money or cost-effectiveness. – Discretionary Risk Note: in exceptional circumstances it could be an External Risk. | **SPD** |
| Political Commitment | Risk of not meeting publicly announced commitments made to meet/further the government's objectives. Could include platform and mandate letter commitments – Discretionary Risk. Note: In exceptional circumstances it could be an External Risk. | **PCD** |
| Governance/ Accountability/ Organizational | Risk that the organization structure, accountabilities, or responsibilities are not defined, designed, communicated or implemented to meet the organization's objectives, and/or that culture and management commitment do not support the formal structures. – Discretionary Risk. | **GAOD** |
| Legal/Contractual Compliance | Risk that a government initiative, or action, will contravene a statute, regulation, contract, and/or MOU – Discretionary Risk | **LCD** |
| | Risk related to potential cost of complying with a legal or contractual agreement or of litigation against government – External Risk | **LCE** |
| Controllership/Accounting | Any risks related to the reliability of reporting or a change in accounting (e.g. a change in definition of the threshold for capital accrual, amortization expenses related to Minor Tangible Capital Assets)– External Risk | **CA** |
| Program Caseload / Utilization | Increased claims/caseload that can be deferred, (e.g., increased caseload) – Discretionary Risk | **UWD** |
| | Change in demand for services or entitlements. (e.g., Higher utilization for drug program or increase in Social Assistance) Assumes no policy or legislative changes – External Risk | **UWE** |
| Service/ Operational Risk | The risk that products or services will not get completed or delivered to quality standards or in a timely manner, as expected for reasons not related to caseload. Includes business continuity risk. | **SO** |
| OPS Compensation/Pensions | Cost recognized from OPS anticipated settlements or future contracts – Discretionary Risk | **OCPD** |
| | Risk related to OPS binding wage settlement, existing contracts or minimum negotiation mandate – External Risk | **OCPE** |
| OPS Workforce/ Skill Shortage | Costs associated with changes in FTEs. Risk related to skill shortage – Discretionary Risk | **OCWD** |
| | Risk related to skill shortage; specialized staff skills not available – External | **OCWE** |
| BPS Compensation | BPS anticipated negotiation - Discretionary | **BCPD** |
| | Risk related to BPS binding wage settlements – External Risk | **BCPE** |
| BPS Workforce | Costs associated with changes in FTEs – Discretionary Risk | **BWD** |
| | Risk related to staff not available to complete tasks (e.g. skills shortage or inability to hire in a timely way) – External Risk | **BWE** |
| Information and Information Technology | The risk that information produced or used (e.g., performance data) is incomplete, out-of-date, inaccurate, irrelevant or inappropriate to disclose. Risk that information or other technology (e.g., architecture, hardware, software) does not support busine | **IT** |
| Capital Project Delays | Risk relating to new projects – Discretionary Risks | **CAPD** |
| | Risk relating to changes in construction costs and/or project delays – External Risks | **CAPE** |
| Other | Risk that does not fit any of the above categories but will only materialize with a discrete decision – Discretionary Risk | **OD** |
| | Risk that does not fit any of the above categories - External Risk | **OE** |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## OGO CONSOLIDATION FORMS

**Ministry Contact:** **David Chan, Accounting Lead (416-570-4862)**

**Ministry:** **MOI / Energy / MEDG / MRIS**

***Other Government Organization(OGO) Name*** **220-Ontario Energy Board**


*Address:* 2300 Yonge Street, 27th Floor

Toronto, ON M4P 1E4

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Date Submitted: October 27, 2016

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## OGO CONSOLIDATION FORMS

### 1) FORM A - PROFORMA INCOME STATEMENT

Report on this form all revenue and expense amounts for each relevant line for each year

### 2) FORM A(i) - DETAILS OF EMPLOYEE BENEFITS EXPENSE

Report a detailed breakdown of employee benefits expense for the periods presented.

### 3) FORM B - PROFORMA BALANCE SHEET

Report on this form all assets and liabilities amounts for each relevant line for the periods presented.

### 4) FORM C - TANGIBLE CAPITAL ASSETS

For each category of TCA, report the continuity details for the asset class and related accumulated amortization for the periods presented.

### 5) FORM D - REVENUE FROM A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

Based on the amounts reported in the proforma income statement (Form A), report **by ministry or other government reporting entity (including hospitals, school boards and colleges by sector)** any revenues from related organizations (GRE); one table for each ministry or government organization; there is no materiality with respect to reporting these amounts

### 6) FORM E - EXPENSES INCURRED WITH OR ON BEHALF OF A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

Based on the amounts reported in the proforma income statement (Form A), report by ministry or other government reporting entity (including hospitals, school boards and colleges by sector) any expenses incurred with related organizations (GRE); one table for each ministry or government organization; there is no materiality with respect to reporting these amounts

### 7) FORM F - INTER-ORGANIZATION BALANCES WITH A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

Based on the amounts reported in the proforma balance sheet (Form B), report by ministry or other government reporting entity (including hospitals, school boards and colleges by sector) any year-end balances with related organizations (GRE); one table for each ministry or government organization; there is no materiality with respect to reporting these amounts

### 8) FORM G - DEFERRED BALANCE CONTINUITY

For amounts reported as DEFERRED REVENUE and DEFERRED CAPITAL CONTRIBUTIONS from related parties (GRE) in Form B, report a continuity of activity in the year **by ministry or other government entity (including hospitals, colleges and school boards by sector)**; one table for each ministry or government organization; there is no materiality with respect to reporting these amounts

### 9) FORM H - STATEMENT OF CHANGE IN ACCUMULATED SURPLUS/(DEFICIT)

To report the statement of change in accumulated surplus/(deficit) capturing unrealized remeasurement gains or losses.

### 10) FORM I - NEW LOANS RECEIVABLE

Report in Table 1 any NEW loans receivable that the other government organization (OGO) has entered into or is planning to enter during the current fiscal year and the planned fiscal years.
Report in Table 2 any inter-governmental new loans receivable listed in Table 1.

### 11) FORM J - NEW INVESTMENTS RECEIVABLE

Report in Table 1 any NEW investments that the OGO has entered into or is planning to enter during the current fiscal year and the planned fiscal years.
Report in Table 2 any inter-governmental NEW investments listed in Table 1.

### NOTES

- ALL amounts should be reported in millions of dollars **to the nearest 4 decimals** (e.g. $2,734,588 reported as $2.7346)
- Interim to March 31 should reflect a **FULL YEAR** forecast
- **GRE** means Government Reporting Entity which comprises the Ministries and the organizations controlled by the government and consolidated in the Province's financial statements. Inter-organizational (GRE) balances will need to be reported in various forms. Please refer to schedule 8 in the 2015-16 Consolidated Financial Statements for a list of consolidated organizations.
- Please contact your respective OPCD Analysts if the forms need to be customized to meet your agency's requirements.

### LEGEND

- Yellow cells require input by users.
- Light blue cells contain links to related forms, no input is required.

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM A - OTHER GOVERNMENT ORGANIZATION - PROFORMA INCOME STATEMENT

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

**Please complete yellow cells only, as all blue cells contain either links to other related forms or formulae.**

Please report PROFORMA INCOME STATEMENT, on an accrual basis, under the following headings:

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Grants/Subsidy from Province and other GRE's **(see Form D)** | - | - | - | - | - |
| Government of Canada | | | | | |
| Other non-provincial grants (municipal, etc.) | | | | | |
| Interest/Investment Income | | | | | |
| - from External Sources | 0.1115 | 0.1115 | 0.1115 | 0.1115 | 0.1115 |
| - from a Ministry or other GRE **(see Form D)** | - | - | - | - | - |
| Deferred revenue recognized | | | | | |
| - from External Sources | | | | | |
| - from a Ministry or other GRE **(see Form D)** | - | - | - | - | - |
| Deferred capital contribution amortized to revenue | | | | | |
| - from External Sources | 0.7806 | 1.2238 | 1.3215 | 1.2861 | 0.7625 |
| - from a Ministry or other GRE **(see Form D)** | - | - | - | - | - |
| Fees and Licenses | | | | | |
| - from External Sources | 0.3725 | 0.3725 | 0.3725 | 0.3725 | 0.3725 |
| - from a Ministry or other GRE **(see Form D)** | - | - | - | - | - |
| Royalties | | | | | |
| - from External Sources | | | | | |
| - from a Ministry or other GRE **(see Form D)** | - | - | - | - | - |
| Fines and Penalties | | | | | |
| - from External Sources | 0.1000 | 0.0150 | 0.0150 | 0.0150 | 0.0150 |
| - from a Ministry or other GRE **(see Form D)** | - | - | - | - | - |
| Sales and Rentals | | | | | |
| - from External Sources | | | | | |
| - from a Ministry or other GRE **(see Form D)** | - | - | - | - | - |
| Other Revenue [1] | | | | | |
| - from External Sources | 45.2180 | 45.5300 | 45.7200 | 45.7200 | 45.7200 |
| - from a Ministry or other GRE **(see Form D)** | - | - | - | - | - |
| **TOTAL REVENUES** | **46.5826** | **47.2528** | **47.5405** | **47.5051** | **46.9815** |
| | | | | | |
| Salaries and Wages | 24.5339 | 25.1823 | 25.7901 | 25.7901 | 25.7901 |
| Employee Benefits [2] **(see Form A(i))** | 5.3363 | 5.5591 | 5.6882 | 5.6882 | 5.6882 |
| Transportation and Communication | 0.7492 | 0.7282 | 0.7252 | 0.7252 | 0.7252 |
| Services | | | | | |
| - to External Sources | 14.0888 | 13.5707 | 12.9768 | 12.9768 | 12.9768 |
| - to a Ministry or other GRE **(see Form E)** | - | - | - | - | - |
| Supplies and Equipment | 0.9938 | 0.9737 | 1.0237 | 1.0237 | 1.0237 |
| Amortization **(See Form C)** | 0.7806 | 1.2238 | 1.3215 | 1.2861 | 0.7625 |
| Transfer Payments [2] | | | | | |
| - to External Sources | | | | | |
| - to a Ministry or other GRE **(see Form E)** | - | - | - | - | - |
| Interest on Debt | | | | | |
| - to External Sources | | | | | |
| - to a Ministry or other GRE **(see Form E)** | - | - | - | - | - |
| Realized (Gains)/Losses | | | | | |
| Expense for remediation of contaminated sites[3] | | | | | |
| - from External Sources | | | | | |
| - from a Ministry or other GRE **(see Form E)** | - | - | - | - | - |
| Other Expenses [1] | | | | | |
| - to External Sources | | | | | |
| - to a Ministry or other GRE **(see Form E)** | - | - | - | - | - |
| **TOTAL EXPENSES** | **46.4826** | **47.2378** | **47.5255** | **47.4901** | **46.9665** |
| | | | | | |
| **SURPLUS/(DEFICIT)** | **0.1000** | **0.0150** | **0.0150** | **0.0150** | **0.0150** |

**Notes:**

[1] Also includes gain/loss on sale of assets.

[2] Transfer payments should include all amounts paid to other organizations for which it does not receive any goods or services directly in return (e.g. program delivery)

[3] A new accounting standard PS 3260 liability for contaminated sites became effective April 1, 2014. Additional liabilities identified subsequent to April 1, 2014 need to be reported in the year in which they are identified with an offsetting journal entry to expense for remediation of contaminated site.

**ADDITIONAL COMMENTS:**

Prepared by: Naresh Bharkhada — Telephone: 416-440-7639

Approved by: John Moon, Finance & Administration Manager (Name and Title) — Date: October 27, 2016

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM A(i) - OTHER GOVERNMENT ORGANIZATION EMPLOYEE BENEFITS EXPENSE

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

**Please complete yellow cells only, as blue cells contain formulae.**

Please provide the following employee benefits expense that is included in your financial statements:

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Pension Expense | | | | | |
| - PSPP | 1.5000 | 1.5000 | 1.5000 | 1.5000 | 1.5000 |
| - OPSEU | | | | | |
| - HOOPP | | | | | |
| - Other (please specify) | | | | | |
| Non-pension Retirement Benefits Expense | | | | | |
| Regular Severance or Termination Benefit Expense | | | | | |
| Workers' Compensation Benefit Expense | | | | | |
| Other employee benefit costs | 3.8363 | 4.0591 | 4.1882 | 4.1882 | 4.1882 |
| **TOTAL** [(1)] | **5.3363** | **5.5591** | **5.6882** | **5.6882** | **5.6882** |

**Notes:**

[(1)] must agree to "Employee Benefits" in Form A.

**ADDITIONAL COMMENTS:**

Prepared by: Naresh Bharkhada  Telephone: 416-440-7639

Approved by: John Moon, Finance & Administration Manager  Date: October 27, 2016
(Name and Title)

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM B - OTHER GOVERNMENT ORGANIZATION - PROFORMA BALANCE SHEET

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

**Please complete yellow cells only, as all blue cells contain either links to other related forms or formulae.**

Please report PROFORMA BALANCE SHEET under the following headings:

| **(report in millions)** | **Interim as at March 31, 2017** | **Plan as at March 31, 2018** |
|---|---|---|
| Cash and Cash Equivalents [1] | 11.5831 | 11.5355 |
| Temporary Investments [2]: | | |
| From External Sources | | |
| From the Province or other GRE **(see Form F)** | - | - |
| Long-Term Investments [2]: | | |
| From External Sources | | |
| From the Province or other GRE **(see Form F)** | - | - |
| Accounts Receivable: | | |
| Due from the Province or other GRE **(see Form F)** | - | - |
| Due from External Sources | 1.2500 | 1.3000 |
| less: Provision for Doubtful Accounts (enter as negative values) | | |
| Due from the Government of Canada | | |
| Loans Receivable: | | |
| - from External Sources | | |
| - from a Ministry or other GRE **(see Form F)** | - | - |
| Other Assets[3]: | | |
| - from External Sources | 3.9250 | 3.9350 |
| - from a Ministry or other GRE **(see Form F)** | - | - |
| Tangible Capital Assets *(net of Accumulated Amortization)* **(See Form C)** | 3.7468 | 3.2360 |
| **TOTAL ASSETS** | **20.5049** | **20.0065** |
| | | |
| Accounts Payable & Accrued Liabilities: | | |
| Accrued Transfer Payments: | | |
| -from External Sources | | |
| -from a Ministry or other GRE **(see Form F)** | - | - |
| Accrued Interest on Debt: | | |
| -from External Sources | | |
| -from a Ministry or other GRE **(see Form F)** | - | - |
| Accrued Salaries Wages and Benefits | 3.6000 | 3.7000 |
| Accrued Materials, Supplies and Other | 3.4000 | 3.4000 |
| Accounts Payable: | | |
| -to External Sources | | |
| -to a Ministry or other GRE **(see Form F)** | - | - |
| Debt | | |
| - from External Sources | | |
| - from a Ministry or other GRE **(see Form F)** | - | - |
| Obligations under Alternative Financing and Procurement | | |
| - from External Sources | | |
| - from a Ministry or other GRE **(see Form F)** | - | - |
| Deferred Revenue | | |
| - from External Sources | | |
| - from a Ministry or other GRE **(see Form F)** | - | - |
| Deferred Capital Contribution (DCC) [4] | | |
| - DCC from External Sources [5] | 3.0264 | 2.7776 |
| - from a Ministry or other GRE **(see Form F)** | - | - |
| Liability for remediation of contaminated sites[6] | | |
| - from External Sources | | |
| - from a Ministry or other GRE **(see Form F)** | - | - |
| Other Liabilities[7] : | | |
| - from External Sources | 8.0502 | 7.6856 |
| - from a Ministry or other GRE **(see Form F)** | - | - |
| **TOTAL LIABILITIES** | **18.0766** | **17.5632** |
| | | |
| **NET ASSETS** | **2.4283** | **2.4433** |

**Notes:**

[1] Cash comprises of cash on hand, demand deposits and bank indebtness. Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value. An investment normally qualifies as a cash equivalent only when it has a short maturity of, for example, three months or less from the date of acquisition.

[2] Temporary investments include treasury bills or investments certificates, and are generally capable of reasonable prompt liquidation (i.e. within one year). If the maturity of the investment is three months or less, the investment normally qualifies as a cash and cash equivalent (refer to (1) above). Investments longer than one year to liquidation should be classified as long-term investments.
Investments include mark-to-market adjustments on financial instruments where appropriate **(See Form H)**.

[3] Include Non-TP prepaid expenses and inventory for consumption under other assets.

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM B - OTHER GOVERNMENT ORGANIZATION - PROFORMA BALANCE SHEET

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

(4) Deferred capital contributions (DCC) represents unamortized portion of tangible capital assets or liabilities to construct or acquire tangible capital assets from specific-purpose funding. Deferred capital contributions are recorded in revenue over the estimated useful life of the underlying tangible capital asset once constructed or acquired.

(5) External sources represent the funding received from Government of Canada, municipalities or third parties.

(6) A new accounting standard PS 3260 liability for contaminated sites became effective April 1, 2014. Additional liabilities identified subsequent to April 1, 2014 need to be reported in the year in which they are identified with an offsetting journal entry to expense for remediation of contaminated site.

(7) Other liabilities include mark-to-market adjustments on financial instruments reported as liabilities **(See Form H)**.

**ADDITIONAL COMMENTS:**

Prepared by: Naresh Bharkhada Telephone: 416-440-7639

Approved by: John Moon, Finance & Administration Manager Date: October 27, 2016
(Name and Title)

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM C - OTHER GOVERNMENT ORGANIZATIONS - TANGIBLE CAPITAL ASSETS

**GOVERNMENT ORGANIZATION NAME:** 220-Ontario Energy Board

**Please complete yellow cells only, as blue cells contain formulae.**

**Report all tangible capital assets in this schedule.**

| (Report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 | Outlook as at March 31, 2019 | Outlook as at March 31, 2020 | Outlook as at March 31, 2021 |
|---|---|---|---|---|---|
| **LAND [1]:** | | | | | |
| Opening balance | | - | - | - | - |
| Add: Additions | | | | | |
| Add: Transfer from CIP [5] | - | - | - | - | - |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write Offs (enter as negative values) | | | | | |
| **TOTAL LAND - CLOSING** | **-** | **-** | **-** | **-** | **-** |
| **BUILDINGS [2]:** | | | | | |
| Opening balance | | - | - | - | - |
| Add: Additions | | | | | |
| Add: Transfer from CIP [5] | - | - | - | - | - |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write Offs (enter as negative values) | | | | | |
| Closing balance | - | - | - | - | - |
| Accumulated Amortization: | | | | | |
| Opening balance | | - | - | - | - |
| Add: Amortization expense | | | | | |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write Offs (enter as negative values) | | | | | |
| Closing balance | - | - | - | - | - |
| **BUILDINGS - NET BOOK VALUE** | **-** | **-** | **-** | **-** | **-** |
| **TRANSPORTATION INFRASTRUCTURE [3]** | | | | | |
| Opening balance | | - | - | - | - |
| Add: Additions | | | | | |
| Add: Transfer from CIP [5] | - | - | - | - | - |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write Offs (enter as negative values) | | | | | |
| Closing balance | - | - | - | - | - |
| Accumulated Amortization: | | | | | |
| Opening balance | | - | - | - | - |
| Add: Amortization expense | | | | | |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write Offs (enter as negative values) | | | | | |
| Closing balance | - | - | - | - | - |
| **TRANSPORTATION INRASTRUCTURE - NET BOOK VALUE** | **-** | **-** | **-** | **-** | **-** |
| **OTHER [4]:** | | | | | |
| Opening balance | 21.2301 | 23.2171 | 24.1921 | 24.8771 | 25.5621 |
| Add: Additions | 1.9870 | 0.9750 | 0.6850 | 0.6850 | 0.6850 |
| Add: Transfer from CIP [5] | - | - | - | - | - |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write Offs (enter as negative values) | | | | | |
| Closing balance | 23.2171 | 24.1921 | 24.8771 | 25.5621 | 26.2471 |
| Accumulated Amortization: | | | | | |
| Opening balance | 18.4277 | 19.4703 | 20.9561 | 22.5396 | 24.0877 |
| Add: Amortization expense | 0.7806 | 1.2238 | 1.3215 | 1.2861 | 0.7625 |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write Offs (enter as negative values) | 0.2620 | 0.2620 | 0.2620 | 0.2620 | 0.2620 |
| Closing balance | 19.4703 | 20.9561 | 22.5396 | 24.0877 | 25.1122 |
| **OTHER - NET BOOK VALUE** | **3.7468** | **3.2360** | **2.3375** | **1.4744** | **1.1349** |
| **CONSTRUCTION IN PROGRESS - LAND** | | | | | |
| Opening balance | | - | - | - | - |
| Add: Traditional Financed | | | | | |
| Add: AFP Projects | | | | | |
| Add: Interest capitalized | | | | | |
| Less: Transfers to in-service (enter as negative values) | | | | | |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write offs (enter as negative values) | | | | | |
| Closing balance | - | - | - | - | - |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM C - OTHER GOVERNMENT ORGANIZATIONS - TANGIBLE CAPITAL ASSETS

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

**Please complete yellow cells only, as blue cells contain formulae.**

| | | | | | |
|---|---|---|---|---|---|
| **CONSTRUCTION IN PROGRESS - BUILDINGS** | | | | | |
| Opening balance | | - | - | - | - |
| Add: Traditional Financed | | | | | |
| Add: AFP Projects | | | | | |
| Add: Interest capitalized | | | | | |
| Less: Transfers to in-service (enter as negative values) | | | | | |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write offs (enter as negative values) | | | | | |
| Closing balance | - | - | - | - | - |
| **CONSTRUCTION IN PROGRESS - TRANSPORTATION INFRASTRUCTURE** | | | | | |
| Opening balance | | - | - | - | - |
| Add: Traditional Financed | | | | | |
| Add: AFP Projects | | | | | |
| Add: Interest capitalized | | | | | |
| Less: Transfers to in-service (enter as negative values) | | | | | |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write offs (enter as negative values) | | | | | |
| Closing balance | - | - | - | - | - |
| **CONSTRUCTION IN PROGRESS - OTHERS** | | | | | |
| Opening balance | | - | - | - | - |
| Add: Traditional Financed | | | | | |
| Add: AFP Projects | | | | | |
| Add: Interest capitalized | | | | | |
| Less: Transfers to in-service (enter as negative values) | | | | | |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write offs (enter as negative values) | | | | | |
| Closing balance | - | - | - | - | - |
| **NET TANGIBLE CAPITAL ASSETS** | 3.7468 | 3.2360 | 2.3375 | 1.4744 | 1.1349 |

***SUMMARY INFORMATION***

| | | | | | |
|---|---|---|---|---|---|
| Gross Additions (excluding Construction in Progress) | | 0.9750 | 0.6850 | 0.6850 | 0.6850 |
| Gross Additions - Construction in Progress | - | - | - | - | - |
| **TOTAL GROSS ADDITIONS** | **-** | **0.9750** | **0.6850** | **0.6850** | **0.6850** |
| Disposals and Other adjustments / Write-offs (net) | (0.2620) | (0.2620) | (0.2620) | (0.2620) | (0.2620) |
| **TOTAL ADDITIONS (NET OF DISPOSAL AND OTHER ADJUSTMENTS / WR** | (0.2620) | 0.7130 | 0.4230 | 0.4230 | 0.4230 |
| **TOTAL AMORTIZATION EXPENSE** | 0.7806 | 1.2238 | 1.3215 | 1.2861 | 0.7625 |

**Notes:**

(1) Land includes land acquired for transportation infrastructure, parks, buildings, and other program use and land improvements. Land excludes Crown lands acquired by right.

(2) Includes those acquired through capital leases and Construction in Progress.

(3) Transportation infrastructure includes highways, railway and track improvements, bridges and related structures and facilities, but excludes land and buildings.

(4) Other tangible capital assets include those capital assets not reported under Land, Buildings and Transportation Infrastructure. Examples include railway equipment, computer equipment, vehicles, aircrafts, furniture, and administrative & service equipment owned by government organizations.

(5) Assets Transferred from Construction-in-Progress (CIP) - This row tracks the cost of assets where construction has been completed during the current fiscal year and the related asset has been placed into service and therefore transferred into the appropriate asset category.

**ADDITIONAL COMMENTS:**

Prepared by: Naresh Bharkhada — Telephone: 416-440-7639

Approved by: John Moon, Finance & Administration Manager (Name and Title) — Date: October 27, 2016

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM D - REVENUE FROM A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as all blue cells contain either links to related forms or formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

***Revenue from a Ministry or other GRE:***

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | | | | | |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | | | | | |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Sales and Rentals | | | | | |
| Other Revenue (please specify): | | | | | |
| **TOTAL REVENUE FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

**MINISTRY OR OTHER GRE:**

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | | | | | |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | | | | | |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Sales and Rentals | | | | | |
| Other Revenue (please specify): | | | | | |
| **TOTAL REVENUE FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

**MINISTRY OR OTHER GRE:**

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | | | | | |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | | | | | |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Sales and Rentals | | | | | |
| Other Revenue (please specify): | | | | | |
| **TOTAL REVENUE FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM D - REVENUE FROM A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as all blue cells contain either links to related forms or formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | | | | | |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | | | | | |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Sales and Rentals | | | | | |
| Other Revenue (please specify): | | | | | |
| **TOTAL REVENUE FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

**MINISTRY OR OTHER GRE:**

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | | | | | |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | | | | | |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Sales and Rentals | | | | | |
| Other Revenue (please specify): | | | | | |
| **TOTAL REVENUE FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

**MINISTRY OR OTHER GRE:**

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | | | | | |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | | | | | |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Sales and Rentals | | | | | |
| Other Revenue (please specify): | | | | | |
| **TOTAL REVENUE FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM D - REVENUE FROM A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as all blue cells contain either links to related forms or formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | | | | | |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | | | | | |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Sales and Rentals | | | | | |
| Other Revenue (please specify): | | | | | |
| **TOTAL REVENUE FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

**MINISTRY OR OTHER GRE:**

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | | | | | |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | | | | | |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Sales and Rentals | | | | | |
| Other Revenue (please specify): | | | | | |
| **TOTAL REVENUE FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

***Total Revenue from Ministries or other GREs:***

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | - | - | - | - | - |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | - | - | - | - | - |
| Fees and Licenses | - | - | - | - | - |
| Royalties | - | - | - | - | - |
| Fines and Penalties | - | - | - | - | - |
| Sales and Rentals | - | - | - | - | - |
| Other Revenue (please specify): | - | - | - | - | - |
| **TOTAL REVENUE FROM RELATED ENTITIES** | **-** | **-** | **-** | **-** | **-** |

**ADDITIONAL COMMENTS:**

Prepared by: Naresh Bharkhada — Telephone: 416-440-7639

Approved by: John Moon, Finance & Administration Manager (Name and Title) — Date: October 27, 2016

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM E - EXPENSES INCURRED WITH OR ON BEHALF OF A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** 220-Ontario Energy Board

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as blue cells contain formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

***Expenses Incurred With or On Behalf of a Ministry or other GRE:***

| Fiscal year ended March 31 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| (report in millions) | Interim | Plan | Outlook | Outlook | Outlook |
| Transfer payments | | | | | |
| Interest on debt | | | | | |
| Services | | | | | |
| Expense for remediation of contaminated sites | | | | | |
| Other Expenses (please specify): | | | | | |
| **TOTAL - EXPENSES FROM THIS MINISTRY OR OTHER GRE** | - | - | - | - | - |

**MINISTRY OR OTHER GRE:**

| Fiscal year ended March 31 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| (report in millions) | Interim | Plan | Outlook | Outlook | Outlook |
| Transfer payments | | | | | |
| Interest on debt | | | | | |
| Services | | | | | |
| Expense for remediation of contaminated sites | | | | | |
| Other Expenses (please specify): | | | | | |
| **TOTAL - EXPENSES FROM THIS MINISTRY OR OTHER GRE** | - | - | - | - | - |

**MINISTRY OR OTHER GRE:**

| Fiscal year ended March 31 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| (report in millions) | Interim | Plan | Outlook | Outlook | Outlook |
| Transfer payments | | | | | |
| Interest on debt | | | | | |
| Services | | | | | |
| Expense for remediation of contaminated sites | | | | | |
| Other Expenses (please specify): | | | | | |
| **TOTAL - EXPENSES FROM THIS MINISTRY OR OTHER GRE** | - | - | - | - | - |

**MINISTRY OR OTHER GRE:**

| Fiscal year ended March 31 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| (report in millions) | Interim | Plan | Outlook | Outlook | Outlook |
| Transfer payments | | | | | |
| Interest on debt | | | | | |
| Services | | | | | |
| Expense for remediation of contaminated sites | | | | | |
| Other Expenses (please specify): | | | | | |
| **TOTAL - EXPENSES FROM THIS MINISTRY OR OTHER GRE** | - | - | - | - | - |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM E - EXPENSES INCURRED WITH OR ON BEHALF OF A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** 220-Ontario Energy Board

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as blue cells contain formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

| Fiscal year ended March 31 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| (report in millions) | Interim | Plan | Outlook | Outlook | Outlook |
| Transfer payments | | | | | |
| Interest on debt | | | | | |
| Services | | | | | |
| Expense for remediation of contaminated sites | | | | | |
| Other Expenses (please specify): | | | | | |
| **TOTAL - EXPENSES FROM THIS MINISTRY OR OTHER GRE** | - | - | - | - | - |

**MINISTRY OR OTHER GRE:**

| Fiscal year ended March 31 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| (report in millions) | Interim | Plan | Outlook | Outlook | Outlook |
| Transfer payments | | | | | |
| Interest on debt | | | | | |
| Services | | | | | |
| Expense for remediation of contaminated sites | | | | | |
| Other Expenses (please specify): | | | | | |
| **TOTAL - EXPENSES FROM THIS MINISTRY OR OTHER GRE** | - | - | - | - | - |

**MINISTRY OR OTHER GRE:**

| Fiscal year ended March 31 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| (report in millions) | Interim | Plan | Outlook | Outlook | Outlook |
| Transfer payments | | | | | |
| Interest on debt | | | | | |
| Services | | | | | |
| Expense for remediation of contaminated sites | | | | | |
| Other Expenses (please specify): | | | | | |
| **TOTAL - EXPENSES FROM THIS MINISTRY OR OTHER GRE** | - | - | - | - | - |

**MINISTRY OR OTHER GRE:**

| Fiscal year ended March 31 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| (report in millions) | Interim | Plan | Outlook | Outlook | Outlook |
| Transfer payments | | | | | |
| Interest on debt | | | | | |
| Services | | | | | |
| Expense for remediation of contaminated sites | | | | | |
| Other Expenses (please specify): | | | | | |
| **TOTAL - EXPENSES FROM THIS MINISTRY OR OTHER GRE** | - | - | - | - | - |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM E - EXPENSES INCURRED WITH OR ON BEHALF OF A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as blue cells contain formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**Total Expenses Incurred With or On Behalf of Ministries or other GREs:**

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Transfer payments | - | - | - | - | - |
| Interest on debt | - | - | - | - | - |
| Services | - | - | - | - | - |
| Expense for remediation of contaminated sites | - | - | - | - | - |
| Other Expenses (please specify): | - | - | - | - | - |
| **TOTAL EXPENSE FROM RELATED ENTITIES** | **-** | **-** | **-** | **-** | **-** |

**ADDITIONAL COMMENTS:**

Prepared by: Naresh Bharkhada — Telephone: 416-440-7639

Approved by: John Moon, Finance & Administration Manager (Name and Title) — Date: October 27, 2016

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM F - INTER-ORGANIZATION BALANCES WITH A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as all blue cells contain either links to related forms or formulae.**

**Please identify all balances arising from transactions with or for GRE's included in your statement of financial position as at March 31, and provide a brief description:**

**MINISTRY OR OTHER GRE:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | | |
| Long-Term Investments | | |
| Receivables from a Ministry or Government Organization | | |
| Loans Receivable | | |
| Other Assets(please specify): | | |
| | | |
| Accrued Transfer Payments | | |
| Accrued Interest on Debt | | |
| Payables to a Ministry or Government Organization | | |
| Loans Payable (Debt) | | |
| Obligations under Alternative Financing and Procurement | | |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | | |
| Other Liabilities(please specify): | | |

**MINISTRY OR OTHER GRE:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | | |
| Long-Term Investments | | |
| Receivables from a Ministry or Government Organization | | |
| Loans Receivable | | |
| Other Assets(please specify): | | |
| | | |
| Accrued Transfer Payments | | |
| Accrued Interest on Debt | | |
| Payables to a Ministry or Government Organization | | |
| Loans Payable (Debt) | | |
| Obligations under Alternative Financing and Procurement | | |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | | |
| Other Liabilities(please specify): | | |

**MINISTRY OR OTHER GRE:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | | |
| Long-Term Investments | | |
| Receivables from a Ministry or Government Organization | | |
| Loans Receivable | | |
| Other Assets(please specify): | | |
| | | |
| Accrued Transfer Payments | | |
| Accrued Interest on Debt | | |
| Payables to a Ministry or Government Organization | | |
| Loans Payable (Debt) | | |
| Obligations under Alternative Financing and Procurement | | |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | | |
| Other Liabilities(please specify): | | |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM F - INTER-ORGANIZATION BALANCES WITH A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as all blue cells contain either links to related forms or formulae.**

**Please identify all balances arising from transactions with or for GRE's included in your statement of financial position as at March 31, and provide a brief description:**

**MINISTRY OR OTHER GRE:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | | |
| Long-Term Investments | | |
| Receivables from a Ministry or Government Organization | | |
| Loans Receivable | | |
| Other Assets(please specify): | | |
| | | |
| Accrued Transfer Payments | | |
| Accrued Interest on Debt | | |
| Payables to a Ministry or Government Organization | | |
| Loans Payable (Debt) | | |
| Obligations under Alternative Financing and Procurement | | |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | | |
| Other Liabilities(please specify): | | |

**MINISTRY OR OTHER GRE:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | | |
| Long-Term Investments | | |
| Receivables from a Ministry or Government Organization | | |
| Loans Receivable | | |
| Other Assets(please specify): | | |
| | | |
| Accrued Transfer Payments | | |
| Accrued Interest on Debt | | |
| Payables to a Ministry or Government Organization | | |
| Loans Payable (Debt) | | |
| Obligations under Alternative Financing and Procurement | | |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | | |
| Other Liabilities(please specify): | | |

**MINISTRY OR OTHER GRE:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | | |
| Long-Term Investments | | |
| Receivables from a Ministry or Government Organization | | |
| Loans Receivable | | |
| Other Assets(please specify): | | |
| | | |
| Accrued Transfer Payments | | |
| Accrued Interest on Debt | | |
| Payables to a Ministry or Government Organization | | |
| Loans Payable (Debt) | | |
| Obligations under Alternative Financing and Procurement | | |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | | |
| Other Liabilities(please specify): | | |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM F - INTER-ORGANIZATION BALANCES WITH A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as all blue cells contain either links to related forms or formulae.**

**Please identify all balances arising from transactions with or for GRE's included in your statement of financial position as at March 31, and provide a brief description:**

**MINISTRY OR OTHER GRE:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | | |
| Long-Term Investments | | |
| Receivables from a Ministry or Government Organization | | |
| Loans Receivable | | |
| Other Assets(please specify): | | |
| | | |
| Accrued Transfer Payments | | |
| Accrued Interest on Debt | | |
| Payables to a Ministry or Government Organization | | |
| Loans Payable (Debt) | | |
| Obligations under Alternative Financing and Procurement | | |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | | |
| Other Liabilities(please specify): | | |

**MINISTRY OR OTHER GRE:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | | |
| Long-Term Investments | | |
| Receivables from a Ministry or Government Organization | | |
| Loans Receivable | | |
| Other Assets(please specify): | | |
| | | |
| Accrued Transfer Payments | | |
| Accrued Interest on Debt | | |
| Payables to a Ministry or Government Organization | | |
| Loans Payable (Debt) | | |
| Obligations under Alternative Financing and Procurement | | |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | | |
| Other Liabilities(please specify): | | |

**Total Assets and Liabilities Incurred With or On Behalf of Ministries or other GREs:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | - | - |
| Long-Term Investments | - | - |
| Receivables from a Ministry or Government Organization | - | - |
| Loans Receivable | - | - |
| Other Assets(please specify): | - | - |
| | | |
| Accrued Transfer Payments | - | - |
| Accrued Interest on Debt | - | - |
| Payables to a Ministry or Government Organization | - | - |
| Loans Payable (Debt) | - | - |
| Obligations under Alternative Financing and Procurement | - | - |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | - | - |
| Other Liabilities(please specify): | - | - |

**ADDITIONAL COMMENTS:**

Prepared by: Naresh Bharkhada  Telephone: 416-440-7639

Approved by: John Moon, Finance & Administration Manager  Date: October 27, 2016
(Name and Title)

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM G -DEFERRED BALANCE CONTINUITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as blue cells formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

Please provide a deferred balance continuity schedule under the following headings:

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred revenue** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED REVENUE** [1] | - | - | - | - | - |

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred capital contribution** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED CAPITAL CONTRIBUTION** [2] | - | - | - | - | - |

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

Please provide a deferred balance continuity schedule under the following headings:

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred revenue** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED REVENUE** [1] | - | - | - | - | - |

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred capital contribution** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED CAPITAL CONTRIBUTION** [2] | - | - | - | - | - |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM G -DEFERRED BALANCE CONTINUITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as blue cells formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

Please provide a deferred balance continuity schedule under the following headings:

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred revenue** | Interim | Plan | Outlook | Outlook | Outlook |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED REVENUE** [1] | - | - | - | - | - |

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred capital contribution** | Interim | Plan | Outlook | Outlook | Outlook |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED CAPITAL CONTRIBUTION** [2] | - | - | - | - | - |

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

Please provide a deferred balance continuity schedule under the following headings:

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred revenue** | Interim | Plan | Outlook | Outlook | Outlook |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED REVENUE** [1] | - | - | - | - | - |

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred capital contribution** | Interim | Plan | Outlook | Outlook | Outlook |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED CAPITAL CONTRIBUTION** [2] | - | - | - | - | - |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM G -DEFERRED BALANCE CONTINUITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as blue cells formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

Please provide a deferred balance continuity schedule under the following headings:

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred revenue** | Interim | Plan | Outlook | Outlook | Outlook |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED REVENUE** [1] | - | - | - | - | - |

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred capital contribution** | Interim | Plan | Outlook | Outlook | Outlook |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED CAPITAL CONTRIBUTION** [2] | - | - | - | - | - |

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

Please provide a deferred balance continuity schedule under the following headings:

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred revenue** | Interim | Plan | Outlook | Outlook | Outlook |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED REVENUE** [1] | - | - | - | - | - |

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred capital contribution** | Interim | Plan | Outlook | Outlook | Outlook |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED CAPITAL CONTRIBUTION** [2] | - | - | - | - | - |

**Notes:**

[1] Must agree to "Deferred Revenue" on Form F.

[2] Must agree to "Deferred Capital Contribution" on Form F.

**ADDITIONAL COMMENTS:**

Prepared by: Naresh Bharkhada  Telephone: 416-440-7639

Approved by: John Moon, Finance & Administration Manager  Date: October 27, 2016
(Name and Title)

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM H - STATEMENT OF CHANGE IN ACCUMULATED SURPLUS/(DEFICIT)

**(To Be Completed by the Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

**Please complete yellow cells only, as blue cells contain formulae. Enter losses as negative values.**

| Fiscal year ended March 31 (report in millions) | Reference | March 31 2017 | |
|---|---|---|---|
| **Accumulated surplus (deficit) is comprised of:** | | | |
| **A**. Accumulated operating surplus (deficit) | Table 1 A | 2.4283 | |
| **B**. Accumulated remeasurement gains (losses) | Table 1 B | - | |
| **Accumulated surplus (deficit) at Year End** | | 2.4283 | |
| | | | **Check** |
| **Net Assets as at March 31, 2017** | Note 1, Note 4, Form B | 2.4283 | **OK** |

**Table 1: Please provide information required below**

| A. Accumulated operating surplus (deficit) | Reference | March 31 2017 |
|---|---|---|
| Accumulated Operating Surplus/(Deficit) per final OGO forms as at March 31, 2016 (submitted for the 2015-16 Public Accounts) | | 2.3283 |
| Add/(Less): Surplus/(Deficit) | Form A | 0.1000 |
| Other – please specify: | Note 2 | |
| **Accumulated Operating Surplus/(Deficit) at End of Year** | | **2.4283** |
| **B. Accumulated remeasurement gains (losses)** [3] | **Note 3** | |
| Accumulated remeasurement gains / (losses) Per Audited Financial Statements as at March 31, 2016 | | |
| Unrealized gains (losses) attributable to: | | |
| Foreign exchange | | |
| Derivatives | | |
| Portfolio Investments | | |
| Less: Amounts reclassified to the statement of operations | Form A | - |
| **Accumulated remeasurement gains and losses at End of Year** | | **-** |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM H - STATEMENT OF CHANGE IN ACCUMULATED SURPLUS/(DEFICIT)

**(To Be Completed by the Government Organization)**

**Notes**

(1) Must agree to "Total Assets" in Form B less "Total Liabilities" in Form B.

(2) Please describe the nature of "other adjustments",

(i) ----------.
(ii) ----------.
(iii) ----------.
(iv) ----------.

(3) Remeasurement gains and losses - this statement is used to distinguish remeasurement gains and losses from the operating revenue and expenses. Remeasurement gains and losses include unrealized changes in fair value of instruments measured at fair value and unrealized foreign exchange gains and losses. Remeasurement gains and losses will be accumulated in the statement of remeasurement gains and losses until the financial instrument they are associated with is derecognized. Upon derecognition of the instrument, the remeasurement gains and losses are reclassified to the statement of operations.

(4) On the statement of financial position net assets will have to be reconciled to the accumulated operating surplus/deficit and the accumulated remeasurement gains and losses.

(5) Accumulated Operating Surplus/(Deficit) - equals to opening accumulated surplus/deficit less opening unrealized gains or losses attributable to foreign exchange, derivatives and portfolio investments.

**ADDITIONAL COMMENTS:**

Prepared by: Naresh Bharkhada

Telephone: 416-440-7639

Approved by: John Moon, Finance & Administration Manager
(Name and Title)

Date: October 27, 2016

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM I - NEW LOANS RECEIVABLE

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** 220-Ontario Energy Board

| Table 1 | | | | | | Principal Repayment (Outstanding loan $000's) | | | | | | | Principal Repayment (Outstanding loan $000's) | | | | | Principal repayment | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Loan Interest Rate | | | | | | | | | | | | | | | | | |
| New Loans Receivable | Loan Amount | Fixed Interest Rate of Loan | Floating Rate (if interest rate will not be fixed) | Loan Start Date | Loan Maturity Date | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Sub-total | 2023-2028 | 2029-2034 | 2035-2040 | 2041 and thereafter | Sub-total | No fixed maturity | Total repayment |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| Total | - | | | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

| Table 2 - Please specify new loans receivable(s) with Inter-Governmental Units (if applicable): | | | | | | Principal Repayment (Outstanding loan $000's) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Loan Interest Rate | | | | | | | | | |
| Name of Government Reporting Entity (GRE) | Loan Amount | Fixed Interest Rate of Loan | Floating Rate (if interest rate will not be fixed) | Loan Start Date | Loan Maturity Date | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| | | | | | | | | | | | |
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| | | | | | | | | | | | |
| TOTAL NEW LOANS RECEIVABLE WITH INTER-GOVERNMENTAL UNITS | - | | | | | - | - | - | - | - | - |

Prepared by: Naresh Bharkhada

Telephone: 416-440-7639

Approved by: John Moon, Finance & Administration Manager
(Name and Title)

Date: October 27, 2016

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM J - NEW INVESTMENTS

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **220-Ontario Energy Board**

**Table 1**

| New Investment(s) | Investment Amount | Investment Interest Rate | | Investment Start Date | Investment Maturity Date |
|---|---|---|---|---|---|
| | | Fixed Interest Rate of Investment | Floating Rate (if interest rate will not be fixed) | | |
| | | | | | |
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| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Total | - | | | | |

**Table 2 - Please specify new Investments with Inter-Governmental Units (if applicable):**

| Name of Government Reporting Entity (GRE) | Investment Amount | Investment Interest Rate | | Investment Start Date | Investment Maturity Date |
|---|---|---|---|---|---|
| | | Fixed Interest Rate of Investment | Floating Rate (if interest rate will not be fixed) | | |
| | | | | | |
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| | | | | | |
| | | | | | |
| TOTAL NEW INVESTMENTS WITH INTER-GOVERNMENTAL UNITS | - | | | | |

Prepared by: Naresh Bharkhada

Telephone: 416-440-7639

Approved by: John Moon, Finance & Administration Manager
(Name and Title)

Date: October 27, 2016

## 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM 1A - REVENUES FROM OTHER GOVERNMENT ORGANIZATIONS

**(To Be Completed by the Ministry)**

**RESPONSIBLE MINISTRY:** Energy

**GOVERNMENT ORGANIZATION NAME *:** Ontario Energy Board

| (report in millions to the nearest 4 decimals) | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| **Revenues[1] from Other Government Organization recorded by the Ministry as:** | **Interim** | **Plan** | **Forecast** | **Forecast** | **Forecast** |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Utility Service Charges | | | | | |
| Sales and Rentals | | | | | |
| Recovery of Prior Year's Expenditures | | | | | |
| Miscellaneous | | | | | |
| Profits from Crown Corporations | | | | | |
| Dividends | | | | | |
| **Total Revenues[1] from Other Government Organization** | - | - | - | - | - |

* Please complete a separate schedule for each Government Organization.

[1] Revenue on an accrual basis from the Other Government Organization as recorded by the Ministry.

Prepared by: _____ Telephone: _____

Approved by: _____ Date: _____
(Name and Title)

## 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION
## FORM 1B - EXPENSES INCURRED WITH OR ON BEHALF OF OTHER GOVERNMENT ORGANIZATIONS

**(To Be Completed by the Ministry)**

**RESPONSIBLE MINISTRY:** **Energy**

**GOVERNMENT ORGANIZATION NAME *:** **Ontario Energy Board**

| (report in millions to the nearest 4 decimals) | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| **Expenses[(1)] Incurred With or On Behalf of Other Government Organization recorded by the Ministry as:** | **Interim** | **Plan** | **Forecast** | **Forecast** | **Forecast** |
| Salaries and Wages | | | | | |
| Transportation and Communication | | | | | |
| Services | | | | | |
| Supplies and Equipment | | | | | |
| Transfer Payments (Operating) | | | | | |
| Transfer Payments (Capital) | | | | | |
| Other Transactions | | | | | |
| Less: Recoveries *(Please Specify)* | | | | | |
| **Total Expenses[(1)] Incurred With or On Behalf of Other Government Organization** | - | - | - | - | - |

* Please complete a separate schedule for each Government Organization.

[(1)] Include expenses incurred with or on behalf of Other Government Organizations, such as transfer payments to the government organization and administrative expenses incurred by the Ministry on behalf of the government organization.

Prepared by: _____ Telephone: _____

Approved by: _____ Date: _____
(Name and Title)

# TCA Supplementary Schedule - Infrastructure 10 Year Plan- Other Government Organizations

GOVERNMENT ORGANIZATION NAME: 220-Ontario Energy Board

Report in millions of dollars (4 decimal places)

| | Interim 2016-17 | Plan 2017-18 | Outlook 2018-19 | Outlook 2019-20 | Outlook 2020-21 | Outlook 2021-22 | Outlook 2022-23 | Outlook 2023-24 | Outlook 2024-25 | Outlook 2025-26 | Outlook 2026-27 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Land [1] | | | | | | | | | | | |
| Building [1] | | | | | | | | | | | |
| Transportation infrastructure [1] | | | | | | | | | | | |
| Construction in Progress [1] | | | | | | | | | | | |
| Others Assets [1] | 1.9870 | 0.9750 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 |
| Interest capitalized | | | | | | | | | | | |
| Gross Additions [1] - A | 1.9870 | 0.9750 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 |
| Provincial share [2] | | | | | | | | | | | |
| Third party contribution [3] | 1.9870 | 0.9750 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 |
| Gross Additions - B (B must equal A above) | 1.9870 | 0.9750 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 | 0.6850 |
| Ministry Capital Expense - Voted | | | | | | | | | | | |
| Provincial capital transfer payments [4] (enter as negative) | | | | | | | | | | | |
| Amortization expense [5] (enter as positive) | 0.7806 | 1.2238 | 1.3215 | 1.2861 | 0.7625 | 0.7625 | 0.7625 | 0.7625 | 0.7625 | 0.7625 | 0.7625 |
| Capital Consolidation Adjustment | 0.7806 | 1.2238 | 1.3215 | 1.2861 | 0.7625 | 0.7625 | 0.7625 | 0.7625 | 0.7625 | 0.7625 | 0.7625 |

| Plan over Plan Check (10-yr as of 2016-17 vs 10-yr as of 2017-18) | 10-Yr Plan (2016-17) | 10-Yr Plan (2017-18) | Change | Explanation [6] |
|---|---|---|---|---|
| Total Additions | 7.3228 | 7.1400 | (0.1828) | |
| Other Partner Funding | 7.3228 | 7.1400 | (0.1828) | |
| Provincial-Funded Expenditure | | - | - | |
| Provincial Capital Grants | - | - | - | |
| Amortization Expense | 8.4272 | 9.1689 | 0.7417 | |

[1] For periods up to 21-22, this balance can be taken directly from the "Additions" row in Form C of the OGO Reporting Templates

[2] Provincial funding used for acquiring capital in the current year. including any funding that was flowed to an agency in a prior period but used in the current period to acquire capital.

[3] Amounts funded (or to be funded) from non-provincial sources such as donations and grants from other levels of government, as well as the use of own resources such as own-source debt and reinvestment of internally generated surplus or reserves.

[4] Represents the voted ministry capital transfer payment to the agency for the fiscal year. May not equal the balance shown in the "Provincial Share" column above if the "Provincial Share" includes funds that were transferred to an agency in prior periods or funds that were appropriated for operating purposes, but used for capital. Otherwise the amounts should agree.

[5] For periods up to 21-22, this balance can be taken directly from the "Amortization" expense row in Form A of the OGO Reporting Templates

[6] Please provide variance explanations if the 10 year change is greater than $100M

## 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION (PRRT)
## INSTRUCTIONS FOR COMPLETING THE CONSOLIDATION SUMMARY FORM

1) **THIS FORM IS TO BE COMPLETED BY THE MINISTRY.**

2) **ONLY INPUT DATA IN THE "YELLOW" SHADED CELLS OF THE FORM.**

3) **NUMBERS ARE INPUT "IN MILLIONS" WITH UP TO FOUR DECIMAL PLACES.**

4) **UNDER THE "DATA INPUT NOTES" SECTION OF THIS FORM, PLEASE ENSURE THAT THE DATA BEING INPUT IS TAKEN FROM THE SOURCE AS INSTRUCTED IN "GREEN" WITHIN EACH SECTION.**

5) **SUBMIT COMPLETED FORM TO OPCD FOR REVIEW.**

6) **UPON OPCD'S REVIEW AND APPROVAL, THE MINISTRY MUST USE THE COMPLETED FORM AS THE BASIS FOR POPULATING AGENCY CONSOLIDATION ADJUSTMENTS IN ORBIT.**

7) **MINISTRY MUST ATTACH THE COMPLETED FORM TO THE RELATED ORBIT DOCKET AS SUPPORT FOR CONSOLIDATION ADJUSTMENTS.**

# 2017-18 Program Review, Renewal and Transformation (PRRT) - Consolidation Summary Form

**Please input data in yellow cells only.**

***Agency Name:*** **Ontario Energy Board**
***Responsible Ministry*** **Energy**
***Date Submitted:***

| | NOTES (See | In Millions 2016-17 Interim | 2017-18 Plan | 2018-19 Outlook | 2019-20 Outlook | 2020-21 Outlook |
|---|---|---|---|---|---|---|
| **Agency Revenue - Input from Form A** | 1 | 46.5826 | 47.2528 | 47.5405 | 47.5051 | 46.9815 |
| Less: Grants & Subsidies from Province | 1 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Interest Income (to Provincial & External IOD)* | 1 | 0.1115 | 0.1115 | 0.1115 | 0.1115 | 0.1115 |
| Less: Amortization Revenue of Provincial DCC/DR | 1 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: All remaining sources of revenues earned from Province / OGO | 1 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Misc. Revenue (elimination of agency ODOE with the Ministries) | 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Other Revenues *(Input additional breakdowns in note 5)* | 5 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| ***Adjustment to CRF Revenue*** | | 46.4711 | 47.1413 | 47.4290 | 47.3936 | 46.8700 |
| **Total Agency Expense - Input from Form A** | | 46.4826 | 47.2378 | 47.5255 | 47.4901 | 46.9665 |
| Less: Operating TP | 3 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Capital TP | 3 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Interest Expense - External + Provincial *(to Provincial IOD)** | 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Other Expenses to Province (elimination of agency ODOE with Ministries) | 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Other Transactions (elimination of agency Revenue from Province / OGO, other than TP & amort. of DCC/DR) | 1 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Pension contributions paid to PSPP/OPSEU Pension Plan | 4 | 1.5000 | 1.5000 | 1.5000 | 1.5000 | 1.5000 |
| Less: Expenses for Contaminated Sites | 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Other Expenses (*Input additional breakdowns in note 5)* | 5 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| ***Adjustment to CRF Expense*** | | **44.9826** | **45.7378** | **46.0255** | **45.9901** | **45.4665** |
| **Net Consolidated Surplus/(Deficit) agency pick-up** | | 1.4885 | 1.4035 | 1.4035 | 1.4035 | 1.4035 |
| **Net Operating expense adjustment pick-up** | | **44.2020** | **44.5140** | **44.7040** | **44.7040** | **44.7040** |
| **Net Capital expense adjustment pick-up** | | **0.7806** | **1.2238** | **1.3215** | **1.2861** | **0.7625** |
| ***Total CRF Expense Adjustment*** | | **44.9826** | **45.7378** | **46.0255** | **45.9901** | **45.4665** |
| ***Check*** | | **CORRECT** | **CORRECT** | **CORRECT** | **CORRECT** | **CORRECT** |
| ***Interest on Debt (IOD)**** | | **(0.1115)** | **(0.1115)** | **(0.1115)** | **(0.1115)** | **(0.1115)** |

*Fiscal impacts do not include adjustment made to IOD which is reported separately under Province's Interest on Debt

## DATA INPUT NOTES (corresponds to "NOTES" column above):

**1** Pre-consolidated revenues per agency submission **(Form A)**:

| **REVENUE (in Millions)** | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| Grants & Subsidies from Province | | | | | |
| Government of Canada | | | | | |
| Other non-provincial grants (Municipal , etc.) | | | | | |
| Interest/Investment Income (Internal + External sources) | 0.1115 | 0.1115 | 0.1115 | 0.1115 | 0.1115 |
| Recognition of Deferred Revenue: | | | | | |
| From External Sources | | | | | |
| From Province / Government Controlled Organization | | | | | |
| Amortization of Deferred Capital Contributions: | | | | | |
| From External Sources | 0.7806 | 1.2238 | 1.3215 | 1.2861 | 0.7625 |
| From Province / Government Controlled Organization | | | | | |
| Fees & Licenses: | | | | | |
| From External Sources | 0.3725 | 0.3725 | 0.3725 | 0.3725 | 0.3725 |
| From Province / Government Controlled Organization | | | | | |
| Royalties | | | | | |
| From External Sources | | | | | |
| From Province / Government Controlled Organization | | | | | |
| Fines and Penalties | | | | | |
| From External Sources | 0.1000 | 0.0150 | 0.0150 | 0.0150 | 0.0150 |
| From Province / Government Controlled Organization | | | | | |
| Sales & Rental: | | | | | |
| From External Sources | | | | | |
| From Province / Government Controlled Organization | | | | | |
| Other Revenue: | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| From External Sources | 45.2180 | 45.5300 | 45.7200 | 45.7200 | 45.7200 |
| From Province / Government Controlled Organization | | | | | |
| **Total Revenue** | **46.5826** | **47.2528** | **47.5405** | **47.5051** | **46.9815** |

| Post-consolidated revenue breakdowns: *(For OPCD to complete)* | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| Vehicle/Driver Registration Fees | | | | | |
| Brewer's Manufacturing Fees | | | | | |
| Other Fees, Licences and Permits | | | | | |
| Royalties | | | | | |
| Sales and Rentals | | | | | |
| Fines and Penalties | | | | | |
| Recoveries | | | | | |
| Reimbursements | | | | | |
| Other Federal Payment | | | | | |
| Miscellaneous Revenue | | | | | |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |
| ***Check*** | **INCORRECT** | **INCORRECT** | **INCORRECT** | **INCORRECT** | **INCORRECT** |

**2** Pre-consolidated expenses per agency submission **(Form A)**:

| **EXPENSES (In Millions)** | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| Salary and Wages | 24.5339 | 25.1823 | 25.7901 | 25.7901 | 25.7901 |
| Employee Benefits | 5.3363 | 5.5591 | 5.6882 | 5.6882 | 5.6882 |
| Transportation and Communication | 0.7492 | 0.7282 | 0.7252 | 0.7252 | 0.7252 |
| Services | | | | | |
| To External Sources | 14.0888 | 13.5707 | 12.9768 | 12.9768 | 12.9768 |
| To Ministry | | | | | |
| To Other Government Controlled Organization *(elimination done by receiving agency)* | | | | | |
| Supplies and Equipment | 0.9938 | 0.9737 | 1.0237 | 1.0237 | 1.0237 |
| Amortization | 0.7806 | 1.2238 | 1.3215 | 1.2861 | 0.7625 |
| Transfer Payments | | | | | |
| Interest on Debt (External + Provincial) | | | | | |
| Realized Gains and Losses | | | | | |
| Other Expenses | | | | | |
| To External Sources | | | | | |
| To Ministry | | | | | |
| To Other Government Controlled Organization *(elimination done by receiving agency)* | | | | | |
| Expenses for Contaminated Sites | | | | | |
| To External Sources | | | | | |
| To Ministry | | | | | |
| To Other Government Controlled Organization *(elimination done by receiving agency)* | | | | | |
| **Total Expenses** | **46.4826** | **47.2378** | **47.5255** | **47.4901** | **46.9665** |

| **Agency Net Surplus/(Deficit) before eliminations (Must Agree to Surplus/Deficit balan** | 0.1000 | 0.0150 | 0.0150 | 0.0150 | 0.0150 |
|---|---|---|---|---|---|

**3** **MINISTRY TRANSFER PAYMENTS** **( Per Ministry Form 1B; must tie into ORBIT submissi**

| ***Transfer Payments (In Millions):*** | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| Operating TP from Reporting Ministry | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Capital TP from Reporting Ministry (please specify) | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total TP - Capital and Operating** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**4** Pension contributions paid directly by the consolidated agency to Public Service Pension Plan (PSPP) and OPSEU Pension plan [**Form A (i)**] are eliminated upon consolidation. Please enter amounts in **Form A(i)** for PSPP and/ or OPSEU.

**5** Please indicate the nature of other adjustments (i.e. reversal of unrealized gains/losses, gross-ups, other PSAB adjustments to conform to Province's accounting policy, tangible capital asset transfers out of agency at nominal value, etc.) below:

| **Breakdown of Other Revenues and Expenses** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| Other Revenues: | | | | | |
| | | | | | |
| Total | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |
| Other Expenses: | | | | | |
| | | | | | |
| Total | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Additional Comments:**

**Prepared By:** _____
*(Name, Title and Contact Number)*

**Approved By:** _____
*(Name, Title and Contact Number)*

## 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM 1A - REVENUES FROM OTHER GOVERNMENT ORGANIZATIONS

**(To Be Completed by the Ministry)**

**RESPONSIBLE MINISTRY:** **Energy**

**GOVERNMENT ORGANIZATION NAME *:** **Independent Electricity System Operator**

| (report in millions to the nearest 4 decimals) | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| **Revenues[(1)] from Other Government Organization recorded by the Ministry as:** | **Interim** | **Plan** | **Forecast** | **Forecast** | **Forecast** |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Utility Service Charges | | | | | |
| Sales and Rentals | | | | | |
| Recovery of Prior Year's Expenditures | | | | | |
| Miscellaneous | | | | | |
| Profits from Crown Corporations | | | | | |
| Dividends | | | | | |
| **Total Revenues[(1)] from Other Government Organization** | - | - | - | - | - |

* Please complete a separate schedule for each Government Organization.

(1) Revenue on an accrual basis from the Other Government Organization as recorded by the Ministry.

Prepared by: _____ Telephone: _____

Approved by: _____ Date: _____
(Name and Title)

## 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION
## FORM 1B - EXPENSES INCURRED WITH OR ON BEHALF OF OTHER GOVERNMENT ORGANIZATIONS

**(To Be Completed by the Ministry)**

**RESPONSIBLE MINISTRY:** **Energy**

**GOVERNMENT ORGANIZATION NAME *:** **Independent Electricity System Operator**

| (report in millions to the nearest 4 decimals) | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| **Expenses[(1)] Incurred With or On Behalf of Other Government Organization recorded by the Ministry as:** | **Interim** | **Plan** | **Forecast** | **Forecast** | **Forecast** |
| Salaries and Wages | | | | | |
| Transportation and Communication | | | | | |
| Services | | | | | |
| Supplies and Equipment | | | | | |
| Transfer Payments (Operating) | | | | | |
| Transfer Payments (Capital) | | | | | |
| Other Transactions | | | | | |
| Less: Recoveries *(Please Specify)* | | | | | |
| **Total Expenses[(1)] Incurred With or On Behalf of Other Government Organization** | - | - | - | - | - |

* Please complete a separate schedule for each Government Organization.

(1) Include expenses incurred with or on behalf of Other Government Organizations, such as transfer payments to the government organization and administrative expenses incurred by the Ministry on behalf of the government organization.

Prepared by: _____ Telephone: _____

Approved by: _____ Date: _____
(Name and Title)

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## OGO CONSOLIDATION FORMS

**Ministry Contact:** **David Chan, Accounting Lead (416-570-4862)**

**Ministry:** **MOI / Energy / MEDG / MRIS**

***Other Government Organization(OGO) Name*** **219-Independent Electricity System Operator**

*Address:* 120 Adelaide Street West

Suite 1600 Toronto, Ontario M5H 1T1

*Tel:*

*Fax:*

*E-Mail:*

Date Submitted: November 4, 2016

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## OGO CONSOLIDATION FORMS

### 1) FORM A - PROFORMA INCOME STATEMENT

Report on this form all revenue and expense amounts for each relevant line for each year

### 2) FORM A(i) - DETAILS OF EMPLOYEE BENEFITS EXPENSE

Report a detailed breakdown of employee benefits expense for the periods presented.

### 3) FORM B - PROFORMA BALANCE SHEET

Report on this form all assets and liabilities amounts for each relevant line for the periods presented.

### 4) FORM C - TANGIBLE CAPITAL ASSETS

For each category of TCA, report the continuity details for the asset class and related accumulated amortization for the periods presented.

### 5) FORM D - REVENUE FROM A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

Based on the amounts reported in the proforma income statement (Form A), report **by ministry or other government reporting entity (including hospitals, school boards and colleges by sector)** any revenues from related organizations (GRE); one table for each ministry or government organization; there is no materiality with respect to reporting these amounts

### 6) FORM E - EXPENSES INCURRED WITH OR ON BEHALF OF A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

Based on the amounts reported in the proforma income statement (Form A), report by ministry or other government reporting entity (including hospitals, school boards and colleges by sector) any expenses incurred with related organizations (GRE); one table for each ministry or government organization; there is no materiality with respect to reporting these amounts

### 7) FORM F - INTER-ORGANIZATION BALANCES WITH A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

Based on the amounts reported in the proforma balance sheet (Form B), report by ministry or other government reporting entity (including hospitals, school boards and colleges by sector) any year-end balances with related organizations (GRE); one table for each ministry or government organization; there is no materiality with respect to reporting these amounts

### 8) FORM G - DEFERRED BALANCE CONTINUITY

For amounts reported as DEFERRED REVENUE and DEFERRED CAPITAL CONTRIBUTIONS from related parties (GRE) in Form B, report a continuity of activity in the year **by ministry or other government entity (including hospitals, colleges and school boards by sector)**; one table for each ministry or government organization; there is no materiality with respect to reporting these amounts

### 9) FORM H - STATEMENT OF CHANGE IN ACCUMULATED SURPLUS/(DEFICIT)

To report the statement of change in accumulated surplus/(deficit) capturing unrealized remeasurement gains or losses.

### 10) FORM I - NEW LOANS RECEIVABLE

Report in Table 1 any NEW loans receivable that the other government organization (OGO) has entered into or is planning to enter during the current fiscal year and the planned fiscal years.
Report in Table 2 any inter-governmental new loans receivable listed in Table 1.

### 11) FORM J - NEW INVESTMENTS RECEIVABLE

Report in Table 1 any NEW investments that the OGO has entered into or is planning to enter during the current fiscal year and the planned fiscal years.
Report in Table 2 any inter-governmental NEW investments listed in Table 1.

### NOTES

- ALL amounts should be reported in millions of dollars **to the nearest 4 decimals** (e.g. $2,734,588 reported as $2.7346)
- Interim to March 31 should reflect a **FULL YEAR** forecast
- **GRE** means Government Reporting Entity which comprises the Ministries and the organizations controlled by the government and consolidated in the Province's financial statements. Inter-organizational (GRE) balances will need to be reported in various forms. Please refer to schedule 8 in the 2015-16 Consolidated Financial Statements for a list of consolidated organizations.
- Please contact your respective OPCD Analysts if the forms need to be customized to meet your agency's requirements.

### LEGEND

- Yellow cells require input by users.
- Light blue cells contain links to related forms, no input is required.

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM A - OTHER GOVERNMENT ORGANIZATION - PROFORMA INCOME STATEMENT

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Please complete yellow cells only, as all blue cells contain either links to other related forms or formulae.**

Please report PROFORMA INCOME STATEMENT, on an accrual basis, under the following headings:

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Grants/Subsidy from Province and other GRE's **(see Form D)** | - | - | - | - | - |
| Government of Canada | | | | | |
| Other non-provincial grants (municipal, etc.) | | | | | |
| Interest/Investment Income | | | | | |
| - from External Sources | | | | | |
| - from a Ministry or other GRE **(see Form D)** | - | - | - | - | - |
| Deferred revenue recognized | | | | | |
| - from External Sources | | | | | |
| - from a Ministry or other GRE **(see Form D)** | - | - | - | - | - |
| Deferred capital contribution amortized to revenue | | | | | |
| - from External Sources | | | | | |
| - from a Ministry or other GRE **(see Form D)** | - | - | - | - | - |
| Fees and Licenses | | | | | |
| - from External Sources | 235.4402 | 220.3991 | 225.0368 | 227.9126 | 227.9126 |
| - from a Ministry or other GRE **(see Form D)** | - | - | - | - | - |
| Royalties | | | | | |
| - from External Sources | | | | | |
| - from a Ministry or other GRE **(see Form D)** | - | - | - | - | - |
| Fines and Penalties | | | | | |
| - from External Sources | 2.0002 | | | | |
| - from a Ministry or other GRE **(see Form D)** | - | - | - | - | - |
| Sales and Rentals | | | | | |
| - from External Sources | | | | | |
| - from a Ministry or other GRE **(see Form D)** | - | - | - | - | - |
| Other Revenue [1] | | | | | |
| - from External Sources | | | | | |
| - from a Ministry or other GRE **(see Form D)** | - | - | - | - | - |
| **TOTAL REVENUES** | **237.4405** | **220.3991** | **225.0368** | **227.9126** | **227.9126** |
| | | | | | |
| Salaries and Wages | 85.1765 | 92.9783 | 95.7375 | 97.4158 | 97.4158 |
| Employee Benefits [2] **(see Form A(i))** | 27.7650 | 26.0699 | 26.2551 | 26.5097 | 26.5097 |
| Transportation and Communication | 3.4880 | 3.4137 | 3.4147 | 3.4154 | 3.4154 |
| Services | | | | | |
| - to External Sources | 55.0182 | 57.6260 | 58.2408 | 58.6489 | 58.6489 |
| - to a Ministry or other GRE **(see Form E)** | - | - | - | - | - |
| Supplies and Equipment | 1.3233 | 1.2805 | 1.2808 | 1.2811 | 1.2811 |
| Amortization **(See Form C)** | 22.4723 | 22.0139 | 22.9235 | 23.3268 | 23.3268 |
| Transfer Payments [2] | | | | | |
| - to External Sources | | | | | |
| - to a Ministry or other GRE **(see Form E)** | - | - | - | - | - |
| Interest on Debt | | | | | |
| - to External Sources | | | | | |
| - to a Ministry or other GRE **(see Form E)** | 1.7498 | 2.0374 | 2.1063 | 2.1592 | 2.1592 |
| Realized (Gains)/Losses | (0.1345) | | | | |
| Expense for remediation of contaminated sites[3] | | | | | |
| - from External Sources | | | | | |
| - from a Ministry or other GRE **(see Form E)** | - | - | - | - | - |
| Other Expenses [1] | | | | | |
| - to External Sources | 14.8134 | 14.9794 | 15.0779 | 15.1558 | 15.1558 |
| - to a Ministry or other GRE **(see Form E)** | - | - | - | - | - |
| **TOTAL EXPENSES** | **211.6721** | **220.3991** | **225.0368** | **227.9126** | **227.9126** |
| | | | | | |
| **SURPLUS/(DEFICIT)** | **25.7684** | **-** | **-** | **-** | **-** |

**Notes:**

[1] Also includes gain/loss on sale of assets.

[2] Transfer payments should include all amounts paid to other organizations for which it does not receive any goods or services directly in return (e.g. program delivery)

[3] A new accounting standard PS 3260 liability for contaminated sites became effective April 1, 2014. Additional liabilities identified subsequent to April 1, 2014 need to be reported in the year in which they are identified with an offsetting journal entry to expense for remediation of contaminated site.

**ADDITIONAL COMMENTS:**

Prepared by: ____Eddie Markovic_____ Telephone: _____() -_____

Approved by: ____Lia Kosic, Director FP&A_____ Date: _____November 4, 2016_____
(Name and Title)

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM A(i) - OTHER GOVERNMENT ORGANIZATION EMPLOYEE BENEFITS EXPENSE

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Please complete yellow cells only, as blue cells contain formulae.**

Please provide the following employee benefits expense that is included in your financial statements:

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Pension Expense | | | | | |
| - PSPP | | | | | |
| - OPSEU | | | | | |
| - HOOPP | | | | | |
| - Other (please specify) | 10.8764 | 9.0284 | 8.5233 | 8.3288 | 8.3288 |
| Non-pension Retirement Benefits Expense | 8.2505 | 8.7505 | 9.2753 | 9.6840 | 9.6840 |
| Regular Severance or Termination Benefit Expense | | | | | |
| Workers' Compensation Benefit Expense | | | | | |
| Other employee benefit costs | 8.6382 | 8.2911 | 8.4566 | 8.4969 | 8.4969 |
| **TOTAL** [(1)] | **27.7650** | **26.0699** | **26.2551** | **26.5097** | **26.5097** |

**Notes:**

(1) must agree to "Employee Benefits" in Form A.

**ADDITIONAL COMMENTS:**

Prepared by: ____Eddie Markovic_____ Telephone: () -

Approved by: ____Lia Kosic, Director FP&A_____ Date: November 4, 2016
(Name and Title)

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM B - OTHER GOVERNMENT ORGANIZATION - PROFORMA BALANCE SHEET

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Please complete yellow cells only, as all blue cells contain either links to other related forms or formulae.**

Please report PROFORMA BALANCE SHEET under the following headings:

| **(report in millions)** | **Interim as at March 31, 2017** | **Plan as at March 31, 2018** |
|---|---|---|
| Cash and Cash Equivalents [1] | 9.9700 | 10.0000 |
| Temporary Investments [2]: | | |
| From External Sources | | |
| From the Province or other GRE **(see Form F)** | - | - |
| Long-Term Investments [2]: | | |
| From External Sources | 42.1694 | 44.7628 |
| From the Province or other GRE **(see Form F)** | - | - |
| Accounts Receivable: | | |
| Due from the Province or other GRE **(see Form F)** | - | - |
| Due from External Sources | 21.1697 | 20.5197 |
| less: Provision for Doubtful Accounts (enter as negative values) | | |
| Due from the Government of Canada | | |
| Loans Receivable: | | |
| - from External Sources | | |
| - from a Ministry or other GRE **(see Form F)** | - | - |
| Other Assets[3]: | | |
| - from External Sources | 6.8330 | 6.8330 |
| - from a Ministry or other GRE **(see Form F)** | - | - |
| Tangible Capital Assets *(net of Accumulated Amortization)* **(See Form C)** | 110.2765 | 115.0852 |
| **TOTAL ASSETS** | **190.4186** | **197.2007** |
| | | |
| Accounts Payable & Accrued Liabilities: | | |
| Accrued Transfer Payments: | | |
| -from External Sources | | |
| -from a Ministry or other GRE **(see Form F)** | - | - |
| Accrued Interest on Debt: | | |
| -from External Sources | | |
| -from a Ministry or other GRE **(see Form F)** | 0.7673 | 0.7673 |
| Accrued Salaries Wages and Benefits | | |
| Accrued Materials, Supplies and Other | | |
| Accounts Payable: | | |
| -to External Sources | 31.8728 | 31.8757 |
| -to a Ministry or other GRE **(see Form F)** | 2.0412 | 2.0383 |
| Debt | | |
| - from External Sources | | |
| - from a Ministry or other GRE **(see Form F)** | 70.5653 | 67.0118 |
| Obligations under Alternative Financing and Procurement | | |
| - from External Sources | | |
| - from a Ministry or other GRE **(see Form F)** | - | - |
| Deferred Revenue | | |
| - from External Sources | | |
| - from a Ministry or other GRE **(see Form F)** | - | - |
| Deferred Capital Contribution (DCC) [4] | | |
| - DCC from External Sources [5] | | |
| - from a Ministry or other GRE **(see Form F)** | - | - |
| Liability for remediation of contaminated sites[6] | | |
| - from External Sources | | |
| - from a Ministry or other GRE **(see Form F)** | - | - |
| Other Liabilities[7] : | | |
| - from External Sources | 121.7561 | 123.5726 |
| - from a Ministry or other GRE **(see Form F)** | - | - |
| **TOTAL LIABILITIES** | **227.0027** | **225.2657** |
| | | |
| **NET ASSETS** | **(36.5841)** | **(28.0650)** |

**Notes:**

[1] Cash comprises of cash on hand, demand deposits and bank indebtness. Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value. An investment normally qualifies as a cash equivalent only when it has a short maturity of, for example, three months or less from the date of acquisition.

[2] Temporary investments include treasury bills or investments certificates, and are generally capable of reasonable prompt liquidation (i.e. within one year). If the maturity of the investment is three months or less, the investment normally qualifies as a cash and cash equivalent (refer to (1) above). Investments longer than one year to liquidation should be classified as long-term investments.
Investments include mark-to-market adjustments on financial instruments where appropriate **(See Form H)**.

[3] Include Non-TP prepaid expenses and inventory for consumption under other assets.

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM B - OTHER GOVERNMENT ORGANIZATION - PROFORMA BALANCE SHEET

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

(4) Deferred capital contributions (DCC) represents unamortized portion of tangible capital assets or liabilities to construct or acquire tangible capital assets from specific-purpose funding. Deferred capital contributions are recorded in revenue over the estimated useful life of the underlying tangible capital asset once constructed or acquired.

(5) External sources represent the funding received from Government of Canada, municipalities or third parties.

(6) A new accounting standard PS 3260 liability for contaminated sites became effective April 1, 2014. Additional liabilities identified subsequent to April 1, 2014 need to be reported in the year in which they are identified with an offsetting journal entry to expense for remediation of contaminated site.

(7) Other liabilities include mark-to-market adjustments on financial instruments reported as liabilities **(See Form H)**.

**ADDITIONAL COMMENTS:**

Prepared by: ____Eddie Markovic_____ Telephone: _____() -_____

Approved by: ____Lia Kosic, Director FP&A_____

Approved by: ____Lia Kosic, Director FP&A_____ Date: November 4, 2016

(Name and Title)

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM C - OTHER GOVERNMENT ORGANIZATIONS - TANGIBLE CAPITAL ASSETS

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Please complete yellow cells only, as blue cells contain formulae.**

**Report all tangible capital assets in this schedule.**

| (Report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 | Outlook as at March 31, 2019 | Outlook as at March 31, 2020 | Outlook as at March 31, 2021 |
|---|---|---|---|---|---|
| **LAND [1]:** | | | | | |
| Opening balance | 0.3659 | 0.3659 | 0.3659 | 0.3659 | 0.3659 |
| Add: Additions | | | | | |
| Add: Transfer from CIP [5] | - | - | - | - | - |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write Offs (enter as negative values) | | | | | |
| **TOTAL LAND - CLOSING** | **0.3659** | **0.3659** | **0.3659** | **0.3659** | **0.3659** |
| **BUILDINGS [2]:** | | | | | |
| Opening balance | 51.9151 | 55.8062 | 55.8062 | 55.8062 | 55.8062 |
| Add: Additions | | | | | |
| Add: Transfer from CIP [5] | 3.8911 | - | - | - | - |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write Offs (enter as negative values) | | | | | |
| Closing balance | 55.8062 | 55.8062 | 55.8062 | 55.8062 | 55.8062 |
| Accumulated Amortization: | | | | | |
| Opening balance | 23.0130 | 24.6548 | 26.2634 | 27.5955 | 28.8902 |
| Add: Amortization expense | 1.6417 | 1.6087 | 1.3321 | 1.2947 | 1.2487 |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write Offs (enter as negative values) | | | | | |
| Closing balance | 24.6548 | 26.2634 | 27.5955 | 28.8902 | 30.1389 |
| **BUILDINGS - NET BOOK VALUE** | **31.1514** | **29.5428** | **28.2107** | **26.9160** | **25.6673** |
| **TRANSPORTATION INFRASTRUCTURE [3]** | | | | | |
| Opening balance | | - | - | - | - |
| Add: Additions | | | | | |
| Add: Transfer from CIP [5] | - | - | - | - | - |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write Offs (enter as negative values) | | | | | |
| Closing balance | - | - | - | - | - |
| Accumulated Amortization: | | | | | |
| Opening balance | | - | - | - | - |
| Add: Amortization expense | | | | | |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write Offs (enter as negative values) | | | | | |
| Closing balance | - | - | - | - | - |
| **TRANSPORTATION INRASTRUCTURE - NET BOOK VALUE** | **-** | **-** | **-** | **-** | **-** |
| **OTHER [4]:** | | | | | |
| Opening balance | 375.4034 | 411.0495 | 430.2995 | 453.2995 | 476.2995 |
| Add: Additions | | | | | |
| Add: Transfer from CIP [5] | 35.6462 | 19.2500 | 23.0000 | 23.0000 | 23.0000 |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write Offs (enter as negative values) | | | | | |
| Closing balance | 411.0495 | 430.2995 | 453.2995 | 476.2995 | 499.2995 |
| Accumulated Amortization: | | | | | |
| Opening balance | 328.8005 | 349.6310 | 370.0362 | 391.6277 | 413.6598 |
| Add: Amortization expense | 20.8305 | 20.4052 | 21.5915 | 22.0321 | 22.0781 |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write Offs (enter as negative values) | | | | | |
| Closing balance | 349.6310 | 370.0362 | 391.6277 | 413.6598 | 435.7378 |
| **OTHER - NET BOOK VALUE** | **61.4185** | **60.2633** | **61.6719** | **62.6398** | **63.5617** |
| **CONSTRUCTION IN PROGRESS - LAND** | | | | | |
| Opening balance | | - | - | - | - |
| Add: Traditional Financed | | | | | |
| Add: AFP Projects | | | | | |
| Add: Interest capitalized | | | | | |
| Less: Transfers to in-service (enter as negative values) | | | | | |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write offs (enter as negative values) | | | | | |
| Closing balance | - | - | - | - | - |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM C - OTHER GOVERNMENT ORGANIZATIONS - TANGIBLE CAPITAL ASSETS

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Please complete yellow cells only, as blue cells contain formulae.**

| | | | | | |
|---|---|---|---|---|---|
| **CONSTRUCTION IN PROGRESS - BUILDINGS** | | | | | |
| Opening balance | 0.9326 | - | - | - | - |
| Add: Traditional Financed | 2.9585 | | | | |
| Add: AFP Projects | | | | | |
| Add: Interest capitalized | | | | | |
| Less: Transfers to in-service (enter as negative values) | (3.8911) | | | | |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write offs (enter as negative values) | | | | | |
| Closing balance | - | - | - | - | - |
| **CONSTRUCTION IN PROGRESS - TRANSPORTATION INFRASTRUCTURE** | | | | | |
| Opening balance | | - | - | - | - |
| Add: Traditional Financed | | | | | |
| Add: AFP Projects | | | | | |
| Add: Interest capitalized | | | | | |
| Less: Transfers to in-service (enter as negative values) | | | | | |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write offs (enter as negative values) | | | | | |
| Closing balance | - | - | - | - | - |
| **CONSTRUCTION IN PROGRESS - OTHERS** | | | | | |
| Opening balance | 26.8024 | 17.3406 | 24.9131 | 24.9131 | 24.9131 |
| Add: Traditional Financed | 26.1844 | 26.8225 | 23.0000 | 23.0000 | 23.0000 |
| Add: AFP Projects | | | | | |
| Add: Interest capitalized | | | | | |
| Less: Transfers to in-service (enter as negative values) | (35.6462) | (19.2500) | (23.0000) | (23.0000) | (23.0000) |
| Less: Disposals/Retirements (enter as negative values) | | | | | |
| Less: Other adjustments/Write offs (enter as negative values) | | | | | |
| Closing balance | 17.3406 | 24.9131 | 24.9131 | 24.9131 | 24.9131 |
| **NET TANGIBLE CAPITAL ASSETS** | 110.2765 | 115.0852 | 115.1616 | 114.8349 | 114.5081 |

***SUMMARY INFORMATION***

| | | | | | |
|---|---|---|---|---|---|
| Gross Additions (excluding Construction in Progress) | | - | - | - | - |
| Gross Additions - Construction in Progress | 29.1429 | 26.8225 | 23.0000 | 23.0000 | 23.0000 |
| **TOTAL GROSS ADDITIONS** | **29.1429** | **26.8225** | **23.0000** | **23.0000** | **23.0000** |
| Disposals and Other adjustments / Write-offs (net) | - | - | - | - | - |
| **TOTAL ADDITIONS (NET OF DISPOSAL AND OTHER ADJUSTMENTS / WR** | 29.1429 | 26.8225 | 23.0000 | 23.0000 | 23.0000 |
| **TOTAL AMORTIZATION EXPENSE** | 22.4723 | 22.0139 | 22.9235 | 23.3268 | 23.3268 |

**Notes:**

(1) Land includes land acquired for transportation infrastructure, parks, buildings, and other program use and land improvements. Land excludes Crown lands acquired by right.

(2) Includes those acquired through capital leases and Construction in Progress.

(3) Transportation infrastructure includes highways, railway and track improvements, bridges and related structures and facilities, but excludes land and buildings.

(4) Other tangible capital assets include those capital assets not reported under Land, Buildings and Transportation Infrastructure. Examples include railway equipment, computer equipment, vehicles, aircrafts, furniture, and administrative & service equipment owned by government organizations.

(5) Assets Transferred from Construction-in-Progress (CIP) - This row tracks the cost of assets where construction has been completed during the current fiscal year and the related asset has been placed into service and therefore transferred into the appropriate asset category.

**ADDITIONAL COMMENTS:**

Prepared by: ____Eddie Markovic_____ Telephone: () -

Approved by: ____Lia Kosic, Director FP&A_____ Date: November 4, 2016
(Name and Title)

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM D - REVENUE FROM A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as all blue cells contain either links to related forms or formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

***Revenue from a Ministry or other GRE:***

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | | | | | |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | | | | | |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Sales and Rentals | | | | | |
| Other Revenue (please specify): | | | | | |
| **TOTAL REVENUE FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

**MINISTRY OR OTHER GRE:**

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | | | | | |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | | | | | |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Sales and Rentals | | | | | |
| Other Revenue (please specify): | | | | | |
| **TOTAL REVENUE FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

**MINISTRY OR OTHER GRE:**

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | | | | | |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | | | | | |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Sales and Rentals | | | | | |
| Other Revenue (please specify): | | | | | |
| **TOTAL REVENUE FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM D - REVENUE FROM A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as all blue cells contain either links to related forms or formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | | | | | |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | | | | | |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Sales and Rentals | | | | | |
| Other Revenue (please specify): | | | | | |
| **TOTAL REVENUE FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

**MINISTRY OR OTHER GRE:**

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | | | | | |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | | | | | |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Sales and Rentals | | | | | |
| Other Revenue (please specify): | | | | | |
| **TOTAL REVENUE FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

**MINISTRY OR OTHER GRE:**

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | | | | | |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | | | | | |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Sales and Rentals | | | | | |
| Other Revenue (please specify): | | | | | |
| **TOTAL REVENUE FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM D - REVENUE FROM A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as all blue cells contain either links to related forms or formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | | | | | |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | | | | | |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Sales and Rentals | | | | | |
| Other Revenue (please specify): | | | | | |
| **TOTAL REVENUE FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

**MINISTRY OR OTHER GRE:**

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | | | | | |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | | | | | |
| Fees and Licenses | | | | | |
| Royalties | | | | | |
| Fines and Penalties | | | | | |
| Sales and Rentals | | | | | |
| Other Revenue (please specify): | | | | | |
| **TOTAL REVENUE FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

***Total Revenue from Ministries or other GREs:***

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Provincial Grants received in year reported as Revenue | - | - | - | - | - |
| Recognition of Deferred Revenue received from Province **(see Form G)** | - | - | - | - | - |
| Amortization of Deferred Capital Contributions received from Province **(Form G)** | - | - | - | - | - |
| Interest/Investment Income | - | - | - | - | - |
| Fees and Licenses | - | - | - | - | - |
| Royalties | - | - | - | - | - |
| Fines and Penalties | - | - | - | - | - |
| Sales and Rentals | - | - | - | - | - |
| Other Revenue (please specify): | - | - | - | - | - |
| **TOTAL REVENUE FROM RELATED ENTITIES** | **-** | **-** | **-** | **-** | **-** |

**ADDITIONAL COMMENTS:**

Prepared by: ____Eddie Markovic_____ Telephone: _____() -_____

Approved by: ____Lia Kosic, Director FP&A_____ Date: _____November 4, 2016_____
(Name and Title)

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM E - EXPENSES INCURRED WITH OR ON BEHALF OF A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** 219-Independent Electricity System Operator

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as blue cells contain formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

***Expenses Incurred With or On Behalf of a Ministry or other GRE:***

| Fiscal year ended March 31 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| (report in millions) | Interim | Plan | Outlook | Outlook | Outlook |
| Transfer payments | | | | | |
| Interest on debt | 1.7498 | 2.0374 | 2.1063 | 2.1592 | 2.1592 |
| Services | | | | | |
| Expense for remediation of contaminated sites | | | | | |
| Other Expenses (please specify): | | | | | |
| **TOTAL - EXPENSES FROM THIS MINISTRY OR OTHER GRE** | **1.7498** | **2.0374** | **2.1063** | **2.1592** | **2.1592** |

**MINISTRY OR OTHER GRE:**

| Fiscal year ended March 31 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| (report in millions) | Interim | Plan | Outlook | Outlook | Outlook |
| Transfer payments | | | | | |
| Interest on debt | | | | | |
| Services | | | | | |
| Expense for remediation of contaminated sites | | | | | |
| Other Expenses (please specify): | | | | | |
| **TOTAL - EXPENSES FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

**MINISTRY OR OTHER GRE:**

| Fiscal year ended March 31 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| (report in millions) | Interim | Plan | Outlook | Outlook | Outlook |
| Transfer payments | | | | | |
| Interest on debt | | | | | |
| Services | | | | | |
| Expense for remediation of contaminated sites | | | | | |
| Other Expenses (please specify): | | | | | |
| **TOTAL - EXPENSES FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

**MINISTRY OR OTHER GRE:**

| Fiscal year ended March 31 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| (report in millions) | Interim | Plan | Outlook | Outlook | Outlook |
| Transfer payments | | | | | |
| Interest on debt | | | | | |
| Services | | | | | |
| Expense for remediation of contaminated sites | | | | | |
| Other Expenses (please specify): | | | | | |
| **TOTAL - EXPENSES FROM THIS MINISTRY OR OTHER GRE** | **-** | **-** | **-** | **-** | **-** |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM E - EXPENSES INCURRED WITH OR ON BEHALF OF A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** 219-Independent Electricity System Operator

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as blue cells contain formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

| Fiscal year ended March 31 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| (report in millions) | Interim | Plan | Outlook | Outlook | Outlook |
| Transfer payments | | | | | |
| Interest on debt | | | | | |
| Services | | | | | |
| Expense for remediation of contaminated sites | | | | | |
| Other Expenses (please specify): | | | | | |
| TOTAL - EXPENSES FROM THIS MINISTRY OR OTHER GRE | - | - | - | - | - |

**MINISTRY OR OTHER GRE:**

| Fiscal year ended March 31 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| (report in millions) | Interim | Plan | Outlook | Outlook | Outlook |
| Transfer payments | | | | | |
| Interest on debt | | | | | |
| Services | | | | | |
| Expense for remediation of contaminated sites | | | | | |
| Other Expenses (please specify): | | | | | |
| TOTAL - EXPENSES FROM THIS MINISTRY OR OTHER GRE | - | - | - | - | - |

**MINISTRY OR OTHER GRE:**

| Fiscal year ended March 31 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| (report in millions) | Interim | Plan | Outlook | Outlook | Outlook |
| Transfer payments | | | | | |
| Interest on debt | | | | | |
| Services | | | | | |
| Expense for remediation of contaminated sites | | | | | |
| Other Expenses (please specify): | | | | | |
| TOTAL - EXPENSES FROM THIS MINISTRY OR OTHER GRE | - | - | - | - | - |

**MINISTRY OR OTHER GRE:**

| Fiscal year ended March 31 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| (report in millions) | Interim | Plan | Outlook | Outlook | Outlook |
| Transfer payments | | | | | |
| Interest on debt | | | | | |
| Services | | | | | |
| Expense for remediation of contaminated sites | | | | | |
| Other Expenses (please specify): | | | | | |
| TOTAL - EXPENSES FROM THIS MINISTRY OR OTHER GRE | - | - | - | - | - |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM E - EXPENSES INCURRED WITH OR ON BEHALF OF A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as blue cells contain formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**Total Expenses Incurred With or On Behalf of Ministries or other GREs:**

| **Fiscal year ended March 31** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| **(report in millions)** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Transfer payments | - | - | - | - | - |
| Interest on debt | 1.7498 | 2.0374 | 2.1063 | 2.1592 | 2.1592 |
| Services | - | - | - | - | - |
| Expense for remediation of contaminated sites | - | - | - | - | - |
| Other Expenses (please specify): | - | - | - | - | - |
| **TOTAL EXPENSE FROM RELATED ENTITIES** | **1.7498** | **2.0374** | **2.1063** | **2.1592** | **2.1592** |

**ADDITIONAL COMMENTS:**

Prepared by: ____Eddie Markovic_____ Telephone: () -

Approved by: ____Lia Kosic, Director FP&A_____ Date: November 4, 2016
(Name and Title)

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM F - INTER-ORGANIZATION BALANCES WITH A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as all blue cells contain either links to related forms or formulae.**

**Please identify all balances arising from transactions with or for GRE's included in your statement of financial position as at March 31, and provide a brief description:**

**MINISTRY OR OTHER GRE:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | | |
| Long-Term Investments | | |
| Receivables from a Ministry or Government Organization | | |
| Loans Receivable | | |
| Other Assets(please specify): | | |
| | | |
| Accrued Transfer Payments | | |
| Accrued Interest on Debt | 0.7673 | 0.7673 |
| Payables to a Ministry or Government Organization | 2.0412 | 2.0383 |
| Loans Payable (Debt) | | |
| Obligations under Alternative Financing and Procurement | | |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | | |
| Other Liabilities(please specify): | | |

**MINISTRY OR OTHER GRE:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | | |
| Long-Term Investments | | |
| Receivables from a Ministry or Government Organization | | |
| Loans Receivable | | |
| Other Assets(please specify): | | |
| | | |
| Accrued Transfer Payments | | |
| Accrued Interest on Debt | | |
| Payables to a Ministry or Government Organization | | |
| Loans Payable (Debt) | 70.5653 | 67.0118 |
| Obligations under Alternative Financing and Procurement | | |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | | |
| Other Liabilities(please specify): | | |

**MINISTRY OR OTHER GRE:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | | |
| Long-Term Investments | | |
| Receivables from a Ministry or Government Organization | | |
| Loans Receivable | | |
| Other Assets(please specify): | | |
| | | |
| Accrued Transfer Payments | | |
| Accrued Interest on Debt | | |
| Payables to a Ministry or Government Organization | | |
| Loans Payable (Debt) | | |
| Obligations under Alternative Financing and Procurement | | |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | | |
| Other Liabilities(please specify): | | |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM F - INTER-ORGANIZATION BALANCES WITH A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as all blue cells contain either links to related forms or formulae.**

**Please identify all balances arising from transactions with or for GRE's included in your statement of financial position as at March 31, and provide a brief description:**

**MINISTRY OR OTHER GRE:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | | |
| Long-Term Investments | | |
| Receivables from a Ministry or Government Organization | | |
| Loans Receivable | | |
| Other Assets(please specify): | | |
| | | |
| Accrued Transfer Payments | | |
| Accrued Interest on Debt | | |
| Payables to a Ministry or Government Organization | | |
| Loans Payable (Debt) | | |
| Obligations under Alternative Financing and Procurement | | |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | | |
| Other Liabilities(please specify): | | |

**MINISTRY OR OTHER GRE:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | | |
| Long-Term Investments | | |
| Receivables from a Ministry or Government Organization | | |
| Loans Receivable | | |
| Other Assets(please specify): | | |
| | | |
| Accrued Transfer Payments | | |
| Accrued Interest on Debt | | |
| Payables to a Ministry or Government Organization | | |
| Loans Payable (Debt) | | |
| Obligations under Alternative Financing and Procurement | | |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | | |
| Other Liabilities(please specify): | | |

**MINISTRY OR OTHER GRE:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | | |
| Long-Term Investments | | |
| Receivables from a Ministry or Government Organization | | |
| Loans Receivable | | |
| Other Assets(please specify): | | |
| | | |
| Accrued Transfer Payments | | |
| Accrued Interest on Debt | | |
| Payables to a Ministry or Government Organization | | |
| Loans Payable (Debt) | | |
| Obligations under Alternative Financing and Procurement | | |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | | |
| Other Liabilities(please specify): | | |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM F - INTER-ORGANIZATION BALANCES WITH A MINISTRY OR OTHER GOVERNMENT REPORTING ENTITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as all blue cells contain either links to related forms or formulae.**

**Please identify all balances arising from transactions with or for GRE's included in your statement of financial position as at March 31, and provide a brief description:**

**MINISTRY OR OTHER GRE:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | | |
| Long-Term Investments | | |
| Receivables from a Ministry or Government Organization | | |
| Loans Receivable | | |
| Other Assets(please specify): | | |
| | | |
| Accrued Transfer Payments | | |
| Accrued Interest on Debt | | |
| Payables to a Ministry or Government Organization | | |
| Loans Payable (Debt) | | |
| Obligations under Alternative Financing and Procurement | | |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | | |
| Other Liabilities(please specify): | | |

**MINISTRY OR OTHER GRE:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | | |
| Long-Term Investments | | |
| Receivables from a Ministry or Government Organization | | |
| Loans Receivable | | |
| Other Assets(please specify): | | |
| | | |
| Accrued Transfer Payments | | |
| Accrued Interest on Debt | | |
| Payables to a Ministry or Government Organization | | |
| Loans Payable (Debt) | | |
| Obligations under Alternative Financing and Procurement | | |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | | |
| Other Liabilities(please specify): | | |

**Total Assets and Liabilities Incurred With or On Behalf of Ministries or other GREs:**

| (report in millions) | Interim as at March 31, 2017 | Plan as at March 31, 2018 |
|---|---|---|
| Temporary Investments | - | - |
| Long-Term Investments | - | - |
| Receivables from a Ministry or Government Organization | - | - |
| Loans Receivable | - | - |
| Other Assets(please specify): | - | - |
| | | |
| Accrued Transfer Payments | - | - |
| Accrued Interest on Debt | 0.7673 | 0.7673 |
| Payables to a Ministry or Government Organization | 2.0412 | 2.0383 |
| Loans Payable (Debt) | 70.5653 | 67.0118 |
| Obligations under Alternative Financing and Procurement | - | - |
| Deferred Revenue **(Form G)** | - | - |
| Deferred Capital Contributions **(Form G)** | - | - |
| Liability for Remediation of Contaminated Sites | - | - |
| Other Liabilities(please specify): | - | - |

**ADDITIONAL COMMENTS:**

Prepared by: ____Eddie Markovic_____ Telephone: _____

Approved by: ____Lia Kosic, Director FP&A_____ Date: November 4, 2016
(Name and Title)

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM G -DEFERRED BALANCE CONTINUITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as blue cells formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

Please provide a deferred balance continuity schedule under the following headings:

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred revenue** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED REVENUE** [1] | - | - | - | - | - |

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred capital contribution** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED CAPITAL CONTRIBUTION** [2] | - | - | - | - | - |

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

Please provide a deferred balance continuity schedule under the following headings:

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred revenue** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED REVENUE** [1] | - | - | - | - | - |

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred capital contribution** | **Interim** | **Plan** | **Outlook** | **Outlook** | **Outlook** |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED CAPITAL CONTRIBUTION** [2] | - | - | - | - | - |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM G -DEFERRED BALANCE CONTINUITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as blue cells formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

Please provide a deferred balance continuity schedule under the following headings:

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred revenue** | Interim | Plan | Outlook | Outlook | Outlook |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED REVENUE** (1) | - | - | - | - | - |

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred capital contribution** | Interim | Plan | Outlook | Outlook | Outlook |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED CAPITAL CONTRIBUTION** (2) | - | - | - | - | - |

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

Please provide a deferred balance continuity schedule under the following headings:

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred revenue** | Interim | Plan | Outlook | Outlook | Outlook |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED REVENUE** (1) | - | - | - | - | - |

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred capital contribution** | Interim | Plan | Outlook | Outlook | Outlook |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED CAPITAL CONTRIBUTION** (2) | - | - | - | - | - |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM G -DEFERRED BALANCE CONTINUITY

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Please prepare a section for each Ministry or other GRE and complete yellow cells only, as blue cells formulae.**

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

Please provide a deferred balance continuity schedule under the following headings:

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred revenue** | Interim | Plan | Outlook | Outlook | Outlook |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED REVENUE** [1] | - | - | - | - | - |

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred capital contribution** | Interim | Plan | Outlook | Outlook | Outlook |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED CAPITAL CONTRIBUTION** [2] | - | - | - | - | - |

**PLEASE IDENTIFY THE RELATED GOVERNMENT REPORTING ENTITY TRANSACTED WITH:**

**MINISTRY OR OTHER GRE:**

Please provide a deferred balance continuity schedule under the following headings:

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred revenue** | Interim | Plan | Outlook | Outlook | Outlook |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED REVENUE** [1] | - | - | - | - | - |

| Fiscal year ended March 31 (report in millions) | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| **Deferred capital contribution** | Interim | Plan | Outlook | Outlook | Outlook |
| Opening | | - | - | - | - |
| Add: contributions | | | | | |
| Less: recognized (enter as negative values) | | | | | |
| Add: interest earned | | | | | |
| Add/(Less): adjustment & write offs | | | | | |
| **CLOSING DEFERRED CAPITAL CONTRIBUTION** [2] | - | - | - | - | - |

**Notes:**

[1] Must agree to "Deferred Revenue" on Form F.

[2] Must agree to "Deferred Capital Contribution" on Form F.

**ADDITIONAL COMMENTS:**

Prepared by: ____Eddie Markovic_____ Telephone: _____() -_____

Approved by: ____Lia Kosic, Director FP&A_____ Date: __November 4, 2016_____
(Name and Title)

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM H - STATEMENT OF CHANGE IN ACCUMULATED SURPLUS/(DEFICIT)

**(To Be Completed by the Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Please complete yellow cells only, as blue cells contain formulae. Enter losses as negative values.**

| Fiscal year ended March 31 (report in millions) | Reference | March 31 2017 | |
|---|---|---|---|
| **Accumulated surplus (deficit) is comprised of:** | | | |
| **A**. Accumulated operating surplus (deficit) | Table 1 A | - 46.0866 | |
| **B**. Accumulated remeasurement gains (losses) | Table 1 B | 9.5025 | |
| **Accumulated surplus (deficit) at Year End** | | - 36.5841 | |
| | | | **Check** |
| **Net Assets as at March 31, 2017** | Note 1, Note 4, Form B | - 36.5841 | **OK** |

**Table 1: Please provide information required below**

| A. Accumulated operating surplus (deficit) | Reference | March 31 2017 |
|---|---|---|
| Accumulated Operating Surplus/(Deficit) per final OGO forms as at March 31, 2016 (submitted for the 2015-16 Public Accounts) | | - 71.8550 |
| Add/(Less): Surplus/(Deficit) | Form A | 25.7684 |
| Other – please specify: | Note 2 | |
| **Accumulated Operating Surplus/(Deficit) at End of Year** | | **- 46.0866** |
| **B. Accumulated remeasurement gains (losses)** [3] | **Note 3** | |
| Accumulated remeasurement gains / (losses) Per Audited Financial Statements as at March 31, 2016 | | 6.9380 |
| Unrealized gains (losses) attributable to: | | |
| Foreign exchange | | - 0.0030 |
| Derivatives | | |
| Portfolio Investments | | 2.4330 |
| Less: Amounts reclassified to the statement of operations | Form A | - 0.1345 |
| **Accumulated remeasurement gains and losses at End of Year** | | **9.5025** |

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM H - STATEMENT OF CHANGE IN ACCUMULATED SURPLUS/(DEFICIT)

**(To Be Completed by the Government Organization)**

**Notes**

(1) Must agree to "Total Assets" in Form B less "Total Liabilities" in Form B.

(2) Please describe the nature of "other adjustments",

(i) ----------.
(ii) ----------.
(iii) ----------.
(iv) ----------.

(3) Remeasurement gains and losses - this statement is used to distinguish remeasurement gains and losses from the operating revenue and expenses. Remeasurement gains and losses include unrealized changes in fair value of instruments measured at fair value and unrealized foreign exchange gains and losses. Remeasurement gains and losses will be accumulated in the statement of remeasurement gains and losses until the financial instrument they are associated with is derecognized. Upon derecognition of the instrument, the remeasurement gains and losses are reclassified to the statement of operations.

(4) On the statement of financial position net assets will have to be reconciled to the accumulated operating surplus/deficit and the accumulated remeasurement gains and losses.

(5) Accumulated Operating Surplus/(Deficit) - equals to opening accumulated surplus/deficit less opening unrealized gains or losses attributable to foreign exchange, derivatives and portfolio investments.

**ADDITIONAL COMMENTS:**

Prepared by: ____Eddie Markovic_____ Telephone: _____() -_____

Approved by: ____Lia Kosic, Director FP&A_____ Date: November 4, 2016
(Name and Title)

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM I - NEW LOANS RECEIVABLE

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** 219-Independent Electricity System Operator

| Table 1 | | | | | | Principal Repayment (Outstanding loan $000's) | | | | | | | Principal Repayment (Outstanding loan $000's) | | | | | Principal repayment | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Loan Interest Rate | | | | | | | | | | | | | | | | | |
| New Loans Receivable | Loan Amount | Fixed Interest Rate of Loan | Floating Rate (if interest rate will not be fixed) | Loan Start Date | Loan Maturity Date | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Sub-total | 2023-2028 | 2029-2034 | 2035-2040 | 2041 and thereafter | Sub-total | No fixed maturity | Total repayment |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| | | | | | | | | | | | | - | | | | | - | | - |
| Total | - | | | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

| Table 2 - Please specify new loans receivable(s) with Inter-Governmental Units (if applicable): | | | | | | Principal Repayment (Outstanding loan $000's) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Loan Interest Rate | | | | | | | | | |
| Name of Government Reporting Entity (GRE) | Loan Amount | Fixed Interest Rate of Loan | Floating Rate (if interest rate will not be fixed) | Loan Start Date | Loan Maturity Date | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
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| | | | | | | | | | | | |
| | | | | | | | | | | | |
| TOTAL NEW LOANS RECEIVABLE WITH INTER-GOVERNMENTAL UNITS | - | | | | | - | - | - | - | - | - |

Prepared by: ____Eddie Markovic_____

Approved by: ____Lia Kosic, Director FP&A_____
(Name and Title)

Telephone: () -

Date: November 4, 2016

# 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION

## FORM J - NEW INVESTMENTS

**(To Be Completed by Government Organization)**

**GOVERNMENT ORGANIZATION NAME:** **219-Independent Electricity System Operator**

**Table 1**

| New Investment(s) | Investment Amount | Investment Interest Rate | | Investment Start Date | Investment Maturity Date |
|---|---|---|---|---|---|
| | | Fixed Interest Rate of Investment | Floating Rate (if interest rate will not be fixed) | | |
| | | | | | |
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| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Total | - | | | | |

**Table 2 - Please specify new Investments with Inter-Governmental Units (if applicable):**

| Name of Government Reporting Entity (GRE) | Investment Amount | Investment Interest Rate | | Investment Start Date | Investment Maturity Date |
|---|---|---|---|---|---|
| | | Fixed Interest Rate of Investment | Floating Rate (if interest rate will not be fixed) | | |
| | | | | | |
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| | | | | | |
| | | | | | |
| TOTAL NEW INVESTMENTS WITH INTER-GOVERNMENTAL UNITS | - | | | | |

Prepared by: ____Eddie Markovic_____ Telephone: () -

Approved by: ____Lia Kosic, Director FP&A_____ Date: November 4, 2016
(Name and Title)

# TCA Supplementary Schedule - Infrastructure 10 Year Plan- Other Government Organizations

GOVERNMENT ORGANIZATION NAME: Independent Electricity System Operator

Report in millions of dollars (4 decimal places)

| | Interim 2016-17 | Plan 2017-18 | Outlook 2018-19 | Outlook 2019-20 | Outlook 2020-21 | Outlook 2021-22 | Outlook 2022-23 | Outlook 2023-24 | Outlook 2024-25 | Outlook 2025-26 | Outlook 2026-27 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Land [1] | | | | | | | | | | | |
| Building [1] | 3.8911 | | | | | | | | | | |
| Transportation infrastructure [1] | | | | | | | | | | | |
| Construction in Progress [1] | (10.3944) | 7.5725 | - | - | - | - | - | - | - | - | - |
| Others Assets [1] | 35.6462 | 19.2500 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 |
| Interest capitalized | | | | | | | | | | | |
| Gross Additions [1] - A | 29.1429 | 26.8225 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 |
| Provincial share [2] | | | | | | | | | | | |
| Third party contribution [3] | 29.1429 | 26.8225 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 |
| Gross Additions - B (B must equal A above) | 29.1429 | 26.8225 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 | 23.0000 |
| Ministry Capital Expense - Voted | | | | | | | | | | | |
| Provincial capital transfer payments [4] (enter as negative) | | | | | | | | | | | |
| Amortization expense [5] (enter as positive) | 22.4723 | 22.0139 | 22.9235 | 23.3268 | 23.3268 | 23.3268 | 23.3268 | 23.3268 | 23.3268 | 23.3268 | 23.3268 |
| Capital Consolidation Adjustment | 22.4723 | 22.0139 | 22.9235 | 23.3268 | 23.3268 | 23.3268 | 23.3268 | 23.3268 | 23.3268 | 23.3268 | 23.3268 |

| Plan over Plan Check (10-yr as of 2016-17 vs 10-yr as of 2017-18) | 10-Yr Plan (2016-17) | 10-Yr Plan (2017-18) | Change | Explanation [6] |
|---|---|---|---|---|
| Total Additions | 235.6145 | 233.8225 | (1.7920) | |
| Other Partner Funding | 0 | 233.8225 | 233.8225 | |
| Provincial-Funded Expenditure | 0 | - | - | |
| Provincial Capital Grants | - | - | - | |
| Amortization Expense | 175.4806 | 231.5516 | 56.0710 | |

[1] For periods up to 21-22, this balance can be taken directly from the "Additions" row in Form C of the OGO Reporting Templates

[2] Provincial funding used for acquiring capital in the current year. including any funding that was flowed to an agency in a prior period but used in the current period to acquire capital.

[3] Amounts funded (or to be funded) from non-provincial sources such as donations and grants from other levels of government, as well as the use of own resources such as own-source debt and reinvestment of internally generated surplus or reserves.

[4] Represents the voted ministry capital transfer payment to the agency for the fiscal year. May not equal the balance shown in the "Provincial Share" column above if the "Provincial Share" includes funds that were transferred to an agency in prior periods or funds that were appropriated for operating purposes, but used for capital. Otherwise the amounts should agree.

[5] For periods up to 21-22, this balance can be taken directly from the "Amortization" expense row in Form A of the OGO Reporting Templates

[6] Please provide variance explanations if the 10 year change is greater than $100M

## 2017-18 PROGRAM REVIEW, RENEWAL & TRANSFORMATION (PRRT)
## INSTRUCTIONS FOR COMPLETING THE CONSOLIDATION SUMMARY FORM

1) **THIS FORM IS TO BE COMPLETED BY THE MINISTRY.**

2) **ONLY INPUT DATA IN THE "YELLOW" SHADED CELLS OF THE FORM.**

3) **NUMBERS ARE INPUT "IN MILLIONS" WITH UP TO FOUR DECIMAL PLACES.**

4) **UNDER THE "DATA INPUT NOTES" SECTION OF THIS FORM, PLEASE ENSURE THAT THE DATA BEING INPUT IS TAKEN FROM THE SOURCE AS INSTRUCTED IN "GREEN" WITHIN EACH SECTION.**

5) **SUBMIT COMPLETED FORM TO OPCD FOR REVIEW.**

6) **UPON OPCD'S REVIEW AND APPROVAL, THE MINISTRY MUST USE THE COMPLETED FORM AS THE BASIS FOR POPULATING AGENCY CONSOLIDATION ADJUSTMENTS IN ORBIT.**

7) **MINISTRY MUST ATTACH THE COMPLETED FORM TO THE RELATED ORBIT DOCKET AS SUPPORT FOR CONSOLIDATION ADJUSTMENTS.**

# 2017-18 Program Review, Renewal and Transformation (PRRT) - Consolidation Summary Form

**Please input data in yellow cells only.**

***Agency Name:*** **Independent Electricity System Operator**
***Responsible Ministry*** **Energy**
***Date Submitted:***

| | NOTES (See | In Millions 2016-17 Interim | 2017-18 Plan | 2018-19 Outlook | 2019-20 Outlook | 2020-21 Outlook |
|---|---|---|---|---|---|---|
| **Agency Revenue - Input from Form A** | 1 | 237.4404 | 220.3991 | 225.0368 | 227.9126 | 227.9126 |
| Less: Grants & Subsidies from Province | 1 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Interest Income (to Provincial & External IOD)* | 1 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Amortization Revenue of Provincial DCC/DR | 1 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: All remaining sources of revenues earned from Province / OGO | 1 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Misc. Revenue (elimination of agency ODOE with the Ministries) | 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Other Revenues *(Input additional breakdowns in note 5)* | 5 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| ***Adjustment to CRF Revenue*** | | 237.4404 | 220.3991 | 225.0368 | 227.9126 | 227.9126 |
| **Total Agency Expense - Input from Form A** | | 211.6720 | 220.3991 | 225.0368 | 227.9126 | 227.9126 |
| Less: Operating TP | 3 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Capital TP | 3 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Interest Expense - External + Provincial *(to Provincial IOD)** | 2 | 1.7498 | 2.0374 | 2.1063 | 2.1592 | 2.1592 |
| Less: Other Expenses to Province (elimination of agency ODOE with Ministries) | 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Other Transactions (elimination of agency Revenue from Province / OGO, other than TP & amort. of DCC/DR) | 1 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Pension contributions paid to PSPP/OPSEU Pension Plan | 4 | | | | | |
| Less: Expenses for Contaminated Sites | 2 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Less: Other Expenses (*Input additional breakdowns in note 5)* | 5 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| ***Adjustment to CRF Expense*** | | **209.9222** | **218.3617** | **222.9305** | **225.7534** | **225.7534** |
| **Net Consolidated Surplus/(Deficit) agency pick-up** | | 27.5182 | 2.0374 | 2.1063 | 2.1592 | 2.1592 |
| **Net Operating expense adjustment pick-up** | | **187.4499** | **196.3478** | **200.0070** | **202.4266** | **202.4266** |
| **Net Capital expense adjustment pick-up** | | **22.4723** | **22.0139** | **22.9235** | **23.3268** | **23.3268** |
| ***Total CRF Expense Adjustment*** | | **209.9222** | **218.3617** | **222.9305** | **225.7534** | **225.7534** |
| ***Check*** | | **CORRECT** | **CORRECT** | **CORRECT** | **CORRECT** | **CORRECT** |
| ***Interest on Debt (IOD)**** | | **1.7498** | **2.0374** | **2.1063** | **2.1592** | **2.1592** |

*Fiscal impacts do not include adjustment made to IOD which is reported separately under Province's Interest on Debt

**DATA INPUT NOTES (corresponds to "NOTES" column above):**

**1** Pre-consolidated revenues per agency submission **(Form A)**:

| **REVENUE (in Millions)** | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| Grants & Subsidies from Province | | | | | |
| Government of Canada | | | | | |
| Other non-provincial grants (Municipal , etc.) | | | | | |
| Interest/Investment Income (Internal + External sources) | | | | | |
| Recognition of Deferred Revenue: | | | | | |
| From External Sources | | | | | |
| From Province / Government Controlled Organization | | | | | |
| Amortization of Deferred Capital Contributions: | | | | | |
| From External Sources | | | | | |
| From Province / Government Controlled Organization | | | | | |
| Fees & Licenses: | | | | | |
| From External Sources | 235.4402 | 220.3991 | 225.0368 | 227.9126 | 227.9126 |
| From Province / Government Controlled Organization | | | | | |
| Royalties | | | | | |
| From External Sources | | | | | |
| From Province / Government Controlled Organization | | | | | |
| Fines and Penalties | | | | | |
| From External Sources | 2.0002 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| From Province / Government Controlled Organization | | | | | |
| Sales & Rental: | | | | | |
| From External Sources | | | | | |
| From Province / Government Controlled Organization | | | | | |
| Other Revenue: | | | | | |
| From External Sources | | | | | |
| From Province / Government Controlled Organization | | | | | |
| **Total Revenue** | **237.4404** | **220.3991** | **225.0368** | **227.9126** | **227.9126** |

| Post-consolidated revenue breakdowns: *(For OPCD to complete)* | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| Vehicle/Driver Registration Fees | | | | | |
| Brewer's Manufacturing Fees | | | | | |
| Other Fees, Licences and Permits | | | | | |
| Royalties | | | | | |
| Sales and Rentals | | | | | |
| Fines and Penalties | | | | | |
| Recoveries | | | | | |
| Reimbursements | | | | | |
| Other Federal Payment | | | | | |
| Miscellaneous Revenue | | | | | |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |
| ***Check*** | **INCORRECT** | **INCORRECT** | **INCORRECT** | **INCORRECT** | **INCORRECT** |

**2** Pre-consolidated expenses per agency submission **(Form A)**:

| **EXPENSES (In Millions)** | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| Salary and Wages | 85.1765 | 92.9783 | 95.7375 | 97.4158 | 97.4158 |
| Employee Benefits | 27.7650 | 26.0699 | 26.2551 | 26.5097 | 26.5097 |
| Transportation and Communication | 3.4880 | 3.4137 | 3.4147 | 3.4154 | 3.4154 |
| Services | | | | | |
| To External Sources | 55.0182 | 57.6260 | 58.2408 | 58.6489 | 58.6489 |
| To Ministry | | | | | |
| To Other Government Controlled Organization *(elimination done by receiving agency)* | | | | | |
| Supplies and Equipment | 1.3233 | 1.2805 | 1.2808 | 1.2811 | 1.2811 |
| Amortization | 22.4723 | 22.0139 | 22.9235 | 23.3268 | 23.3268 |
| Transfer Payments | | | | | |
| Interest on Debt (External + Provincial) | 1.7498 | 2.0374 | 2.1063 | 2.1592 | 2.1592 |
| Realized Gains and Losses | (0.1345) | | | | |
| Other Expenses | | | | | |
| To External Sources | 14.8134 | 14.9794 | 15.0781 | 15.1557 | 15.1557 |
| To Ministry | | | | | |
| To Other Government Controlled Organization *(elimination done by receiving agency)* | | | | | |
| Expenses for Contaminated Sites | | | | | |
| To External Sources | | | | | |
| To Ministry | | | | | |
| To Other Government Controlled Organization *(elimination done by receiving agency)* | | | | | |
| **Total Expenses** | **211.6720** | **220.3991** | **225.0368** | **227.9126** | **227.9126** |

| | | | | | |
|---|---|---|---|---|---|
| **Agency Net Surplus/(Deficit) before eliminations (Must Agree to Surplus/Deficit balan** | 25.7684 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

**3**

| **MINISTRY TRANSFER PAYMENTS** *(* **Per Ministry Form 1B; must tie into ORBIT submissi** | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| ***Transfer Payments (In Millions):*** | | | | | |
| Operating TP from Reporting Ministry | | | | | |
| Capital TP from Reporting Ministry (please specify) | | | | | |
| **Total TP - Capital and Operating** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**4** Pension contributions paid directly by the consolidated agency to Public Service Pension Plan (PSPP) and OPSEU Pension plan **[Form A (i)]** are eliminated upon consolidation. Please enter amounts in **Form A(i)** for PSPP and/ or OPSEU.

**5** Please indicate the nature of other adjustments (i.e. reversal of unrealized gains/losses, gross-ups, other PSAB adjustments to conform to Province's accounting policy, tangible capital asset transfers out of agency at nominal value, etc.) below:

| **Breakdown of Other Revenues and Expenses** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
|---|---|---|---|---|---|
| Other Revenues: | | | | | |
| | | | | | |
| Total | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |
| Other Expenses: | | | | | |
| | | | | | |
| Total | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Additional Comments:**

**Prepared By:** _____
*(Name, Title and Contact Number)*

**Approved By:** _____
*(Name, Title and Contact Number)*

# ORBIT Structure Change Request Form

Attach completed forms to your ***ORBIT Structure Change Request*** docket and change the workflow to ***Central Agency*** .

Email: **ORBIT@ontario.ca** to advise of the update.

| | |
|---|---|
| **Ministry Name (from dropdown)** | Energy (29) |
| **Requestor Name** | Pratima Gounden |
| **Requestor Phone Number** | 647-289-4932 |
| **Manager Name** | Tai An |
| **Manager Phone Number** | 416-807-4992 |
| | |

| No. | Structure Change **(from dropdown)** | Vote Number | Item Number | Subitem Number | Account Number | Subaccount / TP Number | Description | Comment | Instruction | Check |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Add Operating Expense Item | 05 | 04 | | | | Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable | | *Specify Vote, Item and Description* | OK |
| 2 | Add Transfer Payment | 05 | 04 | | 570001 | NEW | Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable Initiative | | *Specify Vote, Item, Account, Transfer Payment (TP) and Description* | OK |
| 3 | Add Transfer Payment | 02 | 01 | | 570001 | NEW | Electric Vehicle Overnight Charging Rebate Program | | *Specify Vote, Item, Account, Transfer Payment (TP) and Description* | OK |
| 4 | Add Transfer Payment | 06 | 01 | | 570001 | NEW | Cash Contribution for First Nations | | *Specify Vote, Item, Account, Transfer Payment (TP) and Description* | OK |
| 5 | Add Transfer Payment | 06 | 01 | | 570001 | NEW | Conferred Benefit Amount | | *Specify Vote, Item, Account, Transfer Payment (TP) and Description* | OK |
| 6 | Add Operating Assets Item | 02 | 06 | | | | Natural Gas Loans | | *Specify Vote, Item and Description* | OK |
| 7 | Add Operating Expense Item | 02 | 07 | | | | Natural Gas Loan Interest | | *Specify Vote, Item and Description* | OK |
| 8 | Add Transfer Payment | 02 | 07 | | 570001 | NEW | Natural Gas Loan Interest Incentives | | *Specify Vote, Item, Account, Transfer Payment (TP) and Description* | OK |
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# ORBIT Structure Change Request Form

Attach completed forms to your ***ORBIT Structure Change Request*** docket and change the workflow to ***Central Agency*** .

Email: **ORBIT@ontario.ca** to advise of the update.

| | |
|---|---|
| **Ministry Name (from dropdown)** | Energy (29) |
| **Requestor Name** | Pratima Gounden |
| **Requestor Phone Number** | 647-289-4932 |
| **Manager Name** | Tai An |
| **Manager Phone Number** | 416-807-4992 |
| | |

| No. | Structure Change **(from dropdown)** | Vote Number | Item Number | Subitem Number | Account Number | Subaccount / TP Number | Description | Comment | Instruction | Check |
|---|---|---|---|---|---|---|---|---|---|---|
| 22 | | | | | | | | | | |
| 23 | | | | | | | | | | |
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# ORBIT Structure Change Request Form

Attach completed forms to your ***ORBIT Structure Change Request*** docket and change the workflow to ***Central Agency*** .

Email: **ORBIT@ontario.ca** to advise of the update.

| | |
|---|---|
| **Ministry Name (from dropdown)** | Energy (29) |
| **Requestor Name** | Pratima Gounden |
| **Requestor Phone Number** | 647-289-4932 |
| **Manager Name** | Tai An |
| **Manager Phone Number** | 416-807-4992 |
| | |

| No. | Structure Change **(from dropdown)** | Vote Number | Item Number | Subitem Number | Account Number | Subaccount / TP Number | Description | Comment | Instruction | Check |
|---|---|---|---|---|---|---|---|---|---|---|
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| 44 | | | | | | | | | | |
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| 47 | | | | | | | | | | |
| 48 | | | | | | | | | | |
| 49 | | | | | | | | | | |

*** To finalize any de-activation requested, Ministries will be required to transfer all information recorded against organizational structure to another vote and item, sub-tem or sub-account within the ministry. Quantitative Management will provide the details of information to be transferred if this situation arise.**

# LIST OF TB/MBC DECISIONS
# Ministry of ENERGY

## I. BOULDERS

**Transfer Payment Administrative Modernization (TPAM) Boulder [D0042340]**

As part of the Transfer Payment Administrative Modernization Boulder, approve the increase of the Grants Ontario business line from Treasury Board Secretariat to Ministry of Government and Consumer Services to better align enterprise service responsibilities:

In this regard, the Board:

i) Approve decrease in savings target of $51,600 for 2017-18 and ongoing.

ii) Approve a decrease of $50,000 in 2017-18 and ongoing in the Ministry of Energy's Vote/Item 2902-01, Energy Development and Management, to provide permanent base funding for Grants Ontario.

## II. PROGRAM DECISIONS

### i. Programs / Functions Requiring a Program Note

**Program A – Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable [D0042330]**

| Proposed Minute |
|---|
| APPROVE the creation of a new Operating Expense item entitled "Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable" under Vote/Item 2905-04, Electricity Price Mitigation. |
| APPROVE the creation of a new transfer payment line entitled "Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable Initiative" under Vote/Item 2905-04, Electricity Price Mitigation. |
| APPROVE an expenditure increase of $249,000,000 in 2017-18, $263,000,000 in 2018-19, $276,000,000 in 2019-20, $319,000,000 in 2020-21 in the transfer payment line entitled "Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable Initiative" under Vote/Item 2905-04, Electricity Price Mitigation. |

# LIST OF TB/MBC DECISIONS
# Ministry of ENERGY

Treasury Board/Management Board of Cabinet approve the following multi-year resources for the program:

| Financial Decisions $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|
| **Operating Expense** | **249.0000** | **263.0000** | **276.0000** | **319.0000** |
| **Capital Expense** | | | | |
| **Total Expense** | **249.0000** | **263.0000** | **276.0000** | **319.0000** |
| **Operating Assets** | | | | |
| **Capital Assets** | | | | |

In this regard, the Board:

| | | |
|---|---|---|
| i) | APPROVE the creation of a new Operating Expense item entitled “Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable” under Vote/Item 2905-04, Electricity Price Mitigation. | D0042330 |
| ii) | APPROVE the creation of a new transfer payment line entitled “Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable Initiative” under Vote/Item 2905-04, Electricity Price Mitigation. | D0042330 |
| iii) | APPROVE an expenditure increase of $249,000,000 in 2017-18, $263,000,000 in 2018-19, $276,000,000 in 2019-20, $319,000,000 in 2020-21 in the transfer payment line entitled “Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable Initiative” under Vote/Item 2905-04, Electricity Price Mitigation. | D0042197 |

# LIST OF TB/MBC DECISIONS
# Ministry of ENERGY

**Program B - Electric Vehicle Overnight Charging Rebate Program [D0042331]**

| Proposed Minute |
|---|
| APPROVE the creation of a new transfer payment line entitled “Electric Vehicle Overnight Charging Rebate Program” under Vote/Item 2902-01, Energy Development and Management. |
| APPROVE an expenditure increase of $2,150,000 in 2017-18, $2,700,000 in 2018-19, $3,700,000 in 2019-20, and $5,000,000 2020-21 in the transfer payment line entitled “Electric Vehicle Overnight Charging Rebate Program” under Vote/Item 2902-01, Energy Development and Management. |
| NOTE a funding requirement of $1,450,000 in 2021-22. |
| NOTE the Ministry will report back to Treasury Board/Management Board of Cabinet on staffing requirements and further program design in 2017. |

Treasury Board/Management Board of Cabinet approve the following multi-year resources for the program:

| Financial Decisions $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|
| **Operating Expense** | **2.1500** | **2.7000** | **3.7000** | **5.0000** |
| **Capital Expense** | | | | |
| **Total Expense** | **2.1500** | **2.7000** | **3.7000** | **5.0000** |
| **Operating Assets** | | | | |
| **Capital Assets** | | | | |

In this regard, the Board:

| | |
|---|---|
| i) APPROVE the creation of a new transfer payment line entitled “Electric Vehicle Overnight Charging Rebate Program” under Vote/Item 2902-01, Energy Development and Management. | D0042331 |
| i) APPROVE an expenditure increase of $2,150,000 in 2017-18, $2,700,000 in 2018-19, $3,700,000 in 2019-20, and $5,000,000 2020-21 in the transfer payment line entitled “Electric Vehicle Overnight Charging Rebate Program” under Vote/Item 2902-01, Energy Development and | D0042201 |

# LIST OF TB/MBC DECISIONS
# Ministry of ENERGY

| | | |
|---|---|---|
| | Management. | |
| ii) | NOTE a funding requirement of $1,450,000 in 2021-22. | D0042201 |
| iii) | NOTE the Ministry will report back to Treasury Board/ Management Board of Cabinet on staffing requirements and further program design in 2017. | D0042331 |

**Program C – Strategic Asset Management [D0042434]**

| Proposed Minute |
|---|
| APPROVE an expenditure increase of $70,000,000 in 2017-18 and $5,000,000 in 2019-20 and onwards under Vote/Item 2906-01, Strategic Asset Management and Transformation. |
| APPROVE 5 FTEs the Ministry of Energy received during the 2016-17 PRRT for the establishment of the Investment and Governance Secretariat on a permanent basis. |
| APPROVE an expenditure increase in the amount of $930,000, including $580,000 in salary and wages to support the Investment and Governance Secretariat in 2019-20 and onwards under Vote/Item 2902-01, Energy Development and Management. |
| APPROVE the creation of a new transfer payment line entitled “Cash Contribution for First Nations” under Vote/Item 2906-01, Strategic Asset Management and Transformation. |
| APPROVE an expenditure decrease of $15,000,000 in 2017-18 to 2019-20 under Vote/Item 2902-01, Energy Development and Management and an expenditure increase of $45,000,000 in 2017-18 in the transfer payment line entitled “Cash Contribution for First Nations” under Vote/Item 2906-01, Strategic Asset Management and Transformation. |
| APPROVE the creation of a new transfer payment line entitled “Conferred Benefit Amount” under Vote/Item 2906-01, Strategic Asset Management and Transformation. |
| APPROVE an expenditure increase of $135,000,000 in 2017-18 in the Transfer Payment line entitled “Conferred Benefit Amount” under Vote/Item 2906-01, Strategic Asset Management and Transformation. |

# LIST OF TB/MBC DECISIONS
# Ministry of ENERGY

Treasury Board/Management Board of Cabinet approve the following multi-year resources for the program:

| Financial Decisions $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|
| **Operating Expense Vote 2902-01** | **-15.0000** | **-15.0000** | **-15.0000** | |
| **Operating Expense Vote 2906-01** | **250.0000** | | **5.9300** | **5.9300** |
| **Capital Expense** | | | | |
| **Total Expense** | **235.0000** | **-15.0000** | **-9.0700** | **5.9300** |
| **Operating Assets** | | | | |
| **Capital Assets** | | | | |

In this regard, the Board:

| | | |
|---|---|---|
| i) | APPROVE an expenditure increase of $70,000,000 in 2017-18 and $5,000,000 in 2019-20 and onwards under Vote/Item 2906-01, Strategic Asset Management and Transformation. | D0042437 |
| ii) | APPROVE 5 FTEs the Ministry of Energy received during the 2016-17 PRRT for the establishment of the Investment and Governance Secretariat on a permanent basis. | D0042454 |
| iii) | APPROVE an expenditure increase in the amount of $930,000, including $580,000 in salary and wages to support the Investment and Governance Secretariat in 2019-20 and onwards under Vote/Item 2902-01, Energy Development and Management. | D0042454 |
| iv) | APPROVE the creation of a new transfer payment line entitled “Cash Contribution for First Nations” under Vote/Item 2906-01, Strategic Asset Management and Transformation. | D0042437 |
| v) | APPROVE an expenditure decrease of $15,000,000 in 2017-18 to 2019-20 under Vote/Item 2902-01, Energy Development and Management and an expenditure increase of $45,000,000 in 2017-18 in the transfer payment line entitled “Cash Contribution for First Nations” under Vote/Item 2906-01, Strategic Asset Management and Transformation. | D0042460 |

# LIST OF TB/MBC DECISIONS
# Ministry of ENERGY

| | | |
|---|---|---|
| vi) | APPROVE the creation of a new transfer payment line entitled “Conferred Benefit Amount” under Vote/Item 2906-01, Strategic Asset Management and Transformation. | D0042437 |
| vii) | APPROVE an expenditure increase of $135,000,000 in 2017-18 in the Transfer Payment line entitled “Conferred Benefit Amount” under Vote/Item 2906-01, Strategic Asset Management and Transformation. | D0042465 |

**Program D - Ontario Rebate for Electricity Consumers [D0042466]**

| Proposed Minute |
|---|
| APPROVE an expenditure increase of $94,000,000 in 2017-18, $96,000,000 in 2018-19, $196,000,000 in 2019-20, and $196,000,000 in 2020-21, under Vote/Item 2905-03 Ontario Rebate for Electricity Consumers. |
| APPROVE 4 new permanent FTEs starting in 2017-18 and onwards to support policy and operational responsibilities related to the Ontario Rebate for Electricity Consumers. |
| APPROVE an expenditure increase of $610,000, including $410,000 in salary and wages in 2017-18 and onwards under Vote/Item 2902-01, Energy Development and Management. |
| APPROVE an expenditure increase of $2,500,000 for program delivery in 2017-18 and onwards under Vote/Item 2902-01, Energy Development and Management. |

Treasury Board/Management Board of Cabinet approve the following multi-year resources for the program:

| Financial Decisions $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|
| **Operating Expense** | **97.1100** | **99.1100** | **199.1100** | **199.1100** |
| **Capital Expense** | | | | |
| **Total Expense** | **97.1100** | **99.1100** | **199.1100** | **199.1100** |
| **Operating Assets** | | | | |
| **Capital Assets** | | | | |

In this regard, the Board:

| | | |
|---|---|---|
| i) | APPROVE an expenditure increase of $94,000,000 in 2017-18, $96,000,000 in 2018-19, $196,000,000 in 2019-20, and $196,000,000 in 2020-21, under Vote/Item 2905-03 Ontario Rebate for Electricity Consumers. | D0042468 |
| ii) | APPROVE 4 new permanent FTEs starting in 2017-18 and onwards to support policy and operational responsibilities related to the Ontario Rebate for Electricity Consumers. | D0042470 |
| iii) | APPROVE an expenditure increase of $610,000, including $410,000 in salary and wages in 2017-18 and onwards under Vote/Item 2902-01, Energy Development and Management. | D0042470 |
| iv) | APPROVE an expenditure increase of $2,500,000 for program delivery in 2017-18 and onwards under Vote/Item 2902-01, Energy Development and Management. | D0042470 |

## ii. Programs / Functions Not Requiring a Program Note

**Natural Gas Access Loan [D0042660]**

| Technical Decisions $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|
| **Operating Expense** | **0.0010** | **0.0010** | **0.0010** | **0.0010** |
| **Capital Expense** | | | | |
| **Total Expense** | **0.0010** | **0.0010** | **0.0010** | **0.0010** |
| **Operating Assets** | **0.0010** | **0.0010** | **0.0010** | **0.0010** |
| **Capital Assets** | | | | |

In this regard, the Board:

i) APPROVE the creation of a new Operating Asset item entitled “Natural Gas Loans” under Vote/Item 2902-06, Energy Development and Management with a $1,000 placeholder for Natural Gas Loan disbursements.

# LIST OF TB/MBC DECISIONS
# Ministry of ENERGY

ii) Approve the creation of a new Operating Expense item entitled “Natural Gas Loan Interest” under Vote/Item 2902-07, Energy Development and Management.

iii) Approve the creation of Transfer Payment line entitled “Natural Gas Loan Interest Incentive” in Vote/Item 2902-07, Energy Development and Management with a $1,000 placeholder to record borrowing cost to the province for providing an interest free loan. Note that expense impact will be offset from the Ministry of Infrastructure’s Natural Gas Loan Interest Incentives transfer payment line (Vote/Item 902-30).

iv) Note that bad debt expense incurred by ENERGY will be offset from the Ministry of Infrastructure’s bad debt expense allocation established for the Natural Gas Access Loan Program.

**Ministry Savings Target [D0042979]**

Approve a expenditure decrease of $1,930,600 in 2017-18 and onwards for the Ministry’s savings target under Vote/Item 2902-01, Energy Development and Management.

| Technical Decisions $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|
| Operating Expense | -1.9306 | -1.9306 | -1.9306 | -1.9306 |
| Capital Expense | | | | |
| Total Expense | -1.9306 | -1.9306 | -1.9306 | -1.9306 |
| Operating Assets | | | | |
| Capital Assets | | | | |

In this regard, the Board:

i) APPROVE a expenditure decrease of $1,930,600 in 2017-18 and onwards for the Ministry’s savings target under Vote/Item 2902-01, Energy Development and Management.

# LIST OF TB/MBC DECISIONS
# Ministry of ENERGY

Inter-ministry transfers

**Temporary FTE Transfer to MAG [D0042590]**

In this regard, the Board:

i) APPROVE a temporary transfer of one FTE from the ENERGY to MAG (Vote-Item 304-2) to support ongoing energy related work for 2017-2018 only.

**Temporary FTE Transfer to GSIC [D0041897]**

In this regard, the Board:

i) APPROVE a temporary transfer of 2 FTEs from ENERGY (Vote/Item 2902-01 Energy Development and Management) to MGCS (Vote/Item 1817-01), to support the Energy and Water Reporting and Benchmarking Project for 2017-18 only.

**ENERGY Transfer to MGCS for IT-Rationalization Initiatives [D0041166]**

In this regard, the Board:

i) APPROVE a decrease in Recoveries of $148,800 in 2017-18 and ongoing in GSIC Vote-Item 1817-01 offset by decreases in Services of $24,300 in MEDEI/MRI Vote-Item 0901-01, $9,700 in ENERGY Vote-Item 2901-01, $56,300 in ServiceOntario Vote-Item 1814-01, and $58,500 in Ontario Shared Services Vote-Item 1811-05 pertaining to User Seat services.

## iii. Report Backs

| Report Backs | Proposed Minute |
|---|---|
| **Annual GIF Report Back** | RECEIVED the report back providing the outcomes achieved, including an estimate of reduction in GHG emissions |

# PROGRAM NOTE

# ENERGY – Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable

| | |
|---|---|
| Government Priority Outcome | **Leader on Environmental Sustainability & Climate Change Mitigation** |
| Program Type | **Assisting** |
| Ministry Linkages | **MNDM, MEDG and MNRF** |

## I. Program Overview

| | Current Allocation | | | | PROPOSED ALLOCATION | | | |
|---|---|---|---|---|---|---|---|---|
| **$M** | 17-18 | 18-19 | 19-20 | 20-21 | **17-18** | **18-19** | **19-20** | **20-21** |
| Operating Expense | | | | | **249** | **263** | **276** | **319** |
| Capital Expense | | | | | | | | |
| Total Expense* | | | | | **249** | **263** | **276** | **319** |
| Operating Assets | | | | | | | | |
| Capital Assets | | | | | | | | |

Notes:
1. Table should be presented on a fully consolidated basis. Capital assets include acquisitions of consolidated entities. Consolidation information should be consistent with information in ORBIT and information submitted to the Office of the Provincial Controller Division (OPCD).
2. See ORBIT for current allocation.
*Reflects sum of all financial impacts related to Key Operating, Capital, Climate Change and Technical Decisions.

- Ontario's cap and trade program will result in an increase in electricity prices. Recycling cap and trade auction proceeds to lower the cost of electricity would offset electricity consumers' contributions to investments/initiatives which reduce greenhouse gas (GHG) emissions (e.g., non-emitting generation, conservation programs, etc.).

- Using cap and trade auction proceeds to lower the cost of electricity would make electricity more competitive with traditionally cheaper fossil fuels. By using the proceeds to lower the cost of electricity, consumers will be incented to fuel-switch away from fossil fuels toward much cleaner grid-connected electricity.

- Lowering the cost of electricity would have the desired effect of fuel switching in building and home heating, electric vehicles and the electrification of transit, and industrial processes.

- As recognized by Ontario's Climate Change Action Plan (CCAP), "technologies that are readily available

and being used today can significantly reduce energy demands and GHG emissions."

- Due to the long-term nature (i.e., typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period (2017-2020). These costs will continue well beyond the timelines described in the CCAP. Auction proceeds recycling would help reduce electricity sector emissions by, directly and / or indirectly, offsetting the cost of non-emitting generation and conservation programs.

- The Ministry of Energy estimates approximately 3,300,000 tonnes of GHG emissions reductions by 2020 associated with "planned/committed" electricity sector initiatives that were developed following the 2013 Long-Term Energy Plan (LTEP). The forecast amount of GHG emissions savings is based on planned/committed electricity projects that have not yet been funded by electricity ratepayers. By using the proceeds to lower the cost of electricity, there is potential to support CCAP goals of fuel-switching and electrification.

- Fuel-switching to clean electricity supports the following CCAP goals:
    - Production or installation of renewable, low-carbon, carbon-free and net zero alternative energy;
    - Distributed renewable generation and energy management technologies to support load-shifting, energy storage, net metering and other measures to eliminate the need for grid-based electricity during natural gas peaking periods; and
    - Reduction of GHGs from land use and buildings including the adoption and use of zero emission and plug-in hybrid vehicles, and low-carbon alternative fuels.

# PROGRAM NOTE

# ENERGY – Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable

## II. Proposed Program Changes

- Ontario's cap and trade program will result in an increase in electricity prices. Recycling cap and trade auction proceeds to lower the cost of electricity would offset electricity consumers' contributions to investments/initiatives which reduce greenhouse gas (GHG) emissions (e.g., non-emitting generation, conservation programs, etc.).

- As recognized by Ontario's Climate Change Action Plan (CCAP), "technologies that are readily available and being used today can significantly reduce energy demands and GHG emissions."

- Cap and trade auction proceeds recycling would help reduce electricity sector GHG emissions by, directly and / or indirectly, offsetting the cost of non-emitting generation and conservation programs. Due to the long-term nature (i.e., typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period (2017-2020). These costs will continue well beyond the timelines described in the CCAP.

- By using the proceeds to lower the cost of electricity, CCAP goals of fuel-switching and electrification will also be supported. The Ministry of Energy estimates approximately 3,300,000 tonnes of GHG emissions reductions by 2020 associated with "planned/committed" electricity sector initiatives that were developed following the 2013 Long-Term Energy Plan (LTEP). The forecast amount of GHG emissions savings is based on planned/committed electricity projects that have not yet been funded by electricity ratepayers.

- On September 12, 2016, Cabinet directed the Ministry of Energy, working with MOECC, to report back to Cabinet on an approach to recycle cap and trade proceeds to industrial and commercial electricity consumers over the first compliance period (2017-2020).

- On September 12, 2016, Ontario announced a number of initiatives to reduce electricity bills for consumers across the province, including the intention to use a portion of the cap and trade auction proceeds to help keep electricity prices affordable for industrial and commercial electricity consumers.

- For FY 2017-18, the Ministry of Energy is requesting $249 million.

- Implementation and delivery:

    - The Ministry is refining the program design, including approach and mechanism, and is expected to report back to Cabinet in November 2016.

    - Depending on the final approach, legislation, regulation or Lieutenant Governor in Council (LGIC) regulation may be required to allow the Independent Electricity System Operator (IESO) and Local Distribution Companies (LDCs) to recycle proceeds to consumers. The program dates are subject to change.

    - ENERGY Legal Services Branch is analyzing the required changes to ENERGY's statutes (e.g., Electricity Act, 1998) and regulations.

# PROGRAM NOTE

# ENERGY – Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable

- ENERGY LSB has identified some key areas where legislative and/or regulatory amendments are likely necessary depending on which mechanism to recycling proceeds is chosen.

- Such amendments could include, clarifying that the IESO can receive amounts from the GGRA and ensuring that Ontario Energy Board (OEB) and IESO have the necessary authority to address electricity pricing matters as contemplated.

- Furthermore, IESO and electricity distribution companies would need to update billing systems to reflect the recycled proceeds on bills for consumers.

## III. Decisions

## 1) Operating Decisions

### Key Decisions

### Greenhouse Gas Reduction Account Decisions

**A.** APPROVE an expenditure increase of $249,000,000 in 2017-18, $263,000,000 in 2018-19, $276,000,000 in 2019-20, $319,000,000 in 2020-21 in the transfer payment line entitled “Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable Initiative” under Vote/Item 2905-04, Electricity Price Mitigation.

GGRA#: 91

| $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 | Docket # |
|---|---|---|---|---|---|
| **Operating Expense** | **249** | **263** | **276** | **319** | D0042197 |
| **GGRA Offset** | **249** | **263** | **276** | **319** | |

- The funding for this GGRA item will be flowed out through a new TP line. This funding is for the first compliance period (2017-2020).

### Non-Financial Decisions

**Docket #** D0042330

- APPROVE the creation of a new Operating Expense item entitled “Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable” under Vote/Item 2905-04, Electricity Price Mitigation.

- APPROVE the creation of a new transfer payment line entitled “Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable Initiative” under Vote/Item 2905-04, Electricity Price Mitigation.

# PROGRAM NOTE

# ENERGY – Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable

## IV. Outcome Measures

| Outcome Measures | Docket # | N/A |
|---|---|---|

**Desired Outcomes/Outputs**

| Measure | Outcome |
|---|---|
| Proceeds from Cap and Trade / Greenhouse Gas Reduction Account | • $ million per year |
| Electricity Commodity Price ($/MWh) | • Estimated cost-savings to consumers relative to what they otherwise would have paid |

- Keep electricity prices affordable for industrial and commercial electricity consumers to incent fuel-switching away from more GHG intensive fossil fuels to clean electricity.

- Electricity prices have increased over time when electricity sector emissions have decreased. Since 2003, Ontario has invested more than $30 billion in over 11,000 megawatts (MW) of new and refurbished clean generation, including nuclear, hydro, wind and solar – this represents about 30% of our current supply. Ontario eliminated coal-fired electricity generation, replacing it with cleaner sources of energy, which has decreased electricity sector emissions by approximately 80% since 2003.

- The costs associated with ongoing investments in the electricity sector to ensure a clean, low-GHG-emitting system are significant and continue to be borne by electricity consumers. Due to the long-term nature (i.e., typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period (2017-2020). These costs will continue well beyond the timelines described in Ontario's Climate Change Action Plan (CCAP). Auction proceeds recycling would help reduce electricity sector greenhouse gas (GHG) emissions by, directly and/or indirectly, offsetting the cost of non-emitting generation and conservation programs.

- Using cap and trade auction proceeds to lower the cost of electricity would make it more competitive with traditionally cheaper fossil fuels, providing an incentive to fuel switch from fossil fuels to electricity. Ontario's electricity sector is now approximately 90% emissions-free. Ontario's grid electricity currently has an emission factor which is far lower than the carbon content of natural gas or diesel.

- During off-peak periods, Ontario's current mix of electricity resources typically emits low levels of emissions. This puts Ontario's electricity sector in a strong position to support fuel switching as a GHG-reducing activity. Recycling proceeds to consumers by lowering electricity prices would help to maintain the emission reductions achieved thus far and encourage further reductions in the future.

- By using the auction proceeds to lower the cost of electricity, consumers will be incented to fuel-switch away from fossil fuels toward much cleaner grid-connected electricity. Lowering the cost of electricity would have the desired effect of fuel switching in building and home heating, electric vehicles and the

electrification of transit, and industrial processes. Fuel-switching to clean electricity supports the following CCAP goals:

  - Production or installation of renewable, low-carbon, carbon-free and net zero alternative energy;
  - Distributed renewable generation and energy management technologies to support load-shifting, energy storage, net metering and other measures to eliminate the need for grid-based electricity during natural gas peaking periods; and
  - Reduction of GHGs from land use and buildings including the adoption and use of zero emission and plug-in hybrid vehicles, and low-carbon alternative fuels.

- On September 12, 2016, Cabinet directed the Ministry of Energy, working with MOECC, to report back to Cabinet on an approach to recycle cap and trade proceeds to industrial and commercial electricity consumers over the first compliance period (2017-2020).

- On September 12, 2016, Ontario announced a number of initiatives to reduce electricity bills for consumers across the province, including the intention to use a portion of the cap and trade auction proceeds to help keep electricity prices affordable for industrial and commercial electricity consumers.

**Approach:**

- A decision has not been made on the mechanism to enable proceeds recycling to industrial and commercial electricity consumers. As directed by Cabinet on September 12, 2016, the Ministry of Energy is to report back to Cabinet (and Treasury Board) on the approach to recycle proceeds.

## V. Additional Considerations

### Implementation

- See above for the rationale.

- A decision has not been made on the mechanism to enable proceeds recycling to industrial and commercial electricity consumers. As directed by Cabinet on September 12, 2016, the Ministry of Energy is to report back to Cabinet (and Treasury Board) on the approach to recycle proceeds. Cabinet report back is expected in November 2016 (TBC).

- Depending on the final approach, legislation, regulation or LGIC may be required to allow the IESO and LDCs to recycle auction proceeds to consumers. Dates are subject to change. ENERGY Legal Services Branch (LSB) is analyzing the required changes to ENERGY's statutes (e.g., Electricity Act, 1998) and regulations.

# PROGRAM NOTE

# ENERGY – Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable

- ENERGY LSB has identified some key areas where legislative and/or regulatory amendments are likely necessary depending on which mechanism to recycling proceeds is chosen.

- Such amendments could include, clarifying that the IESO can receive amounts from the GGRA and ensuring that OEB and IESO have the necessary authority to address electricity pricing matters as contemplated.

- Furthermore, IESO and electricity distribution companies would need to update billing systems to reflect the recycled proceeds on bills for consumers.

## Communications/Stakeholder Engagement Plans

- Stakeholders include all non-residential electricity consumers and LDCs (i.e., billing system changes to facilitate proceeds recycling).

- Work with ENERGY Communications to develop communication plan and key messaging.

- Key Messages could include:
    - Ontario has been taking strong climate-positive actions for years, such as successfully eliminating coal as a source of electricity generation and developing a long-term energy plan that focuses on a safe, clean, reliable and affordable energy future.

    - Since 2003, Ontario has invested more than $30 billion in over 11,000 megawatts (MW) of new and refurbished clean generation, including nuclear, hydro, wind and solar – this represents about 30% of our current supply. Ontario eliminated coal-fired electricity generation, replacing it with cleaner sources of energy, which has decreased electricity sector emissions by approximately 80% since 2003.

    - The Climate Change Action Plan (CCAP) indicated a desire of using cap and trade proceeds to keep electricity rates.

    - Ontario intends to use cap and trade proceeds to keep electricity rates affordable for commercial and industrial electricity consumers.

    - Keeping electricity prices affordable for industrial and commercial electricity consumers to incent fuel-switching away from more greenhouse gas (GHG) intensive fossil fuels to clean electricity.

# PROGRAM NOTE

# ENERGY – Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable

| Risks | Docket # | N/A |
|---|---|---|

| Risk | Likelihood (L/M/H) | Impact (L/M/H) | Mitigation Strategy |
|---|---|---|---|
| Legal | L | L | ENERGY LSB is analyzing the required changes to ENERGY's statutes (e.g., Electricity Act, 1998) and regulations.<br><br>ENERGY LSB has identified some key areas where legislative and/or regulatory amendments are likely necessary depending on which mechanism to recycle proceeds is chosen.<br><br>Such amendments could include, clarifying that the Independent Electricity System Operator (IESO) can receive amounts from the GGRA and ensuring that Ontario Energy Board (OEB) and IESO have the necessary authority to address electricity pricing matters as contemplated. |
| Timing | H | M | The recovery of cap and trade costs from natural gas consumers is set by the Ontario Energy Board (OEB) could begin as early as the beginning of 2017. This means that natural gas-fired generators would pass on the cost of carbon at the same time. Billing for the cost of cap and trade is expected to begin as of January 2017.<br><br>While the impact of cap and trade would be added to electricity bills as of January 2017, the offsetting effect of proceeds recycling may not occur immediately depending on implementation and potential alignment with the first auction expected in March 2017.<br><br>Furthermore, IESO and electricity distribution companies would need to update billing systems to reflect the recycled proceeds on bills for consumers. |

# PROGRAM NOTE

# ENERGY – Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable

## VI. Proposed Minute

**Proposed Minute**

- APPROVE the creation of a new Operating Expense item entitled “Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable” under Vote/Item 2905-04, Electricity Price Mitigation.
- APPROVE the creation of a new transfer payment line entitled “Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable Initiative” under Vote/Item 2905-04, Electricity Price Mitigation.
- APPROVE an expenditure increase of $249,000,000 in 2017-18, $263,000,000 in 2018-19, $276,000,000 in 2019-20, $319,000,000 in 2020-21 in the transfer payment line entitled “Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable Initiative” under Vote/Item 2905-04, Electricity Price Mitigation.

Approve the following multi-year resources for the program:

| Financial Decisions $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|
| **Operating Expense** | **249** | **263** | **276** | **319** |
| **Capital Expense** | | | | |
| **Total Expense** | **249** | **263** | **276** | **319** |
| **Operating Assets** | | | | |
| **Capital Assets** | | | | |

In this regard:

- APPROVE the creation of a new Operating Expense item entitled “Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable” under Vote/Item 2905-04, Electricity Price Mitigation.
- APPROVE the creation of a new transfer payment line entitled “Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable Initiative” under Vote/Item 2905-04, Electricity Price Mitigation.
- APPROVE an expenditure increase of $249,000,000 in 2017-18, $263,000,000 in 2018-19, $276,000,000 in 2019-20, $319,000,000 in 2020-21 in the transfer payment line entitled “Cap and Trade Proceeds Recycling to Keep Electricity Rates Affordable Initiative” under Vote/Item 2905-04, Electricity Price Mitigation.

# PROGRAM NOTE

# ENERGY – Electric Vehicle Overnight Charging Rebate Program

| | |
|---|---|
| Government Priority Outcome | **Leader on Environmental Sustainability & Climate Change Mitigation** |
| Program Type | **Supporting** |
| Ministry Linkages | **MTO** |

## I. Program Overview

| | Current Allocation | | | | | PROPOSED ALLOCATION | | | |
|---|---|---|---|---|---|---|---|---|---|
| **$M** | 17-18 | 18-19 | 19-20 | 20-21 | | **17-18** | **18-19** | **19-20** | **20-21** |
| Operating Expense | | | | | | **2.15** | **2.7** | **3.7** | **5.0** |
| Capital Expense | | | | | | | | | |
| Total Expense* | | | | | | **2.15** | **2.7** | **3.7** | **5.0** |
| Operating Assets | | | | | | | | | |
| Capital Assets | | | | | | | | | |

Notes:
1. Table should be presented on a fully consolidated basis. Capital assets include acquisitions of consolidated entities. Consolidation information should be consistent with information in ORBIT and information submitted to the Office of the Provincial Controller Division (OPCD).
2. See ORBIT for current allocation.
*Reflects sum of all financial impacts related to Key Operating, Capital, Climate Change and Technical Decisions.

This initiative is directed by Cabinet Minutes of 11 May 2016. Minute 10: "ENERGY work with MOECC and MTO to establish a 4 year time-limited free overnight charging program for residential and affected multi-unit residential customers/building and report back to Cabinet in 2016."

The Ontario government wishes to increase the number and use of electric vehicles in Ontario. Free overnight charging provides an incentive to acquire and make use of an electric vehicle by reducing the running costs of electric vehicles.

This initiative is expected to reduce GHGs from automobiles by encouraging greater acquisition and use of EVs, and encouraging EV owners to shift to charging during off-peak hours, reducing peaking demand (which is typically when natural gas electricity generation plants are used to meet power demand).

# PROGRAM NOTE

# ENERGY – Electric Vehicle Overnight Charging Rebate Program

While the Minute states the program is to provide “free overnight charging”, based upon average daily EV charging rates and anticipated EV adoption, the $15 million in funding announced in CCAP would be insufficient.

## II. Proposed Program Changes

- This is a new program announced in the Climate Change Action Plan (CCAP), which was released on June 8, 2016 by the Ministry of Environment and Climate Change (MOECC).
- Using the MOECC CCAP EV uptake forecast, which targets 5% of annual sales to be EVs by 2020 (14,000 EVs), the Ministry estimates there would be about 2,400 vehicles added each year, resulting in almost 52,000 EV on the road by the end of 2020.

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|
| EV Sales | 1,900 | 4,300 | 6,700 | 9,200 | 11,600 | 14,000 | 16,400 |
| EVs at Year End | 5,900 | 10,200 | 16,900 | 26,100 | 37,700 | 51,700 | 68,100 |

- Based on the assumption that owners drive their car 50 kilometers a day (18,250 kms/ year), EVs would require about 8 kilowatt hours (kWh) of charging each day. Using the current time-of-use (TOU) off-peak rate and variable delivery charges, this works out to $1.04 a day, or $380 a year.
    - This forecast assumes a 90% participation rate and a 90% rate of qualification for the rebate (see Measuring Behavior).These assumptions are based on the expectation that majority of customers will be incented to participate to receive the rebate.
- The Ministry estimates that a 4-year program capped at $15 million with comprehensive coverage of EV owners across Ontario would enable an annual rebate of $105.
    - Since specific program design has not been determined yet, the Ministry estimates administration costs of about 10% of total program costs, or about $1.5 million, bringing total program costs to $15 million. Administration costs are assumed to be front-loaded, with annual processing costs of about $200,000.
- To provide the equivalent of free EV charging during overnight / off-peaks times, additional funding would be required to deliver a four-year program.

# PROGRAM NOTE

# ENERGY – Electric Vehicle Overnight Charging Rebate Program

| Fiscal Year Funding Requirements (July 1, 2017 Start Date) | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 4 Year Total |
|---|---|---|---|---|---|---|
| Annual Rebate Cost: $105/ customer ($s) | 1,300,000 | 2,500,000 | 3,500,000 | 4,800,000 | 1,400,000 | 13,500,000 |
| Administrative Cost | 850,000 | 200,000 | 200,000 | 200,000 | 50,000 | 1,500,000 |
| **Total Cost ($)** | **2,150,000** | **2,700,000** | **3,700,000** | **5,000,000** | **1,450,000** | **15,000,000** |

Other Program Approvals

- The Ministry plans to seek approval of program details from Cabinet at a future date.
- If the program design requires a government ministry to administer the program, a request to TB/MBC may be made for FTEs.

## III.Decisions

## 1) Operating Decisions

### Key Decisions

### Greenhouse Gas Reduction Account Decisions

**A.** APPROVE an expenditure increase of $2,150,000 in 2017-18, $2,700,000 in 2018-19, $3,700,000 in 2019-20, and $5,000,000 2020-21 in the transfer payment line entitled "Electric Vehicle Overnight Charging Rebate Program" under Vote/Item 2902-01, Energy Development and Management.

**B.** Note a funding requirement of $1,450,000 in 2021-22.

GGRA#: 10

| $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 | Docket # |
|---|---|---|---|---|---|
| **Operating Expense** | **2.15** | **2.7** | **3.7** | **5.0** | D0042201 |
| **GGRA Offset** | **2.15** | **2.7** | **3.7** | **5.0** | |

- The funding for this GGRA item will be flowed out through the TP line. This funding is for the first compliance period.

# PROGRAM NOTE

# ENERGY – Electric Vehicle Overnight Charging Rebate Program

## Non-Financial Decisions

| | Docket # | D0042331 |
|---|---|---|
| • APPROVE the creation of a new transfer payment line entitled “Electric Vehicle Overnight Charging Rebate Program” under Vote/Item 2902-01, Energy Development and Management. | | |

## IV. Outcome Measures

| Outcome Measures | Docket # | N/A |
|---|---|---|

**Desired Outcomes/Outputs**

As articulated in the CCAP, the desired outcome of this program is increased EV purchases as a proportion of overall vehicle sales, and EV charging during off-peak hours. Data collection would be a corollary output.

The Ministry is engaging with other ministries responsible for EV-related programs under the CCAP to ensure information sharing. This will enable the collection of data to measure program outcomes.

Information derived from this data could lead to the development of future programs that encourage and support low-emission transportation in Ontario. In terms of the efficient operation of the electricity grid, program data could also be used to mitigate any potential negative impact of growth in EV ownership (e.g. causing stress on low-voltage transformer stations if too many EVs are charging at the same time).

The Ministry is also responsible for developing a Vehicle-to-Grid Roadmap as per the CCAP Treasury Board Minute. Data derived from this and other EV programs, and from projects supported by the Ontario Smart Grid Fund, could instruct the design of the Roadmap (Vehicle-to-Grid is a concept whereby EVs are used as “distributed energy resources” that can both consume and supply power in a way that optimizes electricity grid assets).

**Approach**

Program options are under development. Existing EV program delivery frameworks are being taken under consideration for program design. The Ministry is also undertaking thorough consultations with key stakeholders to identify other key considerations for program design (e.g. utilities, energy agencies, other ministries, non-government agencies, industry).

# PROGRAM NOTE

# ENERGY – Electric Vehicle Overnight Charging Rebate Program

## V. Additional Considerations

### Implementation

- Implementation of the program is tentatively planned for Q2 2017, pending approval / direction from Cabinet and TB/MBC.

### Communications/Stakeholder Engagement Plans

- The Ministry has held multiple formal working group meetings with key stakeholders (LDCs, IESO, OEB) as well as other stakeholders (industry associations, not-for-profits, private sector companies, unit sub-meter providers, multi-unit residential sector experts) to solicit feedback on how the program could best achieve the desired objectives. The key themes from these discussions include:
    - Simplicity: The program should minimize administrative and processing costs. To do this program should be kept as simple as possible.
    - Behavioral Change: Incentivizing charging behavior (overnight and not during peak times) is as important as incentivizing adoption of EV ownership.
    - Scope: The program should aim to be province wide and apply to all EV owners (existing and future).
    - Tie to Hydro accounts: Rebate should be tied to customers' hydro accounts – no intention to refund costs of charging away from home.
    - Additional Data: Although there are benefits to capturing additional valuable data – this should be balanced against the costs of hardware to capture the data.
    - Auditability: Program should be robust against post event audits/reviews and able to demonstrate that funding has been disbursed appropriately.
    - Multi-Residential: Charging program for multi-residential customers will require more detailed analysis. It may be necessary to restrict to customers where charging is metered with a personal hydro account.
- Depending on the final project design, the program could have a financial and / or staff impact on some of these stakeholders, and the Ministry has concentrated on minimizing these potential impacts.
- The Ministry of Energy would participate in media / advertising undertaken to support public awareness of CCAP initiatives, including those focused on encouraging greater uptake of EVs.

# PROGRAM NOTE

# ENERGY – Electric Vehicle Overnight Charging Rebate Program

| Risks | Docket # | N/A |
|---|---|---|

Financial Risks

- While MOECC targeted EV sales of 14,000 in 2020, it is possible that uptake could be higher, resulting in a higher program cost. Mitigation measures could either be requesting an increase in funding, or making a change in the program to ensure overspending does not occur.
- It is also possible that the estimated program participation (90%), and rebate qualification (90%) are too low, resulting in higher program cost. Mitigation measures could either be requesting an increase in funding, or making a change in the program to ensure overspending does not occur.
- Funding for the program is expected to come from Greenhouse Gas Reduction Account (GGRA), which will be funded by proceeds from Ontario's cap and trade program. It is possible that forecasts for cap and trade proceeds are too high. Mitigation measures could either be requesting an increase in funding from a different source, or making a change in the program to ensure overspending does not occur.

Participation and Behavioural Change Risk

- As articulated in the CCAP, the key program outcomes are increased EV uptake as proportion of personal vehicles in Ontario, and EV charging overnight instead of during mid- and on-peak hours. These outcomes are behavioural.
- Program options are currently under development. These behavioural outcomes will be taken under consideration for program design. The funding level or other program design options (e.g. a requirement to make the program available for current and future EV owners across Ontario within the $15 million notional allocation) may constrain the ability to achieve these outcomes and ensure a high program participation rate.

| Human Resources (HR) Implications | Docket # | N/A |
|---|---|---|

- The Ministry does not yet know whether the program will require any additional FTEs. Once program details are finalized, the Ministry will make an FTE request (if one is required).

# PROGRAM NOTE

# ENERGY – Electric Vehicle Overnight Charging Rebate Program

## VI. Proposed Minute

| Proposed Minute |
|---|
| • APPROVE the creation of a new transfer payment line entitled “Electric Vehicle Overnight Charging Rebate Program” under Vote/Item 2902-01, Energy Development and Management.<br><br>• APPROVE an expenditure increase of $2,150,000 in 2017-18, $2,700,000 in 2018-19, $3,700,000 in 2019-20, and $5,000,000 2020-21 in the transfer payment line entitled “Electric Vehicle Overnight Charging Rebate Program” under Vote/Item 2902-01, Energy Development and Management.<br><br>• NOTE a funding requirement of $1,450,000 in 2021-22.<br><br>• NOTE the Ministry will report back to Treasury Board/ Management Board of Cabinet on staffing requirements and further program design in 2017. |

Approve the following multi-year resources for the program:

| Financial Decisions $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|
| **Operating Expense** | **2.15** | **2.7** | **3.7** | **5.0** |
| **Capital Expense** | | | | |
| **Total Expense** | **2.15** | **2.7** | **3.7** | **5.0** |
| **Operating Assets** | | | | |
| **Capital Assets** | | | | |

In this regard:

- APPROVE the creation of a new transfer payment line entitled “Electric Vehicle Overnight Charging Rebate Program” under Vote/Item 2902-01, Energy Development and Management.

- APPROVE an expenditure increase of $2,150,000 in 2017-18, $2,700,000 in 2018-19, $3,700,000 in 2019-20, and $5,000,000 2020-21 in the transfer payment line entitled “Electric Vehicle Overnight Charging Rebate Program” under Vote/Item 2902-01, Energy Development and Management.

- NOTE a funding requirement of $1,450,000 in 2021-22.

- NOTE the Ministry will report back to Treasury Board/ Management Board of Cabinet on staffing requirements and further program design in 2017.

# PROGRAM NOTE
# ENERGY – Strategic Asset Management

| | |
|---|---|
| Government Priority Outcome | **Modernized Infrastructure and Transportation Networks** |
| Program Type | **Public Good** |
| Ministry Linkages | **MOF** |

## I. Program Overview

| | Current Allocation | | | | PROPOSED ALLOCATION | | | |
|---|---|---|---|---|---|---|---|---|
| **$M** | 17-18 | 18-19 | 19-20 | 20-21 | **17-18** | **18-19** | **19-20** | **20-21** |
| Operating Expense – Strategic Asset Management | **70.0000** | **70.0000** | | | **140.0000** | **70.0000** | **5.0000** | **5.0000** |
| Operating Expense – Human Resources Support | **0.9300** | **0.9300** | | | **0.9300** | **0.9300** | **0.9300** | **0.9300** |
| Operating Expense – First Nations Cash Contribution | **15.0000** | **15.0000** | **15.0000** | | **45.0000** | | | |
| Operating Expense – Conferred Benefit Amount to First Nations | | | | | **135.0000** | | | |
| Capital Expense | | | | | | | | |
| Total Expense* | **85.9300** | **85.9300** | **15.0000** | | **320.9300** | **70.9300** | **5.9300** | **5.9300** |
| Operating Assets | | | | | | | | |
| Capital Assets | | | | | | | | |

Notes:
1. Table should be presented on a fully consolidated basis. Capital assets include acquisitions of consolidated entities. Consolidation information should be consistent with information in ORBIT and information submitted to the Office of the Provincial Controller Division (OPCD).
2. See ORBIT for current allocation.
*Reflects sum of all financial impacts related to Key Operating, Capital, Climate Change and Technical Decisions.

### 1. GOVERNMENT'S ASSET STRATEGY - FUTURE SHARE SALES

In November 2015, the Province completed the first phase of its plan to broaden Hydro One ownership. It sold approximately 16% of the Province's outstanding Hydro One common shares at a price of $20.50 per share through an IPO and through related share sales to electricity sector union trusts. The Province sold an additional 14% of the Province's outstanding Hydro One common shares at a price of $23.65 through a

secondary share offering completed in April 2016. As a result, the Province currently owns about 70% of the outstanding common shares of Hydro One.

The government may be in a position to complete the broadening of Hydro One in 2017-18 and will require the appropriate allocation to support this effort. An expenditure increase of $70 million would cover the increase in underwriting fees, legal expertise and consulting costs, in the event of a larger sale in 2017-18.

**2. PERMANENT HUMAN RESOURCES SUPPORT FOR GOVERNMENT'S ASSET STRATEGY**

The Ministry continues to require dedicated resources and expertise to support the Province's asset strategy. In October 2015, the Ministry received approval to create an Expert Investment Advisory Committee and an Investment and Governance Secretariat. The Expert Investment Advisory Committee has a mandate of up to three years and consists of five members including a Chair.

The Ministry received temporary funding for 5 FTEs during 2016-17 PRRT for the Secretariat, including an executive director, a manager, two senior advisors and an administrative coordinator. The funding for these FTEs expires in 2018-19.

The Investment and Governance Secretariat was initially created as a temporary office, but the Ministry will require permanent resources in order to support both investment and governance decisions related to the Province's asset strategy on an ongoing basis.

The Ministry is requesting that the 5 temporary FTE positions be made permanent for the Secretariat – an executive director, a manager, two senior advisors and an administrative coordinator. Note, the level of FTEs would not change.

**3. CASH CONTRIBUTIONS ACCELERATION FOR FIRST NATIONS AGREEMENT-IN-PRINCIPLE**

In July 2016, the Province and First Nations in Ontario announced an agreement-in-principle for the Province to sell to First Nations for their collective benefit, shares of Hydro One Limited. The Province would sell up to approximately 15 million shares (2.5% of total current outstanding Hydro One common shares), depending on the level of First Nation participation, to a new collective investment vehicle owned by First Nations.

In addition to the benefit of investing collectively in Hydro One, the Province would also provide seed capital of up to $45 million in cash to the First Nation investment vehicle, depending on the level of First Nation participation. A minimum approval threshold of at least 80% of First Nation participation must be achieved by the end of 2017.

The Ministry received a preliminary allocation for the cash contribution during the 2017-18 PRRT for $45 million over a three year period (2017-18 to 2019-20). The timing for the cash contribution has been revised to a single contribution of up to $45 million in upon closing of the transaction.

**4. CONFERRED BENEFIT AMOUNTS TO FIRST NATIONS**

As part of the Province's agreement-in-principle with First Nations, the Province agreed to sell to First Nations up to approximately 15 million Hydro One shares, representing 2.5% of total Hydro One common shares outstanding, depending on the level of First Nations participation. The purchase price for the shares is $18 per share, which is above the Province's book value but below the current market value.

# PROGRAM NOTE

# ENERGY – Strategic Asset Management

In September 2016, the Ministry was directed to report back through the 2017-18 PRRT process with estimates of the conferred benefit amounts, methodology used to project future market values, and estimates of other financial implications over the agreement timeline and proposed disclosure.

The Ministry is requesting an allocation of $135M in order to book the conferred benefit amount with methodology provided below.

## II. Proposed Program Changes

### 1. GOVERNMENT'S ASSET STRATEGY - FUTURE SHARE SALES

The Ministry may be in a position to complete broadening the ownership of Hydro One by the end of 2017-18. In order to accomplish this, the Ministry requires an expenditure increase of $70 million in 2017-18 to ensure the Province has the flexibility to maximize value depending on market conditions.

**Financial Implications:**

| Item | Forecast 2017-18<br><br>Millions ($) | Description |
|---|---|---|
| Secondary Offering | 132.5 | • These are costs associated with further share sales of Hydro One<br>• Underwriting fees are a fixed portion of revenues (gross proceeds of offering) and comprise the vast majority of the budget under this cost category<br>• Other costs include legal / administrative costs for government and Hydro One (to be reimbursed to the company) |
| Consulting, Services and Other Costs | 7.5 | • Legal costs for advice related to Hydro One Brampton and First Nations and Métis discussions<br>• Transfer Payment Agreements include capacity funding to First Nations and Métis for their respective legal / financial / other advisors<br>• Other procurements for consultants and advisors related to investment and governance decisions to support the Province's ongoing asset management strategy related to Hydro One and OPG |
| **Total** | **140.0** | • The Ministry may be in a position to complete broadening the ownership of Hydro One in 2017-18 and requires this allocation to ensure it has the flexibility to maximize value depending on market conditions. |

Most of the forecasted budget above is recoverable through the proceeds from future offerings.

Ongoing consulting, advisory services and other costs for the Investment and Governance Secretariat are estimated to be approximately $5 million per year starting in 2019-20. This relates to investment and governance decisions to support the Province's ongoing asset management strategy as it relates to both the Province's investment in Hydro One and OPG.

# PROGRAM NOTE
# ENERGY – Strategic Asset Management

**2. PERMANENT HUMAN RESOURCES SUPPORT FOR GOVERNMENT'S ASSET STRATEGY**

Following the Hydro One Initial Public Offering (IPO), the Ministry of Energy created a separate structure that included:

- An Expert Investment Advisory Committee to advise on both investment and governance responsibilities, to support the Minister of Energy in his role as a shareholder; and
- An Investment and Governance Secretariat to support the Expert Investment Advisory Committee.

For these structures, the Ministry received approval during the 2016-17 PRRT process for 5 new FTEs from 2016-17 to 2018-19 to support the Investment and Governance Secretariat in overseeing investment and governance decisions related to the Province's asset strategy. The Ministry received $930,000, including $580,000 in salary and wages, for an Executive Director, a Manager, two Senior Advisors and an Administrative Assistant.

Through the Expert Investment Advisory Committee and the Investment and Governance Secretariat, the Ministry successfully executed part of the Province's asset strategy, including:

- A secondary offering which reduced the Province's share of Hydro One to approximately 70% and increased revenues by $1.97 billion in April 2016;
- An agreement-in-principle with First Nations to sell up to 2.5% of shares of Hydro One was announced July 2016; and
- The Province is poised to continue with its share sales of Hydro One in a staged and prudent manner.

The Secretariat was created in order to support the Minister on both financial and governance matters. While some of that role relates to temporary initiatives such as facilitating the share sale strategy, the Secretariat also provides ongoing advice and support related to, but not limited to:

| Scope | Responsibilities |
|---|---|
| General | • Providing ongoing advice on all financial and governance related matters<br>• Staying informed of industry and market developments through ongoing research, analysis and dialogue with the business community<br>• Tracking the quarterly and annual financial performance to monitor the Province's investments<br>• Being informed about the manner in which assets are consolidated on the Province's financials<br>• Interfacing with the Expert Investment Advisory Committee |
| Specific to Hydro One | • Periodically validating Hydro One is meeting its legal requirements to maintain its grid control, head office and substantially all of its strategic decision making functions in Ontario<br>• Exercising shareholder rights including participating in shareholder meetings, election of directors etc., ensuring the Province operates in accordance with its rights and obligations under the Governance Agreement<br>• Maintaining an up-to-date understanding of the Province's rights and responsibilities as the Province's ownership in Hydro One changes<br>• Effective management of holdings; ensuring the Province operates in accordance with the Registration Rights Agreement<br>• Provide advice on maintaining the Province's ownership objective, including exercising the Province's pre-emptive right to purchase shares up to 45% of any new issuance |

| | |
|---|---|
| | • Facilitating the submission of documents to the Ontario Securities Commission to disclose the amount of shares held (may be required as the Province is a shareholder owning more than 20% of a TSX-listed company) |
| Specific to OPG | • The Province's role and responsibilities as the shareholder of OPG, including analysis of OPG's business plans, and conducting due diligence and analysis on new OPG initiatives<br>• Providing advice and support to ensure OPG's compensation framework aligns with the Province's current legislation and regulations |

The nature of the work requires highly technical skill sets with specialized knowledge in areas such as capital markets, corporate finance and financial analysis.

In order to attract and retain qualified individuals, the Ministry needs to be able to advertise permanent positions to be competitive.

Given Energy's ever-expanding mandate, the ministry is managing on-going staffing pressures and doing its best to manage these staffing requirements internally. The absence of permanent positions or a reduction of FTEs would severely impact the Ministry's ability to deliver its ever-increasing mandate.

**Financial Implications:**

The Ministry is requesting a total of 5 permanent FTEs starting in 2017-18 and onwards. During the 2016-17 PRRT, the Ministry received funding for these FTEs until 2018-19, permanent funding is being requested from 2019-20 and onwards.

The table below shows the financial requirements and classification levels for the requested FTEs for the Investment and Governance Secretariat.

| Vote | Standard Accounts | FTEs | Existing Allocation | | Request | |
|---|---|---|---|---|---|---|
| | | | 2017-18 ($M) | 2018-19 ($M) | 2019-20 ($M) | 2020-21 ($M) |
| 2902-01 | Salary and Wages | 5 | 0.580 | 0.580 | 0.580 | 0.580 |
| | Benefits | | 0.075 | 0.075 | 0.075 | 0.075 |
| | Services – Office operations | | 0.175 | 0.175 | 0.175 | 0.175 |
| | Services – Remuneration for EIAC | | 0.100 | 0.100 | 0.100 | 0.100 |
| | **Subtotal** | | **0.930** | **0.930** | **0.930** | **0.930** |

| Classification | # of FTE |
|---|---|
| XSMC3 | 1 |
| XSMC1 | 1 |
| 7A007 | 2 |
| 5A007 | 1 |

Note: the Ministry received funding the 2016-17 PRRT for remuneration for the Expert Investment Advisory Committee. The table below shows funding for 2017-18 and 2018-19 which include remuneration for each member, with the exception of the Chair, who will not be remunerated. The ministry will report back in-year for formal Order-in-Council to extend the mandate of the Expert Investment Advisory Committee.

# PROGRAM NOTE

# ENERGY – Strategic Asset Management

| Vote | Activity | Estimated Financial Requirement | | | |
|---|---|---|---|---|---|
| | | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
| 2902-01 | Remuneration for Committee members (up to 4) | $2,000 day/member, up to $25,000 each | $2,000 day/member, up to $25,000 each | $2,000 day/member, up to $25,000 each | $2,000 day/member, up to $25,000 each |
| | **Subtotal** | **0.100** | **0.100** | **0.100** | **0.100** |

### 3. CASH CONTRIBUTIONS ACCELERATION FOR FIRST NATIONS AGREEMENT-IN-PRINCIPLE

As part of the Province's agreement-in-principle with First Nations, the Province agreed to provide a cash contribution of up to $45 million to First Nations over three years, depending on level of First Nations participation.

In September 2016, the Ministry was minuted the following:

- Note the Ministry of Energy will formally request an annual expenditure increase of up to $15,000,000 in each of 2017-18, 2018-19, and 2019-20 under vote/item 2902-01 for a cash contribution to the Purchaser. Underspending will be returned to the Treasury Board Contingency Fund.

Timing of payments was recently renegotiated with First Nations. The original timing contemplated the Province contributing three annual payments of up to $15 million following initial close of the share purchase. Revised timing contemplates a one-time contribution of up to $45 million.

Terms which encompass participation thresholds have not changed. The Province will contribute $45 million if 100% of First Nations participate or $30 million and prorated if less than 100% of First Nations participate.

**Financial Implications:**

In order to meet the new negotiated timeline, the Ministry will require the full $45 million cash contribution in 2017-18. Transfer payments in 2018-19 and 2019-20 will decrease by $15 million each year, and transfer payments in 2017-18 will increase by $30 million. The table below shows what the Ministry received during its preliminary allocation and the proposed new estimate / appropriation requirements for the out-years.

| Millions ($) | 2017-18 | 2018-19 | 2019-20 |
|---|---|---|---|
| Preliminary Allocation | 15.0 | 15.0 | 15.0 |
| Updated Forecast | 45.0 | - | - |

While we expect the transaction to close in the 2017-18 fiscal year, the agreement includes an extension provision which could allow closing to be postponed to the 2018-2019 fiscal year, if needed. It is unclear at this time when closing will occur and the Ministry does not expect to have a definitive timing on closing until late 2017 and thus, the Ministry will return during the 2018-19 PRRT process to request an appropriation to cover the risk that closing occurs during the 2018-2019 fiscal year, if needed.

### 4. CONFERRED BENEFIT AMOUNTS TO FIRST NATIONS

As part of the Province's agreement-in-principle with First Nations, the Province agreed to sell to First Nations up to approximately 15 million Hydro One shares, representing approximately 2.5% of total current Hydro One common shares outstanding, depending on the level of First Nations participation. The purchase price for the shares is $18 per share, which is above the Province's book value but below current market value.

# PROGRAM NOTE

# ENERGY – Strategic Asset Management

In September 2016, the Ministry was minuted the following:

- Direct the Ministry to work with Ministry of Finance / Ontario Financing Authority and Treasury Board Secretariat to report back either through Quarterly Reporting or the 2017-18 Program Review, Renewal and Transformation process with estimates of the conferred benefit amounts, methodology used to project future market values, and estimates of other financial implications over the agreement timeline and proposed disclosure.

TBS is in the process of obtaining a regulation under the *Financial Administration Act* prescribing a new class of non-cash expense for imputed subsidies arising out of dispositions of financial assets below fair market value. This is intended to best serve public interest for transparency and accountability.

**Financial Implications:**

A preliminary estimate of the conferred benefit amount to First Nations is up to approximately $135 million. The methodology is shown in the table below. These estimates are highly variable and will be based market conditions at the time of transaction close. The entire amount is expected to be incurred in 2017-18.

While we expect the transaction to close in the 2017-18 fiscal year, the agreement includes an extension provision which could allow closing to be postponed to the 2018-2019 fiscal year, if needed. It is unclear at this time when closing will occur and the Ministry does not expect to have a definitive timing on closing until late 2017 and thus, the Ministry will return during the 2018-19 PRRT process to request an appropriation to cover the risk that closing occurs during the 2018-2019 fiscal year, if needed.

| **Estimate of Difference between Market Value and Purchase Price** | |
|---|---|
| A. Assumed Market Price of Shares in 2017-18 (based on average of analyst price targets[1]) | $27.00 |
| B. Purchase Price for First Nations (per Agreement-in-Principle) | $18.00 |
| **C. Estimated Value Conveyed per Share (A - B)** | **$9.00** |
| D. Maximum Number of Shares being Purchased by First Nations | 14.875 million<br>(2.5% of current Hydro One common shares outstanding) |
| **E. Conferred Benefit Amounts (C x D)** | **$133.875 million**<br>**or approximately $135 million** |
| 1. Analyst share price valuations are generally based on analysis of estimated future earnings, dividends and/or cash flows. | |

# PROGRAM NOTE

# ENERGY – Strategic Asset Management

## III.Decisions

## 1) Operating Decisions

### Key Decisions

**A.** APPROVE an expenditure increase of $70,000,000 in 2017-18 and $5,000,000 in 2019-20 and onwards under Vote/Item 2906-01, Strategic Asset Management and Transformation.

| $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 | Docket # |
|---|---|---|---|---|---|
| **Operating Expense** | **70.0000** | **-** | **5.0000** | **5.0000** | D0042437 |
| **Operating Assets** | | | | | |

- These expenses are intended to cover fees for services the Ministry requires to support various aspects of the Province's asset transformation strategy. These services include underwriting fees, external legal and financial advisors.
- Most of the forecasted budget above is recoverable through the proceeds from future offerings.
- Ongoing consulting, advisory services and other costs for the Investment and Governance Secretariat are estimated to be approximately $5 million per year.
- This relates to investment and governance decisions to support the Province's ongoing asset management strategy as it relates to both the Province's investment in Hydro One and OPG. The Ministry has sufficient existing funding in 2018-19 to support the government's asset strategy.

**B.** APPROVE an expenditure increase in the amount of $930,000, including $580,000 in salary and wages to support the Investment and Governance Secretariat in 2019-20 and onwards under Vote/Item 2902-01, Energy Development and Management.

| $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 | Docket # |
|---|---|---|---|---|---|
| **Operating Expense** | | | **0.9300** | **0.9300** | D0042454 |
| **Operating Assets** | | | | | |

- The Ministry requires dedicated, permanent resources to manage and oversee the government's asset strategy; this includes funding for salary & wages (5 FTEs) as well as office operation service costs for the Investment and Governance Secretariat.
- During the 2016-17 PRRT, the Ministry received funding for these FTEs until 2018-19, permanent funding is being requested from 2019-20 and onwards.

# PROGRAM NOTE

# ENERGY – Strategic Asset Management

**C.** APPROVE an expenditure decrease of $15,000,000 in 2017-18 to 2019-20 under Vote/Item 2902-01, Energy Development and Management and an expenditure increase of $45,000,000 in 2017-18 in the transfer payment line entitled “Cash Contribution for First Nations” under Vote/Item 2906-01, Strategic Asset Management and Transformation.

| $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 | Docket # |
|---|---|---|---|---|---|
| **Operating Expense: Vote/Item 2902-01** | **(15.0000)** | **(15.0000)** | **(15.0000)** | | D0042460 |
| **Operating Expense: Vote/Item 2906-01** | **45.0000** | | | | |
| **Operating Assets** | | | | | |

- The Ministry received the cash contribution for First Nations in its preliminary allocation in Vote/Item 2902-01 Energy Development and Management. The Ministry will manage this cash contribution from Vote/Item 2906-01 Strategic Asset Management to better track all expense related to the government’s asset strategy.
- As part of its 2017-18 preliminary allocation, the Ministry received a $45 million transfer payment over three years to First Nations, as a cash contribution.
- First Nations have renegotiated the terms of the agreement and full cash contribution to First Nations may be issued upon closing of the transaction depending on the level of First Nation participation.

**D.** APPROVE an expenditure increase of $135,000,000 in 2017-18 in the Transfer Payment line entitled “Conferred Benefit Amount” under Vote/Item 2906-01, Strategic Asset Management and Transformation.

| $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 | Docket # |
|---|---|---|---|---|---|
| **Operating Expense** | **135.0000** | | | | D0042465 |
| **Operating Assets** | | | | | |

- The Ministry will incur this expense to account for the conferred benefit amount to First Nations, which is the difference between the purchase price for the shares and the market price.
- This is a one-time transaction.

## Non-Financial Decisions

| Docket # | D0042434 |
|---|---|

- APPROVE 5 FTEs the Ministry of Energy received during the 2016-17 PRRT for the establishment of the Investment and Governance Secretariat on a permanent basis.
- APPROVE the creation of a new transfer payment line entitled “Cash Contribution for First Nations” under Vote/Item 2906-01, Strategic Asset Management and Transformation.
- APPROVE the creation of a new transfer payment line entitled “Conferred Benefit Amount” under Vote/Item 2906-01, Strategic Asset Management and Transformation.

# PROGRAM NOTE

# ENERGY – Strategic Asset Management

## IV. Outcome Measures

| Outcome Measures | Docket # | N/A |
|---|---|---|

**Desired Outcomes/Outputs**

| Measure | Desired Outcome |
|---|---|
| **Investment contribution** | • Broadening the ownership of Hydro One will raise approximately $9 billion in funding for both the Trillium Trust to support priority infrastructure investments and pay down debt. |
| **Ownership** | • The Province is expected to sell down to 40% ownership in a careful, staged, and prudent manner |

## V. Additional Considerations

**Implementation**

- The government may be in a position to complete the broadening of Hydro One in 2017-18.
- Share sale plans will be developed by the Investment and Governance Secretariat and the Expert Investment Advisory Committee.
- The Ministry will seek approval from TB/MBC in early 2017 of a proposed share sale strategy.

# PROGRAM NOTE

# ENERGY – Strategic Asset Management

## Communications/Stakeholder Engagement Plans

| Stakeholder Group | Potential Issue | Stakeholder Engagement / Communications Strategy |
|---|---|---|
| **General Public (1)** | • First Nations being able to purchase shares at a reduced price compared to market value, as shown in conferred benefit amounts, may raise issues of fairness | • No proactive engagement required<br>• Conferred benefit amounts are disclosed to best serve public interest for transparency and accountability<br>• Purchase price is above the Province's book value for the shares and there is no impact to the Province's expectation to raise up to $9 billion to support infrastructure investment and pay down debt |
| **General Public (2)** | • Accelerating cash contributions to First Nations from up to three annual payments to one full payment increases costs for next year | • No proactive engagement required<br>• Continue to reinforce to stakeholders that no changes to overall amounts have been contemplated<br>• Timing of payments are fluid and remain subject to negotiation |
| **Shareholders / Investors** | • Increases in costs associated with potentially accelerating share sales | • No proactive engagement required<br>• Justification is that the Ministry requires flexibility to maximize value for the Province depending on market conditions |

## Risks

**Docket #** See Risks Dockets

**Market Conditions (High Risk)**

The Ministry's ability to meet financial targets will be largely impacted by the state of the market. The Ministry will seek to develop share sale plans and maintain on-going relationships with key investors to maximize returns and minimize costs.

**First Nations and Métis (Low Risk)**

Risk that First Nations or Métis may interfere with future share offerings. Plan to mitigate by engaging with First Nation and Métis communities and working to facilitate participation in broadening the ownership of Hydro One.

**Staffing Resources (Medium Risk)**
Once the government has completed the sale of Hydro One, there remains a need to manage and oversee the government's investments in the organization. The nature of the work requires highly technical skill sets with specialized knowledge that are in high demand.

In order to attract and retain qualified individuals, the Ministry needs to be able to advertise permanent positions to be competitive. Lack of qualified individual could hinder the ministry's ability to manage the shares in the future.

# PROGRAM NOTE
# ENERGY – Strategic Asset Management

| Human Resources (HR) Implications | Docket # | D0042454 |
|---|---|---|

Successful implementation and development of the government's asset strategy requires staff resources in the Investment and Governance Secretariat in the Ministry. The Secretariat is a separate division of the Ministry, formally reporting to the Deputy Minister of Energy.

The Ministry requires permanent 5 FTEs to support the Investment and Governance Secretariat.

See Section II Proposed Changes – Human Resource Implications for more details.

| Previously Requested Report Backs | Docket # | N/A |
|---|---|---|

- **Hydro One Brampton (April 2015):** TB requested Ministry of Energy to report back to TB/MBC with details on the final Brampton transaction results. At the August 25, 2015 meeting, the ministry provided an update and was directed to report back with details on the final Brampton transaction results.

- **First Nations (September 2016):** Direct the Ministry to work with Ministry of Finance/Ontario Financing Authority and Treasury Board Secretariat to report back either through Quarterly Reporting or the 2017-18 Program Review, Renewal and Transformation process with the recommended treatment of the conferred benefit being given to First Nations including estimates of the conferred benefit amounts over the agreement timeline and the methodology used to project future market values.

- **Métis (September 2016):** Direct the Ministry to report back to Treasury Board/Management Board of Cabinet for approval prior to finalization of the term sheet.

## VI. Proposed Minute

**Proposed Minute**

- APPROVE an expenditure increase of $70,000,000 in 2017-18 and $5,000,000 in 2019-20 and onwards under Vote/Item 2906-01, Strategic Asset Management and Transformation.

- APPROVE 5 FTEs the Ministry of Energy received during the 2016-17 PRRT for the establishment of the Investment and Governance Secretariat on a permanent basis.

- APPROVE an expenditure increase in the amount of $930,000, including $580,000 in salary and wages to support the Investment and Governance Secretariat in 2019-20 and onwards under Vote/Item 2902-01, Energy Development and Management.

- APPROVE the creation of a new transfer payment line entitled "Cash Contribution for First Nations" under Vote/Item 2906-01, Strategic Asset Management and Transformation.

# PROGRAM NOTE

## ENERGY – Strategic Asset Management

- APPROVE an expenditure decrease of $15,000,000 in 2017-18 to 2019-20 under Vote/Item 2902-01, Energy Development and Management and an expenditure increase of $45,000,000 in 2017-18 in the transfer payment line entitled “Cash Contribution for First Nations” under Vote/Item 2906-01, Strategic Asset Management and Transformation.

- APPROVE the creation of a new transfer payment line entitled “Conferred Benefit Amount” under Vote/Item 2906-01, Strategic Asset Management and Transformation.

- APPROVE an expenditure increase of $135,000,000 in 2017-18 in the Transfer Payment line entitled “Conferred Benefit Amount” under Vote/Item 2906-01, Strategic Asset Management and Transformation.

Approve the following multi-year resources for the program:

| Financial Decisions $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|
| **Operating Expense – Vote 2902-01** | (15.0000) | (15.0000) | (15.0000) | |
| **Operating Expense – Vote 2906-01** | 250.0000* | | 5.9300 | 5.9300 |
| **Capital Expense** | | | | |
| **Total Expense** | **235.0000** | **(15.0000)** | **(9.0700)** | **5.9300** |
| **Operating Assets** | | | | |
| **Capital Assets** | | | | |

* Operating expense requests for 2906-01 is the aggregate total of additional funding for Strategic Asset Management and Transformation ($70 million), Cash Contribution for First Nations ($45 million) and Conferred Benefit Amount ($135 million).

In this regard:

- APPROVE an expenditure increase of $70,000,000 in 2017-18 and $5,000,000 in 2019-20 and onwards under Vote/Item 2906-01, Strategic Asset Management and Transformation.

- APPROVE 5 FTEs the Ministry of Energy received during the 2016-17 PRRT for the establishment of the Investment and Governance Secretariat on a permanent basis.

- APPROVE an expenditure increase in the amount of $930,000, including $580,000 in salary and wages to support the Investment and Governance Secretariat in 2019-20 and onwards under Vote/Item 2902-01, Energy Development and Management.

# PROGRAM NOTE

## ENERGY – Strategic Asset Management

- APPROVE the creation of a new transfer payment line entitled “Cash Contribution for First Nations” under Vote/Item 2906-01, Strategic Asset Management and Transformation.

- APPROVE an expenditure decrease of $15,000,000 in 2017-18 to 2019-20 under Vote/Item 2902-01, Energy Development and Management and an expenditure increase of $45,000,000 in 2017-18 in the transfer payment line entitled “Cash Contribution for First Nations” under Vote/Item 2906-01, Strategic Asset Management and Transformation.

- APPROVE the creation of a new transfer payment line entitled “Conferred Benefit Amount” under Vote/Item 2906-01, Strategic Asset Management and Transformation.

- APPROVE an expenditure increase of $135,000,000 in 2017-18 in the Transfer Payment line entitled “Conferred Benefit Amount” under Vote/Item 2906-01, Strategic Asset Management and Transformation.

# PROGRAM NOTE

# ENERGY – Ontario Rebate for Electricity Consumers

| | |
|---|---|
| Government Priority Outcome | **Reduced Poverty, Inequality and Exclusion** |
| Program Type | **Assisting** |
| Ministry Linkages | **MOF, OFA** |

## I. Program Overview

| | Current Allocation | | | | PROPOSED ALLOCATION | | | |
|---|---|---|---|---|---|---|---|---|
| **$M** | 17-18 | 18-19 | 19-20 | 20-21 | **17-18** | **18-19** | **19-20** | **20-21** |
| Operating Expense | **1,006.00** | **1,004.00** | **1,004.00** | **1,004.00** | **1,103.11** | **1,103.11** | **1,203.11** | **1,203.11** |
| Capital Expense | | | | | | | | |
| Total Expense* | **1,006.00** | **1,004.00** | **1,004.00** | **1,004.00** | **1,103.11** | **1,103.11** | **1,203.11** | **1,203.11** |
| Operating Assets | | | | | | | | |
| Capital Assets | | | | | | | | |

Notes:
1. Table should be presented on a fully consolidated basis. Capital assets include acquisitions of consolidated entities. Consolidation information should be consistent with information in ORBIT and information submitted to the Office of the Provincial Controller Division (OPCD).
2. See ORBIT for current allocation.
*Reflects sum of all financial impacts related to Key Operating, Capital, Climate Change and Technical Decisions.

Ontario is taking action to reduce electricity bills for families, farms, and businesses.

Electricity costs have increased as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.

Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables. This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%. Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.

Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online. Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.

To mitigate electricity prices, the Ministry of Energy has implemented an 8% rebate equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan and other eligible consumers as defined by legislation – this includes about five million residential consumers, small businesses and farms.

# PROGRAM NOTE

# ENERGY – Ontario Rebate for Electricity Consumers

The rebate will be automatically added to every eligible consumer's bill beginning January 1, 2017.

The 8% rebate is part of a broader package of rate mitigation measures, that will help all electricity rate payers, announced in the 2016 Speech from the Throne, including:

- Enhancement of existing Rural or Remote Rate Protection to provide additional support to approximately 330,000 eligible rural consumers; and
- Expanding participation in the Industrial Conservation Initiative to allow more businesses to participate.

## II. Proposed Program Changes

In September 2016, the Ministry received Treasury Board/Management Board of Cabinet (TB/MBC) approval for the implementation of the Ontario Rebate for Electricity Consumers Program, an 8% rebate equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan and other eligible consumers as defined by legislation – this includes about five million residential consumers, small businesses and farms.

The 8% rebate is part of a broader package of rate mitigation measures, that will help all electricity rate payers, announced in the 2016 Speech from the Throne, including:

- Enhancement of existing Rural or Remote Rate Protection to provide additional support to approximately 330,000 eligible rural consumers; and
- Expanding participation in the Industrial Conservation Initiative to allow more businesses to participate.

As part of approving the program, the Ministry is required to report back on updated future year impacts and a potential offset strategy for resource requirements to support program implementation.

The program design and implementation for the new Ontario Rebate for Electricity Consumers will follow procedures established through the previous administration of the Ontario Clean Energy Benefit, including a parallel process to provide support to Independent Power Authorities serving remote Indigenous communities.

Electricity consumers will receive the 8% benefit directly on their bill from their electricity vendor. The distributors and sub-meterers then submit claims for the month through the IESO. A total monthly invoice is issued to the Ministry of Energy by the IESO, which is then paid by the Ontario Financing Authority (OFA), on behalf of the Ministry for Energy. Once the OFA makes the payment, the IESO reimburses distributors and sub-meterers. The Ministry of Energy will enter into Memorandums of Understanding (MOU) with the IESO and OFA to clearly define each organizations respective role in the delivery of the Rebate.

Local distribution companies (LDCs) require time and investment to prepare billing systems to provide the rebate directly to consumers. The LDC community has indicated it intends to have such implementation work ready to begin providing rebates as of January 1, 2017. In the event that an LDC is not prepared for January 1, the legislation allows LDCs until July 1, 2017 for rebates to begin appearing on bills, with consumers entitled to a lump sum payment of rate assistance from the period between January 1 and the time the rebate begins appearing on their bills.

**FINANCIAL IMPLICATION:**

Electricity price is a key input variable in calculating the total costs associated with the Ontario Rebate for Electricity Consumers since expenditure is a direct function of the size of the bill. The ministry is providing a revised price forecast that reflects the Ministry's best estimate of all current and future price pressures and weather projections. The initial forecast was subsequently revised based on updated methodology and improved data inputs, leading to an increase in the estimated cost of administering the program in all years. The table below shows what the Ministry received during its preliminary allocation and the proposed new

estimate/appropriation requirements for the out-years. The Ontario Rebate for Electricity Rebate program does not have an end date.

| Millions ($) | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|
| Preliminary Allocation | 1,006.00 | 1,004.00 | 1,004.00 | 1,004.00 |
| Updated Forecast | 1,100.00 | 1,100.00 | 1,200.00 | 1,200.00 |

**HUMAN RESOURCES IMPLICATIONS:**

Successful implementation of the Ontario Rebate for Electricity Consumers, a permanent program, will require additional permanent staff resources in the Ministry of Energy to support new government policy and operational responsibilities.

The ministry's partners in this initiative – the IESO, OFA and the Ministry of Finance – are not providing program administration support. Rather, the IESO and OFA are only making payments on behalf of the Ministry of Energy, and the Ministry of Finance is tasked with auditing entities post payment.

Successful implementation of the Ontario Rebate for Electricity Consumers will require additional permanent staff resources in the Ministry of Energy to support new government policy and operational responsibilities. The implementation of an initiative of this magnitude and importance cannot be met within existing resources.

Rising electricity price in Ontario has been a continued to grow as a media focus over last few months. This has created significant communication challenges that the ministry needs to address on a regular basis. The ministry cannot falter in the implementation of the program, especially in the light public perception that the government is not doing enough to reduce the price of electricity for consumers. Negative stakeholder reactions would raise concerns about the government's energy price mitigation commitments.

The Ministry is requesting a total of 4 new permanent FTEs starting in 2017-18 and onwards. The FTEs requested will cover a variety of responsibilities critical to the success of the Ontario Rebate for Electricity Consumers, including:

- Policy and program development, providing direction to 72 local distribution companies (LDCs) and 10 Independent Power Authorities to develop specific payment and billing mechanisms, in addition to managing the relationships with service providers to ensure that any identified issues are addressed and resolved.
- Financial support to track and monitor up to 400 data elements each month in order to know how much funding has been provided and to what entities, and tracking LDC payments and settlement statements based on information received from the IESO.
- Communications and marketing support to handle internal and external program stakeholders.

The table below shows the financial requirements and classification levels for the requested permanent FTEs for the Ontario Rebate for Electricity Consumers.

| Vote | Standard Accounts | FTEs | 2017-18 ($M) | 2018-19 ($M) | 2019-20 ($M) | 2020-21 ($M) |
|---|---|---|---|---|---|---|
| 2902-01 | Salary and Wages | 4 | 0.41 | 0.41 | 0.41 | 0.41 |
| | Benefits | | 0.06 | 0.06 | 0.06 | 0.06 |
| | Services – Office operations | | 0.14 | 0.14 | 0.14 | 0.14 |
| | **Subtotal** | | **0.61** | **0.61** | **0.61** | **0.61** |

# PROGRAM NOTE

# ENERGY – Ontario Rebate for Electricity Consumers

| Classification | # of FTE |
|---|---|
| 7A007 | 1 |
| 6A007 | 2 |
| 5A007 | 1 |

In addition, the Ministry requires $2.5 million to cover program implementation and delivery of the Ontario Rebate for Electricity Consumers, this includes:

**Program Development and Management**

- Overall program management and oversight
- Develop policies as they relate to the implementation and ongoing management of the benefit
- Manage the relationships with service providers (IESO/OFA/Finance/OEB) to ensure that any identified issues are addressed and resolved
- Develop the program design for the Independent Power Authorities including payment mechanisms, audit and monitoring
- Field ongoing LDC, sub-meterer, and retailer program questions
- Assess other information from IESO and LDCs
- Develop and implement tools, standards, definitions, service expectations and monitoring systems which will result in an accountable, well managed disbursement of funds
- Develop performance measures and standards for delivery in order to take corrective action if standards are not being met
- Develop agreements relative to the administration of the Ontario Rebate for Electricity Consumers

**Financial and Administrative Oversight**

- Manage the appropriation and provide information to Treasury Board for quarterly reporting
- Develop controllership framework to ensure the financial integrity in the use of public funds is maintained for audit purposes, and that appropriate accountability mechanisms are in place
- Manage appropriation variances, and compute accruals
- Prepare reports and central agency request for spending authority and/or in-year funding adjustments as part of the annual PRRT process based on information and forecasted data
- Monthly tracking of LDC payments and settlement statements based on information received from the IESO. There will be a need to track and monitor up to 400 data elements in each month in order to know how much funding has been provided and to what entities
- Internal due diligence checks of payments
- Develop contract management tools to ensure that service partners are meeting contractual requirements and compliance of Transfer Payment directives are being met
- Monitor monthly payments
- Provide updates in quarterly management reports on expenditures to date and beneficiaries.
- Obtain actual annual costs of the Ontario Rebate for Electricity Consumers and the number of beneficiaries from the LDCs
- Liaise with IESO, OEB and LDCs to come up with accurate fiscal/allocation forecasting

**Communications Support**

- Lead overall communications around the Rebate, both internal and external
- Development of communications and marketing materials to explain the Rebate (e.g., web content, print materials if needed, etc.)
- Ongoing media relations and issues management support

# PROGRAM NOTE

# ENERGY – Ontario Rebate for Electricity Consumers

**Program Delivery for Independent Power Authorities (IPAs)**

- IPAs are not connected to the IESO-controlled grid; not part of the provincial electricity system; and outside of Ontario's regulatory framework. IPAs set their own electricity rates and are not subject to the OEB's ratemaking or licensing authority.
- Payments to the IPAs expected to be highly resource intensive: complexity of running auditable programs in remote entities.
- Program requirements include:
  - determining eligibility of customers;
  - defining the "base invoice amount" to apply the 8% credit;
  - developing accurate projections and forecasts;
  - determining program delivery process – how the rebate will be delivered and received; and
  - setting accountability mechanisms to maintain financial integrity of public funds

The table below shows the total financial request for the Ontario Rebate for Electricity Consumers. The Ontario Rebate for Electricity Rebate program does not have an end date.

| Millions ($) | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|
| Salary and Wages | 0.41 | 0.41 | 0.41 | 0.41 |
| Benefits | 0.06 | 0.06 | 0.06 | 0.06 |
| Services – Office Operations | 0.14 | 0.14 | 0.14 | 0.14 |
| Services – Program Delivery | 2.50 | 2.50 | 2.50 | 2.50 |
| Transfer Payment | 1,100.00 | 1,100.00 | 1,200.00 | 1,200.00 |
| **Subtotal** | **1,103.11** | **1,103.11** | **1,203.11** | **1,203.11** |

## III. Decisions

## 1) Operating Decisions

### Key Decisions

**A.** APPROVE an expenditure increase of $94,000,000 in 2017-18, $96,000,000 in 2018-19, $196,000,000 in 2019-20, and $196,000,000 in 2020-21, under Vote/Item 2905-03 Ontario Rebate for Electricity Consumers.

| $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 | Docket # |
|---|---|---|---|---|---|
| **Operating Expense** | **94.0000** | **96.0000** | **196.0000** | **196.0000** | D0042468 |
| **Operating Assets** | | | | | |

- The initial forecast was subsequently revised based on updated methodology and improved data inputs, leading to an increase in the estimated cost of administering the program in all years.
- Note: The Ontario Rebate for Electricity Rebate program does not have an end date.

# PROGRAM NOTE

# ENERGY – Ontario Rebate for Electricity Consumers

**B.** APPROVE an expenditure increase of $610,000, including $410,000 in salary and wages in 2017-18 and onwards under Vote/Item 2902-01, Energy Development and Management.

| $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 | Docket # |
|---|---|---|---|---|---|
| **Operating Expense** | **0.6100** | **0.6100** | **0.6100** | **0.6100** | D0042470 |
| **Operating Assets** | | | | | |

- The Ministry will require dedicated resources and expertise to support the implementation of the Ontario Rebate for Electricity Consumers, in particular:
  - Funding for salary & wages (4 FTEs) as well as office operation service costs.

**C.** APPROVE an expenditure increase of $2,500,000 for program delivery in 2017-18 and onwards under Vote/Item 2902-01, Energy Development and Management.

| $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 | Docket # |
|---|---|---|---|---|---|
| **Operating Expense** | **2.5000** | **2.5000** | **2.5000** | **2.5000** | D0042470 |
| **Operating Assets** | | | | | |

- The Ministry requires funding for program implementation and delivery to manage the Ontario Rebate for Electricity Consumers. This includes program development and management, financial administration and oversight, communications and program delivery for IPAs.

## Non-Financial Decisions

| Docket # | D0042470 |
|---|---|

- APPROVE 4 new permanent FTEs starting in 2017-18 and onwards to support policy and operational responsibilities related to the Ontario Rebate for Electricity Consumers.

# PROGRAM NOTE

# ENERGY – Ontario Rebate for Electricity Consumers

## IV. Outcome Measures

| Outcome Measures | Docket # | N/A |
|---|---|---|

**Desired Outcomes/Outputs**

| Measure | Desired Outcome |
|---|---|
| **Investment** | • Number of rebates provided to eligible residential consumers, farms and small businesses<br>• Number of Ontario electricity consumers benefiting from the Ontario Rebate for Electricity Consumers |
| **Rate Mitigation** | • Total amount saved in each sector – residential and small business – expressed both in dollar amount and percentage savings<br>• Contribution to reduction in annual growth of electricity cost<br>• Estimated cost-savings to consumers |

## V. Additional Considerations

### Implementation

LDCs require time and investment to prepare billing systems to provide the rebate directly to consumers. The LDC community has indicated it intends to have such implementation work ready to begin providing rebates as of January 1, 2017. In the event that an LDC is not prepared for January 1, the legislation allows LDCs until July 1, 2017 for rebates to begin appearing on bills, with consumers entitled to a lump sum payment of rate assistance from the period between January 1 and the time the rebate begins appearing on their bills.

**Role of Ministry's partners in this initiative:**

Electricity consumers receive the 8% benefit directly on their bill from their electricity vendor. The distributors and sub-meterers then submit claims for the month through the IESO. A total monthly invoice is issued to the Ministry of Energy by the IESO, which is then paid by the Ontario Financing Authority (OFA), on behalf of the Ministry for Energy. Once the OFA makes the payment, the IESO reimburses distributors and sub-meterers.

The Ministry of Energy will enter into Memorandums of Understanding (MOU) with the IESO and OFA to clearly define each organizations respective role in the delivery of the Rebate.

# PROGRAM NOTE

# ENERGY – Ontario Rebate for Electricity Consumers

## Communications/Stakeholder Engagement Plans

A series of high-profile announcements occurred around the introduction of legislation in September 2016:

- Keynote speech and two public events pre-introduction
- News release at introduction
- Full media availability province-wide
- Regional echo events post-introduction
- Early engagement of EDA, CEOs of LDCs
- Stakeholder outreach/technical briefings with Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.

The target audience is all electricity consumers in Ontario.

The Ministry has/is positioning the Ontario Rebate for Electricity Consumers as:

- An unprecedented plan to benefit all ratepayers in a lasting, meaningful way.
- Rural customers will receive the largest single rate relief ever.
- Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.

## Risks

**Docket #** N/A

**Legal (Low Risk)**

The government introduced legislation that would authorize financial assistance for certain Ontario electricity consumers in respect of electricity costs.

The proposed *Ontario Rebate for Electricity Consumers Act, 2016* would authorize the making of regulations to reimburse electricity vendors for amounts credited to consumers' accounts under the Act. The Act authorizes the making of various other regulations, including setting out other ways for consumers to receive financial assistance, to alter the default rules in the Act for how to calculate the financial assistance and to limit or alter who is entitled to financial assistance. The Act amends the *Ontario Clean Energy Benefit Act, 2010* to authorize the making of regulations under that Act in respect of cut-off dates for financial assistance under that Act.

**Pressure on the Fiscal Plan (Low Risk)**

The 8% rebate is expected to cost about $1 billion per year (i.e., $4 billion from 2017-2020), representing an additional pressure on the fiscal plan. Consideration could be given to allocating the $0.24 billion in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset. If cap and trade auctions are under-subscribed, the $0.24 billion may not be available for reallocation to the fiscal plan.

In the absence of any offset strategies, the full cost of the rate mitigation approach would add to the pressures and risks that need to be managed in order for the government to balance the budget in 2017-18 and stay balanced in 2018-19 and beyond.

**Fiscal Estimates (Low Risk)**

The estimated cost of the Ontario Rebate for Electricity Consumers is based on projected electricity prices, applied to estimated consumption each year by residential, farm, and small businesses. There is a fiscal risk exposure, as actual fiscal cost will depend on actual prices, including existing and new retailer contract prices

and numbers, and actual consumption by eligible consumers, which will certainly be variable.

This may lead to insufficient funds nearing year-end. A mitigation strategy will require a flexible and quick method for obtaining additional funds, or otherwise risk late payment to the IESO, LDCs and sub-metering providers, which could delay the availability of the rebate to customers or cause significant working capital issues for these entities.

**Independent Power Authorities (IPA) (Low Risk)**

There are inherent risks in the program delivery especially with the IPAs as they have varying degrees of sophistication, some are well-managed with administration functions contracted out, while others are very resource constrained. The billing of customers across IPAs is not necessarily consistent (it may be that not all customers are billed regularly) and some IPAs may not be able to apply the rebate directly to customer's electricity bills. This may require the rebate to be applied retroactively on a quarterly basis, possibly as a mailed cheque through the IPA. The Ministry will use parallel process to support to Independent Power Authorities serving remote Indigenous communities that was used during the delivery of the Ontario Clean Energy Benefit.

| Human Resources (HR) Implications | Docket # | D0042470 |
|---|---|---|

Successful implementation of the Ontario Rebate for Electricity Consumers will require additional staff resources in the Ministry of Energy to support new government policy and operational responsibilities.

The Ministry is requesting a total of 4 new FTEs starting in 2017-18 and onwards.

See Section II Proposed Changes – Human Resource Implications for more details.

## VI. Proposed Minute

**Proposed Minute**

- APPROVE an expenditure increase of $94,000,000 in 2017-18, $96,000,000 in 2018-19, $196,000,000 in 2019-20, and $196,000,000 in 2020-21, under Vote/Item 2905-03 Ontario Rebate for Electricity Consumers.
- APPROVE 4 new permanent FTEs starting in 2017-18 and onwards to support policy and operational responsibilities related to the Ontario Rebate for Electricity Consumers.
- APPROVE an expenditure increase of $610,000, including $410,000 in salary and wages in 2017-18 and onwards under Vote/Item 2902-01, Energy Development and Management.
- APPROVE an expenditure increase of $2,500,000 for program delivery in 2017-18 and onwards under Vote/Item 2902-01, Energy Development and Management.

# PROGRAM NOTE

## ENERGY – Ontario Rebate for Electricity Consumers

Approve the following multi-year resources for the program:

| Financial Decisions $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|
| **Operating Expense** | **97.1100** | **99.1100** | **199.1100** | **199.1100** |
| **Capital Expense** | | | | |
| **Total Expense** | **97.1100** | **99.1100** | **199.1100** | **199.1100** |
| **Operating Assets** | | | | |
| **Capital Assets** | | | | |

In this regard:

- APPROVE an expenditure increase of $94,000,000 in 2017-18, $96,000,000 in 2018-19, $196,000,000 in 2019-20, and $196,000,000 in 2020-21, under Vote/Item 2905-03 Ontario Rebate for Electricity Consumers.

- APPROVE 4 new permanent FTEs starting in 2017-18 and onwards to support policy and operational responsibilities related to the Ontario Rebate for Electricity Consumers.

- APPROVE an expenditure increase of $610,000, including $410,000 in salary and wages in 2017-18 and onwards under Vote/Item 2902-01, Energy Development and Management.

- APPROVE an expenditure increase of $2,500,000 for program delivery in 2017-18 and onwards under Vote/Item 2902-01, Energy Development and Management.

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

| | |
|---|---|
| Government Priority Outcome | **Modernized Infrastructure and Transportation Networks** |
| Program Type | **External** |
| Ministry Linkages | **ENERGY, OMAFRA** |

## I. Program Overview

| | Current Allocation | | | | PROPOSED ALLOCATION | | | |
|---|---|---|---|---|---|---|---|---|
| **$M** | 17-18 | 18-19 | 19-20 | 20-21 | **17-18** | **18-19** | **19-20** | **20-21** |
| Natural Gas Program – Capital Expense *Includes Natural Gas **Loan** (launching in 2016) and **Grant Program** (not yet launched)* | 1.5000 Loan | 16.7000 *Loan – 1.5 Grant – 15.2* | 9.2000 *Loan – 1.5 Grant – 7.7* | 9.2000 *Loan – 1.5 Grant – 7.7* | **0.0000** | **15.2000** *Grant* | **7.7000** *Grant* | **7.7000** *Grant* |
| Natural Gas Program – Operating Expense *Includes Interest Incentive and Program Admin Costs* | 0.0000 | 0.0000 | 0.0000 | 0.0000 | **5.5540** *Loan* | **22.8483** *Loan* | **17.7524** *Loan* | **0.0925** *Loan* |
| Program Expense – Bad Debt | 0.0000 | 0.0000 | 0.0000 | 0.0000 | **0.0010** | **0.0010** | **0.0010** | **0.0010** |
| Municipal Infrastructure Investment Initiative – Capital Expense | 4.0540 | 4.0540 | 4.0540 | 4.0540 | **0.0000** | **0.0000** | **0.0000** | **4.0540** |
| Strategic Community Infrastructure Fund – Reduced Request | 0.0000 | 160.0000 | 420.0000 | 690.0000 | **0.0000** | **142.7057** | **407.8016** | **0.0000** |

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Total Expense* | 5.5540 | 180.7540 | 433.2540 | 703.2540 | **5.5550** | **180.7550** | **433.2550** | **11.8475** |
| Operating Assets | 0.0000 | 0.0000 | 0.0000 | 0.0000 | **60.0000** | **80.0000** | **60.0000** | **0.0000** |
| Capital Assets | | | | | | | | |

Notes:
1. Table should be presented on a fully consolidated basis. Capital assets include acquisitions of consolidated entities. Consolidation information should be consistent with information in ORBIT and information submitted to the Office of the Provincial Controller Division (OPCD).
2. See ORBIT for current allocation.
*Reflects sum of all financial impacts related to Key Operating, Capital, Climate Change and Technical Decisions.

**Request for New Allocation and Operating Asset in 2017-18**

- MOI is requesting a new allocation of $5.6 million in 2017-18 to support program expenses (interest expense and program administration costs) associated with the Natural Gas Access Loan program approved by Treasury Board on September 13, 2016.
- This is to ensure that loans can be advanced starting in 2017-18 and until 2019-20.
- MOI is requesting the creation of a new Operating Asset (for disbursement of Natural Gas Loans) and an Operating Expense in the form of a Transfer Payment for the Natural Gas Interest Incentive in the Ministry of Infrastructure starting in 2017-18, Vote-Item 4003-05.
- MOI is also noting a risk of $10.8M to the 2017-18 Natural Gas Interest Incentive Transfer Payment line representing the province's cost of borrowing to make interest-free loans. Additional risks of $2.9M in 2017-18 and $1.6M in 2018-19 are noted, reflecting market fluctuations in the interest rate applicable to the province's cost of borrowing. Actual applicable interest rates and borrowing costs will be determined at the time that loans are made.
- MOI is also requesting the creation of a new Operating Asset line under Loans and Investments for disbursement of Natural Gas loans.
- ENERGY is requesting the creation of a new Operating Asset (for disbursement of Natural Gas Loans) and an Operating Expense in the form of a Transfer Payment for the Natural Gas Interest Incentives starting in 2017-18, Vote/Item 2902-06.

**New Expense profile for 2018-19 to 2020-21, fully offset**

- $40.7 million in program expenses from 2018-19 to 2020-21 are fully offset from MOI's Municipal Infrastructure Investment Initiative, Natural Gas Access Program, and reduced request under the Strategic Community Infrastructure Fund notional capital expense allocations.
- MOI is requesting the creation of a new Bad Debt Operating Statutory Appropriation for the Natural Gas Access Loan Program in the Ministry of Infrastructure Vote-Item 4003-19 with a $1,000 placeholder in 2017-18, 2018-19, 2019-20, and 2020-21.
- Note, in 2022-23, MOI is requesting a $30.0 million Bad Debt Expense allocation that will be offset by a reduced request under the Strategic Community Infrastructure Fund. The Bad Debt Operating Statutory Appropriation will require a $1,000 placeholder allocation from 2023-24 until 2036-37 (i.e., over the remaining duration of the 20-year loan program).

**Loan Loss Provision Policy**

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

- This program note also provides an update to the loan loss provision policy in support of the Natural Gas Access Loan Program, in consultation with the Ontario Financing Authority.

## II. Proposed Program Changes

Budget 2016 committed to introducing the Natural Gas Access Loan program to support access to natural gas in 2016. This commitment was further supported by Minister of Infrastructure's 2016 mandate letter, which includes direction to implement the Natural Gas Access Loan and Natural Gas Economic Development Grant programs.

***Loan Program***

In September 2016, the Ministries of Infrastructure (MOI), Energy (ENERGY) and Agriculture, Food and Rural Affairs (OMAFRA) received Treasury Board/Management Board of Cabinet (TB/MBC) approval for the Loan program, including program design, fiscal impacts and launch in Fall of 2016.

As part of approving the Loan program, TB/MBC noted the ministries have identified offsets to partially address the fiscal impact of the Loan program, and instructed the ministries to report back through PRRT to:

a. Create expense lines, operating asset(s), and bad debt allocations.
b. Confirm offsets and provide updates to future-year implications.
c. Provide an update on the loan provision policy, in consultation with the Ontario Financing Authority, that includes a risk assessment to determine if any changes are required to the loan loss provision

MOI is projecting the estimated fiscal impact of the Loan program at $89 million, including $87 million in program expenses over the next six years and $2 million in program administration over the next 20 years. It should be noted that the actual fiscal impact will depend on the types of loans that are approved (e.g., risk level of borrower, loan repayment schedule, etc.).

The following table summarizes the fiscal profile for the Loan program, including the identified offsets and the outstanding net pressure of $10.8 million in 2017-18.

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

| $M | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | Total (2016-17 – 2022-23) | Total (20 year program) |
|---|---|---|---|---|---|---|---|---|---|
| Program Expense - Interest Subsidy | 0.0000 | 5.4615 | 22.7558 | 17.6599 | 0.0000 | 0.0000 | 0.0000 | 45.8772 | 45.8772 |
| Program Expense – Bad Debt | 0.0000 | 0.0.0010 | 0.0010 | 0.0010 | 0.0010 | 0.0010 | 30.0000 | 30.0050 | 30.0190 |
| Program Expense - Administration | 0.1500 | 0.0925 | 0.0925 | 0.0925 | 0.0925 | 0.0925 | 0.0925 | 0.7050 | 2.0000 |
| **Total Program Cost:** | **0.1500** | **5.5550** | **22.8493** | **17.7534** | **0.0935** | **0.0935** | **30.0925** | **76.5872** | **77.8972** |
| *Offsets:* | | | | | | | | | |
| *ODOE Underspending (operating)* | (0.1500) | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | (0.1500) | (0.1500) |
| *Existing Natural Gas Loan Program Allocation* | 0.0000 | (1.5000) | (1.5000) | (1.5000) | (0.0925) | (0.0925) | (1.5000) | (6.1850) | (7.3875) |
| *Municipal Infrastructure Program* | 0.0000 | (4.0540) | (4.0540) | (4.0540) | 0.0000 | 0.0000 | (4.0540) | (16.2160) | (16.2160) |
| *Moving Ontario Forward (outside GTHA set-aside for Strategic Community Infrastructure Fund)* | 0.0000 | 0.0000 | (17.2943) | (12.1984) | 0.0000 | 0.0000 | (24.5385) | (54.0312) | (54.0312) |
| ***Total Offsets*** | ***(0.1500)*** | ***(5.5540)*** | ***(22.8483)*** | ***(17.7524)*** | ***(0.0925)*** | ***(0.0925)*** | ***(30.0925)*** | ***(76.5822)*** | ***(76.5822)*** |
| **Net Pressure** | **0** | **0.0010** | **0.0010** | **0.0010** | **0.0010** | **0.0010** | **0** | **0.0050** | **1.315** |

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

MOI is noting a risk of $10.8M to the 2017-18 Natural Gas Interest Incentive Transfer Payment which represents the province's cost of borrowing to make interest-free loans (for a total interest cost of $16.2M). This is based on the following assumptions (please see Appendix for details):

- Loans will be disbursed on a milestone basis as follows: $60 million in 2017-18, $80 million in 2018-19 and $60 million in 2019-20.
- An interest rate of 2.72% is used to estimate the cost of borrowing to the province. This represents the serial amortizer rate that was applicable at the time of the Treasury Board submission in September 2015.
- Loan recipients would being repaying years 5-7 of the loan term (maximum of 20 years).

The actual interest cost to the province is contingent upon a number of factors that will be known at the time that loans are made, including:

- The amount and term of approved loans
- The repayment profile of approved loans
- Applicable market interest rates to the province's cost of borrowing, based on consultation with the OFA

MOI is also seeking approval to create:

- An Operating Asset for the Natural Gas loan in the Ministry of Infrastructure starting in 2017-18;
- An Operating Transfer Payment line for the Natural Gas Interest Incentive in the Ministry of Infrastructure starting in 2017-18 to reflect the total cost borrowing to Ontario for providing interest-free loans; and,
- A Bad Debt Operating Statutory Appropriation for the Natural Gas loan program in the Ministry of Infrastructure with a $1,000 placeholder starting in 2017-18.

<u>Loan Loss Provision</u>

As part of TB/MBC approval to launch the Loan program, the ministries were also instructed to develop a loan loss provision to outline the fiscal impact of an event where a lender defaults on their loan.

**Loan Loss Policy:**

For planning purposes, MOI is requesting an allocation of $30 million in 2022-23 for bad debt expense. This is to create an "Allowance for Doubtful Accounts (ADA) to cover loan losses that may occur 2022-23 is the first year that repayments are currently scheduled to occur under the loan program.

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

To minimize the risk of loan loss, the Ministry and Infrastructure Ontario will assess the collectability of the loan principal at the time of application and on an annual basis. A minimum debt-service coverage ratio of 1.0x will be required; preference will be given to projects with a ratio of 1.25x or greater. The assessment will be informed by Infrastructure Ontario's extensive experience lending to municipalities and utilities and may include the use of sector-specific financial metrics, including debt-equity ratio, liquidity, etc.

Evidence to be collected in estimating a provision (%) include:

a) sources of revenues for loan repayment;
b) recent collection experience for the loan (principal);
c) recent financial performance/condition of the borrower;
d) security held for the loan (if any);
e) factors known at the time of reporting that are likely to affect the borrower's ability to repay the loan in the future;
f) economic conditions in the region in which the borrower operates; and,
g) conditions in the industry in which the borrower operates.

The methodology for estimating the amount of loan loss provision will be reviewed by management based on actual experience and as new information comes to light. Infrastructure Ontario will be responsible for monitoring/administering the loans with borrowers and providing advice to MOI.

Loan agreements signed with successful applicants will include rights and remedies available to the Province in case of default, including the ability to withhold provincial transfers and exercise security, where available.

<u>Consultation with the Ontario Financing Authority</u>

*Fiscal Profile*

The OFA has advised that interest expense for the Loan Program is subject to prevailing borrowing rates in the market at the time that loans are made. This means the interest incentive transfer payment line is subject to fluctuations depending on when loans are made and repaid.

To reflect this additional risk, MOI modelled an additional scenario, using a higher interest rate (3.072% from Q2 in 2016), leading to an additional $2.9M risk to the 2017-18 and $1.6M to the 2018-19 Natural Gas Interest Incentive Transfer Payment line.

As loans are approved under the program and actual loan disbursement schedules are developed, MOI will work with the OFA to refine applicable interest rates and report back through subsequent in-year submissions and PRRT.

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

*Loan Loss Policy*

The Loan Loss Policy has been updated to reflect OFA's feedback, including the addition of a minimum debt-service coverage ratio (1.0x), use of sector-specific financial metrics (e.g., liquidity) as well as consideration of available security for the loan.

***Grant Program***

The 2014 mandate letter to the Minister of the former Ministry of Economic Development, Employment and Infrastructure noted the importance of creating a Natural Gas Economic Development Grant to accelerate projects with clear economic development potential.

It is expected that uptake for the Grant program will be high, since the Grant program will provide non-repayable project funding, particularly in comparison to the Loan program. The Ministry will attempt to target Grant program funding by using focused metrics, including economic benefit, proponent contribution, number of natural gas connections established, and impact on greenhouse gas emissions.

Preparation for the Grant program, including program design, are under development and will likely be launched sometime in Spring-Summer 2017.

***Background***

The Natural Gas Loan and Grant Programs are part of *Moving Ontario Forward*, the Province's plan to invest $31.5 billion in public transit, transportation and other priority infrastructure projects over ten years. This includes $16.5 billion for transit and transportation inside the Greater Toronto and Hamilton Area (GTHA), and $15 billion for transit, transportation and other infrastructure priorities outside the GTHA, including the Natural Gas Loan and Grant Programs.

As part of *Moving Ontario Forward*, MOI reached out to communities and interested stakeholders to seek input on the design of the natural gas programs from May – September 2015. Consultation feedback highlighted competing expectations regarding the design of the programs:

- Small communities and businesses are concerned about energy fairness, i.e., they want all communities to have an opportunity to share in affordable supplies of natural gas.
- Established utilities would like to prioritize projects for government funding based on economic feasibility (i.e., the ones closest to being economic would proceed first).
- New natural gas distributors are seeking subsidization of consumer conversion costs to help them attract new customers, and support for different modes of delivery such as liquefied natural gas.

The Loan program has been approved for launch in fall 2016, with the following program parameters:

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

| Parameter | Program Overview |
|---|---|
| **What types of projects are eligible?** | • Capital projects to build new natural gas pipelines, compressors and other related infrastructure.<br>• Capital projects to fund liquefied or compressed natural gas infrastructure, including pipelines, liquefaction facilities, regasification facilities, storage facilities and other related infrastructure.<br>• Local programs to subsidize customer conversion costs or individual customer contributions in aid of construction. In such cases, the entities receiving loans are restricted to Municipalities and Indigenous communities, not private corporations.<br><br>All projects must be for net new connections / volume. |
| **Who is eligible to apply?** | • Municipalities*<br>• Indigenous Communities*<br>• Private sector entities providing liquefied natural gas (LNG) and compressed natural gas (CNG) for the MOI-funded portions only.<br><br>**Municipalities or Indigenous communities would use the loan to make a capital contribution-in-aid-of-construction to the utility to build natural gas infrastructure.*<br><br>*They could also use the funds to launch a local program to subsidize customer conversion costs (e.g., converting a furnace to natural gas) or customer contributions in aid of construction to the utility (e.g., the cost to a customer of bringing pipe across a large property, such as a farm, over and above the distance that a utility would normally fund).*<br><br>*The municipality or Indigenous community would be the borrower, however, the natural gas infrastructure would be owned by the utility.* |
| **What are key assessment criteria?** | • Credit-worthiness (i.e. the ability to pay back the loan)<br>• Additional criteria related to cost per connection, net new connections, savings and greenhouse gas emissions impact. |
| **Funding Terms** | • There is no cap on the amount of funding that can be requested within the overall $200 million funding envelope.<br>• Loans would be repayable over a term of up to 20 years. |
| **Timing** | • Application intake and assessment would occur on an ongoing basis over two years. |

## III.Decisions

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

## 1) Operating Decisions

### Key Decisions – MOI

**A.** Creation of Natural Gas Loan Interest Incentive transfer payment lines (Vote/Item 4003-05) to report borrowing cost to the province for providing an interest free loan.
**B.** Operating Asset line and appropriation required for initial Natural Gas Loan disbursement in 2017-18 (Vote/Item 4003-05)

| $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 | Docket # |
|---|---|---|---|---|---|
| **Operating Expense** | **5.5540** | **22.8483** | **17.7524** | **0.0925** | X |
| **Operating Assets** | **60.0000** | **80.0000** | **60.0000** | | |

### Key Decisions – Energy

**A.** Approve the creation of an Operating Asset entitled “Natural Gas Loans” under Vote/Item 2902-06, Energy Development and Management with a $1,000 placeholder for Natural Gas Loan disbursements.
**B.** Approve the creation of a new Operating Expense item entitled “Natural Gas Loan Interest” under Vote/Item 2902-07, Energy Development and Management.
**C.** Approve the creation of Transfer Payment line entitled “Natural Gas Loan Interest Incentive” in Vote/Item 2902-07, Energy Development and Management with a $1,000 placeholder to record borrowing cost to the province for providing an interest free loan. Note that expense impact will be offset from the Ministry of Infrastructure’s Natural Gas Loan Interest Incentives transfer payment line (Vote/Item 4003-05).
**D.** Note that bad debt expense incurred by ENERGY will be offset from the Ministry of Infrastructure’s bad debt expense allocation established for the Natural Gas Access Loan Program.

| $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 | Docket # |
|---|---|---|---|---|---|
| **Operating Expense** | **0.0010** | **0.0010** | **0.0010** | **0.0010** | X |
| **Operating Assets** | **0.0010** | **0.0010** | **0.0010** | **0.0010** | |

### Technical Decisions

**A.** The Ministry of Infrastructure notes an Operating Expense appropriation requirement with an increase to Statutory Appropriations for Bad Debt Expense, in Vote 4003, with a $1,000 placeholder in 2017-18, 2018-19, 2019-20, and 2020-21. Note, in 2022-23, MOI is requesting an allocation of $30.0M Bad Debt Expense

that will be offset by a reduced request under the Strategic Community Infrastructure Fund.

| $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 | Docket # |
|---|---|---|---|---|---|
| **Operating Expense** | **0.0010** | **0.0010** | **0.0010** | **0.0010** | X |
| **Section 15** | **X.X** | | | | |

### Non-Financial Decisions

| | Docket # | X |
|---|---|---|
| o | N/A | |

## 2) Capital Decisions

### Key Decisions

**A.** Decrease appropriation under the Municipal Infrastructure Investment Initiative and Natural Gas Access Program Transfer Payment lines (Vote/Item 4003-05) for the purposes of establishing Loan program offsets.

| $M | 17-18 | 18-19 | 19-20 | 20-21 | 21-22 | 22-23 | 23-24 | 24-25 | 25-26 | 26-27 | Docket # |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Municipal Infrastructure Investment Initiative – Capital Expense** | **-4.0540** | **-4.0540** | **-4.0540** | **X.X** | **X.X** | **-4.0540** | **X.X** | **X.X** | **X.X** | **X.X** | X |
| **Natural Gas Access Program – Capital Expense** | **-1.5000** | **-1.5000** | **-1.5000** | **-0.0925** | **-0.0925** | **-1.5000** | **-0.0925** | **-0.0925** | **-0.0925** | **-0.0925** | |

Note:
Table should be presented on a fully consolidated basis. Capital assets include acquisitions of consolidated entities. Consolidation information should be consistent with information in ORBIT and information submitted to the Office of the Provincial Controller Division (OPCD) in their consolidation worksheets.

- Decrease in funding for the Municipal Infrastructure Investment Initiative is requested as an offset to support increased Loan program funding. This offset is requested to partially address an identified increase in the fiscal impact of the Loan program resulting from additional interest incentive (Appendix A).
- This will help ensure the Loan program has the fiscal capacity to maintain the current proposal of providing loans starting in 2017-18.

**B.** Reduced funding request under the Strategic Community Infrastructure Fund for the purposes of establishing Loan Program Offsets, with reductions of $17.4M in 2018-19, $12.3M in 2019-20 and $24.5M in 2022-23.

| $M | 17-18 | 18-19 | 19-20 | 20-21 | 21-22 | 22-23 | 23-24 | 24-25 | 25-26 | 26-27 | Docket # |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reduced** | **X.X** | **-17.2943** | **-12.1984** | **X.X** | **X.X** | **-24.5385** | **X.X** | **X.X** | **X.X** | **X.X** | X |

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Strategic Critical Infrastructure Fund Request** | | | | | | | | | | | |
| **Capital Asset** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | |

Note:
Table should be presented on a fully consolidated basis. Capital assets include acquisitions of consolidated entities. Consolidation information should be consistent with information in ORBIT and information submitted to the Office of the Provincial Controller Division (OPCD) in their consolidation worksheets.

- This decrease in notional funding is requested as an offset to support increased Loan program funding. This offset is requested to partially address an identified increase in the fiscal impact of the Loan program resulting from additional interest incentive and adjusted timing for the recognition of bad debt expenses (Appendix A).
- This will help ensure the Loan program has the fiscal capacity to maintain the current proposal of providing loans starting in 2017-18.

## Technical Decisions

**C.** N/A

| $M | 17-18 | 18-19 | 19-20 | 20-21 | 21-22 | 22-23 | 23-24 | 24-25 | 25-26 | 26-27 | Docket # |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Capital Expense** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | X |
| **Capital Asset** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | **X.X** | |

Note:
Table should be presented on a fully consolidated basis. Capital assets include acquisitions of consolidated entities. Consolidation information should be consistent with information in ORBIT and information submitted to the Office of the Provincial Controller Division (OPCD) in their consolidation worksheets.

## Non-Financial Decisions

| | Docket # |
|---|---|
| o N/A | X |

# IV. Outcome Measures

| Outcome Measures | Docket # |
|---|---|
| | X |

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

| Measure | Outcome |
|---|---|
| **Investment** | • Ratio of $ provincial loan amount to municipal/private sector investment<br>• Number of communities served though the investment |
| **Connections** | • Number of net new connections to natural gas – residential, business and industrial<br>• Volume increase in natural gas through new connections |
| **Adoption** | • Rate of adoption/conversion among individuals and businesses |
| **Previous Energy Source** | • % of conversions from oil, propane, electricity, etc.<br>• Estimated cost-savings to consumers |

Additional Considerations

## Implementation

- Funding under the Loan Program would be conditional on the project receiving approval for a leave-to-construct application from the Ontario Energy Board (OEB).
    - Natural gas projects, depending on their size, require approval for a leave-to-construct application from the OEB to proceed.
    - The OEB assesses projects for, among other things, economic feasibility, i.e., the expected project costs and revenues and anticipated impact on rates (more details in Section 4.0).
    - LNG/CNG applicants for loans or utilities potentially receiving an aid in contribution payment from a municipality or First Nation will have the flexibility to seek approval from the Board after making an application or in the case of an utility after an application is made by a municipality or First Nation to the Loan Program in order to allow them to bring forward a more complete application for the Board's review.
- Projects must be submitted to the OEB within **three** months of receiving approval under the Loan Program to ensure the credit-assessment stays current.
- Project financials submitted to the OEB must be the same as those submitted under the Loan Program for review. In instances where there is a material change in relevant financial details, the project may be re-assessed under the Loan Program.
- The delivery of loans under the Loan program is partially affected by a regulatory review process currently being undertaken by the OEB.

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

- Loan program guidelines will encourage applicants to ensure proposals include full use of the rate-base, including through "stand alone" rates for new expansion communities, which are now allowed as a result of the OEB's generic review of regulatory flexibility.
- The timing for the launch of the Loan program is proposed as follows:

| Milestone | Estimated Timeline |
|---|---|
| **Program Launch** | Fall 2016 |
| **Application Submissions** | Starting Fall 2016 |
| **Applications evaluated by IO. Shared with MOI and ENERGY Ministers for approval** | Winter 2017 (Approximately 3-4 months process, at the earliest) |
| **Begin Notifying Successful Applicants** | Spring 2017 |
| **OEB Review Process Complete and Funding Begins to Flow**<br><br>**OEB's review process typically takes an estimated 4 to 7 months** | Summer – Fall 2017 |
| **Close of the rolling application intake** | Summer/Fall 2018 |

- It is also important to consider the impact of the ongoing work in preparation of the launch of the Grant program.
- Since the launch of the Grant program will occur after the launch of the Loan program, it is anticipated that some applicants may wait to apply for Grant funding first.

## Communications/Stakeholder Engagement Plans

- MOI consulted with stakeholders, including municipalities, natural gas distributors and special interest groups (e.g., Ontario Federation of Agriculture, Canadian Propane Association, etc.) on the design of the natural gas programs as part of the *Moving Ontario Forward* consultations last summer. The Province released a discussion guide to gather feedback on infrastructure initiatives outside the GTHA, including the Loan and Grant programs.

- A number of additional stakeholders also reached out to MOI, ENERGY and OMAFRA to provide input on the natural gas programs, as follows:

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

| STAKEHOLDER | FEEDBACK SUMMARY |
|---|---|
| **MUNICIPALITIES AND INDIGENOUS COMMUNITIES** | • Concerned about energy fairness and want the opportunity to share in affordable supplies of natural gas and support economic development.<br>• Primarily looking for grant funding to help offset the upfront costs of expansion, as well as consumer conversion costs. |
| **UNION and ENBRIDGE GAS**<br><br>*Established utility seeking to maximize connections by leveraging regulatory flexibility* | • Provide funding to marginally (un)economic projects with a minimum of 50 existing homes/businesses. These are projects that are unable to meet the economic feasibility test put in place for the Ontario Energy Board for expansion projects and would require additional revenues to proceed.<br>• Projects must leverage flexibility (i.e., customer surcharge, increases in rates for existing customers and municipal property tax equivalent contributions)<br>• Provincial funding should not support establishment of new utilities<br>• Customers should be responsible for conversion costs (e.g., furnace, baseboards, etc.,) |
| **EPCOR**<br><br>*New entrant trying to incent new customers to attach and build a rate base* | • Provincial funding be used to subsidize consumer conversion costs—50% from provincial grant, 25% from loan and the remaining would be covered by Epcor<br>• Additional funding to potentially provide a capital contribution in aid of construction to the communities |
| **NORTHEAST MIDSTREAM**<br><br>*New entrant developing a greenfield LNG distribution system* | • Natural gas programs should be open to private-sector proponents.<br>• Eligible costs should include:<br>  o Capital expenditures associated with the creation of LNG distribution systems<br>  o 50% of consumer conversion costs<br>  o Acquisition of LNG supply capacity<br>• The Natural Gas Access Loan should be structured with a customized repayment schedule. |

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

| | |
|---|---|
| **ONTARIO FEDERATION OF AGRICULTURE**<br><br>*Seeking to maximize access for individual farm owners* | • In partnership with the Western Ontario Wardens' Caucus and the Eastern Ontario Wardens' Caucus asked that provincial government work with gas companies to install 1,000Km of new pipe each year for the next 20 years, at an approximate cost of $75 million a year.<br>• Indicated gas expansion would provide an estimated 1 billion savings in energy costs for rural residents and farmers.<br>• Provincial funding should be directly accessible to farm owners and support contributions-in-aid-of-construction by individual property owners (i.e., the cost of bringing the pipe to the property boundary).<br>• Farm owners pay for cost of traversing the property setback and equipment conversion costs. |

## Phase 2 of Federal Infrastructure Funding

o N/A

## Risks

**Docket #** X

| Risk | Mitigation |
|---|---|
| **No or Low Program Uptake** | There has been no uptake of the existing Infrastructure Ontario Loan Program for natural gas expansion. A similar risk exists for the new Loan Program as several stakeholders expressed a preference for grant funding rather than a loan.<br><br>The Loan Program has been structured as a broad and flexible program to provide additional incentive for communities to expand by offering loans at zero-interest. |

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

| | |
|---|---|
| **Low rate of application success** | A number of communities currently without natural gas are small and northern communities with low fiscal capacity, and may not meet the credit assessment criteria. In addition, LNG distribution companies with no established credit history or assets may have challenges demonstrating credit-worthiness.<br><br>MOI and ENERGY will work with IO through the loan approval process to balance considerations related to credit-worthiness with supporting expansion projects. |
| **Projects may not leverage regulatory flexibility** | Program guidelines will encourage applicants to ensure proposals include full use of the rate-base, including through "stand alone" rates for new expansion communities, which are now allowed as a result of the OEB's generic review of regulatory flexibility.<br><br>Since the loans are repayable, failure to make full use of the rate-base would increase their debt obligation. This means that there is a built-in incentive for projects to leverage regulatory flexibility to minimize the loan amount being requested. |
| **Climate Change Mitigation** | Residents applying to the Loan Program would be switching from a mix of fuels – electricity, propane and fuel oil. As such, it is not possible to know the exact greenhouse gas (GHG) emissions impact of the program in advance. Residents switching from propane and fuel oil would reduce their carbon emissions, while residents switching from electricity would increase their emissions under the current electricity supply mix.<br><br>Overall, given the profile of heating systems in Ontario, it is expected that emissions will increase by about 70% or 35 kt CO2e per year for the converted customers as a whole. While this represents less than 0.01% of the Province's GHG reduction targets for 2020, 2030 and 2050, there is a risk that the Loan Program will be seen as inconsistent with the Province's efforts to reduce reliance on fossil fuels.<br><br>The Ministries will develop a responsive communications strategy that focuses on affordability and complementarity with other provincial efforts.<br><br>The key message is that expanding access to natural gas is about energy affordability and providing consumers in underserved areas with more energy choices and lowering energy costs. These savings could be used to finance other GHG reducing initiatives such as building envelope improvements or the purchase of electric vehicles. |

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

| | |
|---|---|
| **Loan Defaults** | IO will perform financial due diligence to ensure the credit worthiness of the applicants prior to final funding decisions. Loans will be secured using security agreements, where possible. IO will be responsible for annual monitoring and tracking loan payments in order to flag any potential concerns for MOI and ENERGY associated with the borrower and the loan.<br><br>If the borrower is demonstrating signs of financial duress and/or a loan goes into default, as a first step, IO on behalf of MOI and ENERGY will work with the borrower to determine the underlying reasons associated with their current situation. If it is determined the borrower is experiencing a short term issue, IO would provide advice on restructuring the repayment schedule or developing other solutions. Final decisions with rest with the MOI or ENERGY Minister. |

| **Human Resources (HR) Implications** | **Docket #** | X |
|---|---|---|

- No FTE impacts have been identified
- Infrastructure Ontario would administer the Natural Gas Access Loan program using the existing loan program framework.

| **Previously Requested Report Backs** | **Docket #** | X |
|---|---|---|

- As part of the 2016-17 PRRT process, TB/MBC directed the former MEDEI, ENERGY and OMAFRA to report back on details of the proposed Loan program by summer 2016 and prior to program launch.
- MOI, ENERGY and OMAFRA reported back to TB/MBC as requested, in September 2016 and received approval to launch the Loan program in Fall 2016.
- At the September 2016 TB/MBC Report Back, MOI, ENERGY and OMAFRA were directed to report back in the 2017-18 PRRT process to:

  a) Create expense lines, operating asset(s), and bad debt allocations.

  b) Confirm offsets and provide updates to future-year implications.

  c) Provide an update on the loan loss provision policy, in consultation with the Ontario Financing Authority, that includes a risk assessment to determine if any changes are required to the loan loss provision.

- As part of the September 2016 TB/MBC Report Back, MOI, ENERGY and OMAFRA were also

directed to report back through the quarterly reporting process on the status of implementation, spending to date, and any additional fiscal impacts.

## V. Proposed Minute

**Proposed Minute**

- Receive a Report Back on the fiscal profile for the Natural Gas Access Loan and Natural Gas Economic Development Grant Programs, including an update on the loan loss provision policy under the Natural Gas Access Loan Program in consultation with the Ontario Financing Authority.
- In this regard:

MOI:

- Approve the creation of an Operating Asset line entitled “Natural Gas Access Loans” under Loans and Investments (Vote-Item 4003-05).
  - Approve an increase of $60,000,000 in 2017-18, $80,000,000 in 2018-19, and $60,000,000 in 2019-20 under Natural Gas Access Loans.
- Approve the Operating Expense appropriation of $5.6M 2017-18, $22.9M in 2018-19 and $17.9M in 2019-20 (Vote/Item 4003-01)
  - Approve the creation of the operating transfer payment line entitled “Natural Gas Loan Interest Incentive” (Vote/Item 4003-01) to report the province’s cost of borrowing to support the interest-free loan program.
  - Approve expenditure increases of $5,554,000 in 2017-18, $22,848,300 in 2018-19 and $17,752,400 in 2019-20 in the Natural Gas Loan Interest Incentive Transfer Payment.
  - Approve increases in program administration costs of $92,500 in 2017-18 and ongoing under Services in Infrastructure Policy and Planning, Vote/Item, 4003-01.
- Approve a Capital Expense offset from the existing Natural Gas Loan Program Transfer Payment, Vote-Item 4003-02, with $1.5000 million in 2017-18, 2018-19, 2019-20 and $0.0925 million in 2020-21.
  - Note that decreases of $0.0925 million in 2021-22, decreases of $1.5000 million in 2022-23, decreases of $0.0925 million in 2023-24, 2024-25, 2025-26, and 2026-27 will be offset from the Natural Gas Access Loan Program.
- Approve the creation of a new Bad Debt Operating Statutory Appropriation under Vote 4003.
- Approve an increase of $1,000 placeholder in 2017-18, 2018-19, 2019-20, and 2020-21 under Bad Debt Expense, the Financial Administration Act under Vote 4003.
- Note an increase of $30,000,000 in Bad Debt expense that will be offset by a reduced request under the Strategic Community Infrastructure Fund.

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

- Note an increase of $1,000 from 2023-24 and ongoing for Bad Debt Expense.
- Note a reduction in funding to be requested under the Strategic Community Infrastructure Fund for the purposes of establishing Loan Program Offsets, with reductions of $17,294,300 in 2018-19, $12,198,400 in 2019-20 and $24,538,500 in 2022-23.
- Approve an expenditure decrease under the Municipal Infrastructure Investment Initiative transfer payment line (Vote/Item 4003-02), for the purposes of establishing Loan program offsets, with reductions of $4,054,000 in 2017-18, $4,054,000 in 2018-19, $4,054,000 in 2019-20, and $4,054,000 in 2022-23 in Vote-Item 4003-02.

Energy:

- Approve the creation of a new Operating Asset item entitled “Natural Gas Loans” under Vote/Item 2902-06, Energy Development and Management with a $1,000 placeholder for Natural Gas Loan disbursements.
- Approve the creation of a new Operating Expense item entitled “Natural Gas Loan Interest Incentive” under Vote/Item 2902-07, Energy Development and Management.
- Approve the creation of a new Transfer Payment line entitled “Natural Gas Loan Interest Incentives” under Vote/Item 2902-07, Energy Development and Management with a $1,000 placeholder to record borrowing cost to the province for providing an interest free loan. Note that expense impact will be offset from the Ministry of Infrastructure’s Natural Gas Loan Interest Incentives transfer payment line (Vote/Item 4003-01).
- Note that bad debt expenses incurred by ENERGY will be offset from the Ministry of Infrastructure’s bad debt expense allocation established for the Natural Gas Access Loan Program.

Approve the following multi-year resources for the program:

| Financial Decisions $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|
| **Operating Expense** | **5.5540** | **22.8483** | **17.7524** | **0.0925** |
| **Capital Expense** | **0.0** | **0.0** | **0.0** | **0.0** |
| **Total Expense** | **5.5540** | **22.8483** | **17.7524** | **0.0925** |
| **Operating Assets** | **60.0000** | **80.0000** | **60.0000** | **0.0000** |
| **Capital Assets** | **-** | **-** | **-** | **-** |

Note the following multi-year capital resources:

| Financial Decisions $M | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 |
|---|---|---|---|---|---|---|
| **Capital Expense*** | **0.0925*** | **30.0925** | **0.0925*** | **0.0925*** | **0.0925*** | **0.0925*** |

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

| | | | | | | |
|---|---|---|---|---|---|---|
| **Capital Assets** | **-** | **-** | **-** | **-** | **-** | **-** |

*To be moved to Operating Expense allocation

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

**APPENDIX A: Loan Program Expense Breakdown**

**What is the Ministry proposing to expense and when?**

Estimated expense requirements for the natural gas loan program are approximately $87 million over 6 years, based on the following assumptions:

1. $200 million dollars will be advanced to recipients on a project milestones-basis – i.e., as certain stages of construction are completed. The fiscal profile below assumes that loans are advanced as follows: $60 million in 2017-18; $80 million in 2018-19; $60 million in 2019-20.
2. An interest rate of 2.72% is assumed and is expensed in the year the loan is advanced. The Interest Subsidy is the difference between the value of the loan advanced and the Net Present Value of loan and repayment stream.
3. The bad debt placeholder represents 15% of the loan portfolio ($30 million) and occurs in the first year that re-payment would take place. The placeholder would be reviewed annually and adjusted to reflect the latest information on the status of loans.
4. A total of $2 million over 20 years for program administration costs would also be expensed ($150,000 in the launch year and $90,000 per year after that) resulting in a total program cost of $89 million over 20 years.

| | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 | 2030-31 | 2031-32 | 2032-33 | 2033-34 | 2034-35 | 2035-36 | 2036-37 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fiscal Impact** | **Total ($M)** | **Yr 0** | **Yr 1** | **Yr 2** | **Yr 3** | **Yr 4** | **Yr 5** | **Yr 6** | **Yr 7** | **Yr 8** | **Yr 9** | **Yr 10** | **Yr 11** | **Yr 12** | **Yr 13** | **Yr 14** | **Yr 15** | **Yr 16** | **Yr 17** | **Yr 18** | **Yr 19** | **Yr 20** |
| Statutory Bad Debt Expense | 30.0 | | | | | | | 30.0 | | | | | | | | | | | | | |
| Interest Incentive | 56.6 | | 16.2 | 22.8 | 17.6 | | | | | | | | | | | | | | | | |
| Program Admin | 2.0 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| **Total Fiscal Impact** | **88.6** | **0.2** | **16.3** | **22.9** | **17.8** | **0.1** | **0.1** | **30.1** | **0.1** | **0.1** | **0.1** | **0.1** | **0.1** | **0.1** | **0.1** | **0.1** | **0.1** | **0.1** | **0.1** | **0.1** | **0.1** |

# PROGRAM NOTE
# Ministry of Infrastructure – Natural Gas Access Loan and Economic Development Grant Programs

**APPENDIX B: Available Offsets**

Existing Allocation

MOI has an existing allocation of $1.5M per year for 20 years for the Loan program (total $30 million):

| $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | Total |
|---|---|---|---|---|---|---|---|
| **Capital Expense** | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 9 |

Municipal Infrastructure Funding

MOI has $24.6M available over 6 years from its Municipal Infrastructure Investment Transfer Payment:

| $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | Total |
|---|---|---|---|---|---|---|---|
| **Capital Expense** | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 24.6 |

Proposed Strategic Community Infrastructure Fund (SCIF)

MOI is developing a proposal for a $2.6 billion application-based funding program for infrastructure development outside the Greater Toronto and Hamilton Area. The program would be part of the Moving Ontario Forward initiative, and would support critical infrastructure projects identified through municipal asset management plans as well as larger strategic projects of economic importance. Funding has not yet been approved by Treasury Board. The profile includes $2.42 billion over 6 years.

| $M | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | Total |
|---|---|---|---|---|---|---|---|
| **Capital Expense** | 0 | 160 | 420 | 690 | 700 | 450 | 2,420.0 |

# MINISTRY OF THE ENVIRONMENT AND CLIMATE CHANGE – REPORT BACKS

## GREEN INVESTMENT FUND (GIF)

### SUMMARY

| Report Back Requirements | Provided? | Comment |
|---|---|---|
| Requirement 1 - Provide details on the outcomes achieved and status | Yes | All programs are on track, with one exception. |
| Requirement 2 - Provide an estimate of the reduction in Greenhouse Gas (GHG) emissions and actual GHG emissions reductions to date | Yes | Estimates reported for all applicable programs, with one exception.<br>Actual GHG reductions and verification will be reported at a later date, when information is available, which will vary by ministry/program. |

**Executive Summary**

Ontario's Green Investment Fund (GIF) was announced in the 2015 Fall Economic Statement. GIF is a down payment on the province's cap and trade program that commits $325 million to programs that will fight climate change, grown the economy and create jobs. GIF programs will: help homeowners use less energy; support more electric vehicle charging stations across Ontario; retrofit social housing developments; help businesses reduce emissions; help fund local environmental organizations; and help provide Indigenous communities with training, tools and infrastructure to address climate change.

Nine programs from seven ministries were approved for funding through the GIF. Ministries participating in GIF include: Energy; Housing; Transportation; Research, Innovation and Science; Economic Development and Growth; Indigenous Relations and Reconciliation; and Environment and Climate Change.

The GIF programs are as follows:

1. Supporting businesses to make energy efficiency investments (Sustainability CoLab)
2. Audits and energy efficiency retrofits for single family homes (Home Retrofits)
3. Development of microgrid and energy storage to reduce diesel fuel use in First Nation communities (Smart Grid Fund)
4. Social Housing Electricity Efficiency Program (SHEEP)
5. Social Housing Apartment Retrofit Program (SHARP)
6. Energy efficiency projects for small and medium sized businesses and industry (SMART Green)
7. Technology innovation initiatives for large industrial emitters (TargetGHG)

8. Improve capacity for First Nations to inform development of and participate in economic opportunities associated with GHG mitigation and adaptation (First Nation Capacity Building)
9. Electrical Vehicles Chargers Ontario (EVCO)

The smart grid program is off track. Additional details can be found later in the report back.

The total estimated GHG emission reduction potential to date is 4,637 kt. The estimates are expected to change since MOECC is currently reviewing and providing feedback to ministries on the estimates calculations. Actual GHG reductions will be available when projects are implemented, the timing of which will vary with each program. One program has yet to provide the GHG estimated emission reduction potential (SHEEP). An estimate will be available in Q3. Additional details can be found later in the report back.

## 1. Ministry of the Environment and Climate Change (MOECC) – Sustainability CoLab

### Overview

- The Sustainability CoLab program will help small businesses launch and grow target-based sustainability programs that will reduce their environmental impact, increase profitability and stimulate the low-carbon economy.

- The Sustainability CoLab supports a network of non-profit members that assist businesses in becoming more environmentally sustainable.

- Network members include: Durham Sustain Ability, Niagara Sustainability Initiative, Sustainable Waterloo Region, Enviro Centre, reThink Green, Sustainable Kingston, Sustainable Hamilton-Burlington, and the Windfall Ecology Centre.

- Network members support the following geographical areas: Region of Durham, Niagara Region, Waterloo Region, City of Ottawa, Greater Sudbury, City of Kingston, Hamilton-Burlington, and York Region.

### Status/Achievements/Challenges

- The Transfer Payment Agreement (TPA) has been signed with Sustainability CoLab.

- Progress to date includes:
    - Seven of the 8 Network Members have signed sub-funding agreements with CoLab and the remaining agreement will be finalized shortly.

    - Three peer learning events have been held by CoLab for Network Members on GHG accounting methodologies.

  - Funds have been disbursed to 7 of the 8 Network Members, based on achievement of certain milestones in Q1.
  - Performance data has been collected and analyzed to provide funding based on the achievements of Network Members for Q2.
  - Coaching of Network Members has taken place to encourage increased action.

- The end date of the program is August, 2018.

**Performance Measures**

- Program participation: 48 businesses/ organizations have participated in the program to date (Q1 and Q2).
  - The annual target for participation is X businesses/organizations.

- This program will not be reporting on GHG reductions, cost-per-tonne or verification of actual GHG emissions as it is an enabling initiative (does not result in direct GHG reductions).

- Performance measures such as capacity building will be reported on at a later date due to the early stage of program implementation.

**Co-Benefits**

- The anticipated co-benefits are related to: employment; economic development opportunities in vulnerable regions/ communities; infrastructure and energy; environment; and, social issues.

- Results for co-benefits cannot be reported on at this time due to the early stage of program implementation.

**Value for Money**

- The program is designed to help participating businesses with setting and achieving targets to reduce their GHG emissions cost-effectively.

- The program provides coaching, resources, tools, networking and learning opportunities to help participants build a business case to make investments and take measures to reduce emissions.

- The program is designed so that Network Members will become self-sustaining, social enterprises over time through fees paid by participating organizations.

## 2. Ministry of Energy – Home Retrofits

**Overview**

- This program expands on the existing home audit and retrofit programs offered by Enbridge Gas Distribution (Enbridge) and Union Gas (Union).
- Enbridge and Union are regulated utilities that have been delivering conservation programs in Ontario for over 20 years.
- This program is province-wide, and targets homes that use natural gas, oil, propane or wood for primary heating.
- The program will help approximately 37,000 additional homes become more energy efficient by providing rebates for home energy audits and retrofits.

**Status/Achievements/Challenges**

- TPAs have been signed with Enbridge and Union.
- The program launched in October 2016 and is on track.
- In July 2016, funding was flowed by ENERGY to Enbridge and Union and the programs are available to homeowners until the funds are exhausted.

**Performance Measures**

- Cost-per-tonne for GHGs (see Table 2).
    - Note that cost-per-tonne (for all programs) represents the GIF funding divided by the estimated GHG reduction potential, e.g., For example, for the energy home retrofits program: $100.000M/ 1,600,000 tonnes = $62.50.
    - When actual GHG reductions become known, this value may be recalculated based on actuals.
    - This value should be evaluated alongside estimated or actual GHG reductions, and other performance measures in order to evaluate the effectiveness of the program.
- The following performance measures will be reported on at a later date due to the early stage of program implementation:
    - Program participation
    - Cost effectiveness
    - Annual incremental cubic metre of gas saving (including the related GHG impact) (propane, oil and wood savings will also be measured)
    - Cumulative lifetime GHG savings (including the related GHG impact)

**Co-Benefits**

- The anticipated co-benefits are related to: new jobs; Ontario's economy; training; the environment (clean air); and, health.

- Results of co-benefits cannot be reported on at this time due to the early stage of program implementation.

**Value for Money**

- $100 million from the GIF has been allocated to Ontario's two primary natural gas utilities, Enbridge and Union Gas, to expand their existing audit and energy-efficiency programs for single family homes. Historically, every dollar invested in natural gas efficiency has resulted in $1.5 to $4 in savings for natural gas ratepayers (largely through savings on natural gas costs).

- Enbridge and Union have been delivering natural gas energy efficiency programs across the province to the industrial, commercial, institutional and residential sectors for over 20 years under the Demand Side Management (DSM) Framework which is overseen by the Ontario Energy Board (OEB).

- Home energy retrofits reduce greenhouse gas emissions and help residential consumers manage energy bills as Ontario transitions to a low-carbon economy. Based on past performance of residential natural gas energy efficiency programs, it is estimated that an incremental $100 million investment in these initiatives would result in 850 million cubic metres of cumulative natural gas savings (propane, oil and wood savings will also be measured), which translates to a 1,600,000 tonne reduction in greenhouse gas emissions.

## 3. Ministry of Energy – Smart Grid Fund

**Overview**

- Smart Grid projects are designed to demonstrate and deploy microgrid and energy storage technology and infrastructure, with a focus on reducing diesel use in remote First Nations communities.

- The transfer payment recipients are Canadian Solar (2 projects) and Ontario Power Generation (1 project). Canadian Solar is a leading manufacturer of solar photovoltaic modules and provider of solar energy solutions.

    - The three projects are located in Keewaywin First Nation, Weenusk First Nation, and Gull Bay First Nation (GBFN).

- Note that a fourth project was planned with Strathcona Solar and the Shawanaga First Nation. The project proposal for this project was revised significantly by the proposed recipient. As a result, this project was terminated.

**Status/Achievements/Challenges**

- The Keewaywin and Weenusk First Nation projects are on hold, awaiting final agreements between the proponent and the host community. However, letters of commitment have been signed, allowing funds to accrue.

  - The project challenges are primarily associated with drafting the agreements needed between the applicant and the respective First Nation communities regarding future ownership of the new energy assets.

  - To mitigate project risk, the Ministry is requiring that any agreement with the First Nation communities is reviewed by a third party that can provide independent advice to the community about the draft agreement. This would ensure full community support of the project before funds are delivered.

  - The applicant is working diligently with to the First Nations, the federal government, and other collaborators to reach an agreement.

- The Gull Bay project is also experiencing a delay.

  - GBFN is involved in the development of agreements between Ontario Power Generation and all collaborators.

  - GBFN is having an election and has requested that no further work take place until the election has concluded and the new leadership is in place (mid to late November).

- The Ministry of Energy's Smart Grid spending did not take place by June 30, 2016 (2015/16 fiscal year).

  - The Ministry plans to accrue $6M and anticipates spending in 2017/18 and 2018/19).

  - Funding will flow in future years in accordance with Smart Grid Fund rules, which is to disburse funds upon the successful completion of project milestones throughout the life of the project.

**Performance Measures**

- Cost effectiveness: See value for money below.

- Cost-per-tonne for GHGs (see Table 2).

- Diesel savings: the solar installations are estimated to offset approximately 546,000 litres of diesel use for Keewaywin/Weenusk and 127,000 litres for Gull Bay.

- The following performance measure will be reported on at a later date due to the early stage of program implementation:
  - Annual incremental diesel savings (including the related incremental GHG reductions)

- Cumulative incremental lifetime GHG savings
- Innovation/ productivity improvements associated with GHG savings
- Near-term increases in jobs and investment in Ontario's Smart Grid sector
- Proactive investment by utilities in Smart Grid solutions where Smart Grid Fund projects have demonstrated benefits
- Increased commercialization of products in Ontario, with a focus on intellectual property
- Program participation
- Leveraged funding and economic development opportunities

**Co-Benefits**

- The anticipated co-benefits are related to: First Nations and Metis communities; new jobs; training; environmental (clean air); and, health.

- Results for co-benefits cannot be reported on at this time due to the early stage of program implementation.

**Value for Money**

- This remote First Nation community has relied on diesel generation for electricity, exposing them to unreliable generators, high service costs and long outages, high fuel prices, diesel's inherent transportation costs and the associated environmental risks. Once completed, this project is anticipated to offset significant diesel spending in the community and allow for greater control of the energy resources within the community.

- The 2 Canadian Solar projects are expecting the system to offset approximately $0.8000M in diesel spending annually for the life of the asset.

## 4. Ministry of Housing (MHO) – Social Housing Electricity Program (SHEEP)

**Overview**

- SHEEP will assist social-housing single family homes become more energy efficient.

- This program will take place in various municipalities in Ontario.

- MHO is encouraging all recipients to participate in any and all gas and electricity incentive programs that may be available to them through their local distribution company or gas utility. Incentive levels may vary across programs; however, the incentives are not being quantified or reported on by ministries.

**Status/Achievements/Challenges**

- TPAs have been signed with 21 Service Managers (includes Consolidated Municipal Service Managers and District Social Service Administration Boards) and the Ontario Aboriginal Housing Services (OAHS).

- MHO received approval to flow 85% of the funds to recipients by June 30, 2016; the remaining 15% will be flowed based on completed reports.

- Recipients have selected, or are finalizing the selection of social housing providers that will receive funding for retrofit work under the program.

- The end date of this program is March, 2018.

**Performance Measures**

- Cost-per-tonne information is not yet available as GHG reduction estimates will not be reported until Q3.

- The following performance measure will be reported on at a later date due to the early stage of program implementation:
    - Program participation
    - Cost effectiveness
    - Annual incremental electricity usage savings
    - Innovation/ productivity improvements associated with electricity usage savings
    - Financial savings incurred by families in social housing single homes

**Co-Benefits**

- The anticipated co-benefits are related to: First Nations and Metis communities; new jobs; collaboration and capacity building; training; health; financial; quality of living conditions; and, energy security.

- Results for co-benefits cannot be reported on at this time due to the early stage of program implementation.

**Value for Money**

- The program will provide good value for money through the funded retrofits, as these will not only assist in measurably reducing GHG emissions in Ontario, but also assist housing providers in securing the long-term viability and sustainability of the social housing stock.

### 5. Ministry of Housing – Social Housing Apartment Retrofit Program (SHARP)

**Overview**

- SHARP will allow for energy efficiency retrofits in high-rise apartment buildings owned by social housing providers.

- This program will take place in various municipalities in Ontario.

- MHO is encouraging all recipients to participate in any and all gas and electricity incentive programs that may be available to them through their local distribution company or gas utility. Incentive levels may vary across programs; however, the incentives are not being quantified or reported on by ministries.

**Status/Achievements/Challenges**

- TPAs have been signed with ten Service Managers (includes Consolidated Municipal Service Managers and District Social Service Administration Boards).

- MHO received approval to flow 85% of the funds to recipients by June 30, 2016; the remaining 15% will be flowed based on completed reports.

- Recipients have selected, or are finalizing the selection of social housing providers that will receive funding for retrofit work under the program.

- The end date of this program is March, 2018.

**Performance Measures**

- Cost-per-tonne for GHGs (see Table 2).

- The following performance measure will be reported on at a later date due to the early stage of program implementation:
  - Program participation
  - Cost effectiveness
  - Annual incremental cubic metre of gas savings (including the related incremental GHG reductions)
  - Cumulative incremental lifetime GHG savings
  - Innovation/ productivity improvements associated with GHG savings

**Co-Benefits**

- The anticipated co-benefits are related to: vulnerable communities; low-income households; social issues; new jobs; Ontario's economy; innovation, science and technology; collaboration and capacity building; the environment (clean air); and, health.

- Results for co-benefits cannot be reported on at this time due to the early stage of program implementation.

**Value for Money**

- The program will provide good value for money through the funded retrofits, as these will not only assist in measurably reducing GHG emissions in Ontario, but also assist housing providers in securing the long-term viability and sustainability of the social housing stock.

## 6. Ministry of Economic Development and Growth (MEDG) – SMART Green

# MINISTRY OF THE ENVIRONMENT AND CLIMATE CHANGE – REPORT BACKS

**Overview**

- SMART Green is a province-wide program, which will help small and medium-sized manufacturers and industry to reduce their GHG emissions and become more energy efficient through upgrades to their production/process equipment.

**Status/Achievements/Challenges**

- A TPA has been signed with the Canadian Manufacturers and Exporters (CME).
- Program is on track and launched in October, 2016.
- CME will be distributing the funding on an application, matching-funding basis.
- The end date of this program is March, 2019.

**Performance Measures**

- Cost-per-tonne for GHGs (see Table 2).
- The following performance measure will be reported on at a later date due to the early stage of program implementation:
    - Program participation
    - Cost effectiveness
    - Annual incremental energy reductions based on production output levels (e.g., energy savings in cubic metres of gas, kilowatt-hours of electricity or litres of fuel), including the related incremental GHG reductions
    - Cumulative incremental lifetime GHG savings
    - Innovation/ productivity improvements associated with per production unit GHG savings
    - Match a specified percentage of grant investment (exact amount TBD, but expected to be 1:1)

**Co-Benefits**

- The anticipated co-benefits are related to: Ontario's economy, productivity, the environment (clean air), and, health.
- Results for co-benefits cannot be reported on at this time due to the early stage of program implementation.

**Value for Money**

- ...

## 7. Ministry of Research Innovation and Science (MRIS) – TargetGHG

**Overview**

- The TargetGHG Program has three streams: Industrial Innovation Demonstration; Technology Development; and, Solutions for 2030.

- This program brings together large industry, cleantech small and medium-sized enterprises (SMEs), and research consortiums.

- The objectives of the program are to:
    - Establish Ontario as a leader in reducing GHG emissions;
    - Build a marketplace that brings together technology development with technology adoption, where Ontario's innovators and entrepreneurs can work together with the industry/customers/supply chains to develop, demonstrate and adopt new and innovative solutions to significantly reduce GHG emissions; and,
    - Catalyze private sector investments in GHG reduction strategies, and drive adoption.

**Status/Achievements/Challenges**

- A TPA has been signed with the Ontario Centres of Excellence (OCE), who is managing the application-based grant program to fund various projects.

- Round-table industry consultations were held in May, 2016 and included 104 participants.

- Partnering forums occurred in October, 2016.

- MOUs have been signed with Emissions Reductions Alberta; Natural Sciences and Engineering Research Council (NSERC); and, Sustainable Development Technology Canada (SDTC).

- Projects are expected to begin...

- The end date of this program is March, 2022.

**Performance Measures**

- Cost-per-tonne for GHGs (see Table 2).

- Matching funding:
    - For NSERC projects, OCE will provide $0.8M with a matching contribution from NSERC.

- The following performance measure will be reported on at a later date due to the early stage of program implementation:
    - Program participation (industry partners and SMEs)
    - Cost effectiveness

- Annual incremental energy reductions based on production output levels (e.g., energy savings in cubic metres of gas, kilowatt-hours of electricity or litres of fuel), including the related incremental GHG reductions
- Cumulative incremental lifetime GHG savings
- Innovation/ productivity improvements associated with per production unit GHG savings
- Match a specified percentage of grant investment (exact amount TBD, but expected to be 1:1)
- Additional economic development indicators

**Co-Benefits**

- The anticipated co-benefits relate to: First Nations and Metis communities; new jobs; vulnerable communities; productivity; training; the environment (clean air, water, and soil); and, health.

- Results for co-benefits cannot be reported on at this time due to the early stage of program implementation.

**Value for Money**

- ...

## 8. Ministry of Indigenous Relations and Reconciliation (MIRR) – First Nation Capacity Building

**Overview**

- This program provides support to First Nation communities to build capacity to participate in economic opportunities related to cap and trade, to prepare for the effects of climate change (e.g., training, tools, infrastructure), and fund a Northern Climate Change Impact Study.

- The Transfer Payment recipient is the Ontario Centre for Climate Impacts and Adaptation Resources (OCCIAR), who will partner with the Ontario First Nations Technical Services Corporation to develop a program to distribute the funding.

- The program is taking place in four regions of the province: northern, eastern, south western and west central Ontario. It involves First Nations in 10 Northern and 4 Southern communities.

**Status/Achievements/Challenges**

- TPA has been signed with OCCIAR.

- This program has been launched, events are being held, and is on track. The following outlines the progress to date:

  - Participation in the Climate Change Impact Study has been confirmed (20 communities); the Climate change field work has begun and the frog range study is underway in two locations (Fort Severn, Eabametoong).

  - Two youth engagement sessions have been held.

  - The participation of additional First Nations has been confirmed for adaptation and energy planning.

- The anticipated end date of this program is March, 2018.

**Performance Measures**

- Program participation rate: Energy Plans - 150%; Adaptation Plans - 150%; and, Climate Change Impacts for the North - 200%.

- This program will not be reporting on GHG reductions, cost-per-tonne or verification of actual GHG emissions as it is an enabling initiative (does not result in direct GHG reductions).

- The following performance measure will be reported on at a later date due to the early stage of program implementation:
  - Number of adaptation and mitigation plans created
  - Number of First Nations communities represented in the governance structure
  - Number of adaptation and mitigation measures created
  - Number of adaptation and mitigation projects identified

**Co-Benefits**

- The anticipated co-benefits relate to: First Nations and Metis communities; new jobs; collaboration and capacity building; training; health; financial issues; quality of living conditions; and, energy security.

- Results for co-benefits cannot be reported on at this time due to the early stage of program implementation.

**Value for Money**

- The program will build capacity in Indigenous communities to develop and implement climate change adaptation and energy plans.

  - Plans created in pilot communities will be made available to all Indigenous communities across the province.

  - The Climate Change Impact Study for the North (CI Study) will assess potential climate change impacts by working with Indigenous community members to collect traditional ecological knowledge and scientific data related to climate change markers.

## 9. Ministry of Transportation (MTO) – Electric Vehicle Chargers Ontario (EVCO)

### Overview

- Through the EVCO grant program, the province is working with 24 public and private sector partners to create a network of electric vehicle stations in cities, along highways and at workplaces and public places across Ontario.

### Status/Achievements/Challenges

- Some projects have been completed already and others are underway.

- The Ministry of Transportation was approved to spend $20M on EVCO; however only $19.8451M will be spent (variance of $0.1549M).

- The end date of this program is June 2022.

### Performance Measures

- This program will not be reporting on GHG reductions, cost-per-tonne or verification of actual GHG emissions as it is an enabling initiative (does not result in direct GHG reductions).

- The following performance measure will be reported on at a later date due to the early stage of program implementation:
    - …

### Co-Benefits

- The anticipated co-benefits relate to: First Nations and Metis communities; new jobs; the environment (clean air); collaboration and capacity building; Ontario's economy; financial issues; health; innovation, science and technology; productivity; social issues; and, vulnerable communities.

- Results for co-benefits cannot be reported on at this time due to the early stage of program implementation.

### Value for Money

- EVCO is an application-based program. All EVCO submissions were evaluated on their optimal connectivity, site or corridor selection, innovativeness, cost efficiency and effectiveness, and reasonableness. Successful applicants delivered the best value for money and customer experience.

- With a focus on value for money at the application, location and broader network-level, the province selected 24 partners to install close to 500 charging stations with a $20M investment.

## Financial Status

- Approved funds for GIF were $325M; $303.0451M has been spent to date.
- Leveraged, in-kind, and matching funding total $69.4364M to date.

### Table 1: Financial Summary ($M)

| | MOECC - Sustainability Co-Lab | Energy - Home Retrofits | Energy - Smart Grid Fund | MHO - SHEEP (Homes) | MHO - SHARP (Buildings) | MEDG - SMART Green | MRIS - TargetGHG | MIRR - FN Capacity Building | MTO - EVCO | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| **GIF Funding** | 1.0000 | 100.0000 | 6.0000 | $10.0000 | $82.0000 | $25.0000 | $74.0000 | $5.0000 | $20.0000 | $325.0000 |
| **Leveraged Funding** | $0 | $0 | $7.9961 | $0 | $0 | $0 | $19.0000 | $0 | $0 | $27.5422 |
| **In-Kind Funding** | $0 | $0 | $0.2082 | $0 | $0 | $0 | $2.0000 | $0 | $0 | $2.1442 |
| **Matching Funding** | $0 | $0 | $0 | $0 | $0 | TBD | $39.7500 | $0 | $0 | $39.7500 |
| **Total Additional Funding (leveraged, in-kind, and matching)** | $0 | $0 | $8.2043 | $0 | $0 | $0 | $60.7500 | $0 | $0 | $69.4364 |
| **Total Funding (all types)** | $1.0000 | $100.0000 | $14.2043 | $10.0000 | $82.0000 | $25.0000 | $134.7500 | $5.0000 | $20.0000 | $394.4364 |
| **Ministry Spending** | $1.0000 | $100.0000 | $0 | $8.5000 | $69.7000 | $25.0000 | $74.0000 | $5.0000 | $19.8451 | $303.0451 |
| **Ministry Spending Variance** | $0 | $0 | $6.0000 | $1.5000 | $12.3000 | $0 | $0 | $0 | $0.1549 | $21.9549 |
| **Recipient Spending** | $0.0988 | $0.216 | $0 | Not Reported | Not Reported | $0.0676 | $0.0958 | $0.2762 | $0.2168 | $0.7552 |
| **Audit Planned (Y/N/Not Reported)** | N | Y | N | Not Reported | Not Reported | Not Reported | Y | N | TBD | |

## GHG Reduction Estimates

- Total GHG reductions estimates for all programs are 4,637 kt.
- MOECC is currently reviewing and providing feedback to ministries on the estimates calculations. The estimate total is anticipated to change as a result.

**Table 2: Greenhouse Gas Reduction Estimates Summary**

| | Total Estimated GHG Reductions (kt)[1] | Cost-per-tonne based on GHG Reduction Potential ($/tonne)[2] | Comments |
|---|---|---|---|
| **MOECC Sustainability CoLab** | N/A | N/A | Enabling initiative, no direct GHG reductions |
| **Energy Home Retrofits** | 1,600 | $62.50 | GHG reduction estimate up to 2031/32 |
| **Energy Smart Grid Fund** | 26 | $208.99-$285.03 | GHG reduction estimate up to 2050. Range provided for three projects. |
| **MHO SHEEP (Homes)** | Not reported | Not reported | GHG reduction estimate to be reported in Q3. MOECC is assisting MHO in calculating these estimates. |
| **MHO SHARP (Buildings)** | 208 | $395.18 | GHG reduction estimate up to 2050 |
| **MEDG SMART Green** | 1,174 | $21.29 | GHG reduction estimate up to 2050 |
| **MRIS TargetGHG** | 1,630 | $29.70 - $54.48 | GHG reduction estimate up to 2030 |
| **MIRR FN Capacity Building** | N/A | N/A | Enabling initiative, no direct GHG reductions |
| **MTO EVCO** | N/A | N/A | Enabling initiative, no direct GHG reductions |
| **Total** | 4,637 | | |

1. Rounded to the nearest kt
2. Cost-per-tonne values are based on values provided by ministries or calculated by dividing the GI funding allocation by GHG estimates provided.

# MINISTRY OF THE ENVIRONMENT AND CLIMATE CHANGE – REPORT BACKS

## PROPOSED MINUTE

- Received the reportback providing the outcomes achieved, including an estimate of the reduction in GHG emissions.

## APPENDIX 1: REPORT BACK MINUTE

- Directed MOECC, MAA, MMAH, MTO, ENE, MEDEI and MRI to report back in the 2017-18 PRRT process with details on the outcomes achieved, including an estimate of the reduction in GHG emissions.

| | | |
|---|---|---|
| ☐ [2016] Document Initiative | ☐ [2016-17] PRRT Final Minutes (Not a Doc. Initiative) | ☒ [TB/MBC January 26, 2016] In-Year Minute |

# BUSINESS CASE - FTE TRANSFER
# FROM: MINISTRY OF ENERGY
# TO: GSIC

## A. Request:

This note requests the transfer of 2 temporary FTEs for 2017-18 only from the Ministry of Energy to GSIC to undertake project work for the Energy and Water Reporting and Benchmarking (EWRB) Project.

| Docket # D0041897 | **2016-17** | **2017-18** | **2018-19** | **2019-20** |
|---|---|---|---|---|
| Total operating ($M) | - | - | - | - |
| Total capital ($M) | - | - | - | - |
| Total financial impact ($M) | 0 | 0 | 0 | 0 |
| Net FTE impact | | 0 | 0 | 0 |
| FTE impact - GSIC | | 2 | 0 | 0 |
| FTE impact – Ministry Of Energy | | (2) | 0 | 0 |

## B. Key Considerations:

The 2 FTEs are required for work on the EWRB Project which will continue into the 2017-18. No funding is being transferred as the project work and ongoing sustainment work will be recoverable from the Ministry of Energy.

**Policy Linkages:**
N/A

## C. Business Case Rationale:

The Ministry of Energy FTEs will support the development and implementation of the EWRB Project which is continuing into 2017-18.

At this time GSIC does not have the flexibility to manage from within the allocation due to a number of multi-year initiatives to meet Budget commitments and the Ministry's mandate. Accordingly, GSIC seeks approval to receive two FTEs from Ministry of Energy to meet its business needs

## D. Additional Background:

*N/A*

## E. Linkages to Government Priorities:

| Government Priority Areas | Description of Alignment |
|---|---|
| Investing in people | N/A |
| Investing in modern infrastructure | N/A |
| Supporting a dynamic and innovative business climate | N/A |

## F. Cross Cutting Linkages:

N/A

## G. Alignment with the Commission on the Reform of Ontario Public Services (CROPS) Recommendations:

N/A

## H. Risk Analysis and Mitigation Strategy:

N/A

## I. Human Resource Implications:

GSIC is seeking the transfer of 2 temporary FTE for 2017-18 only from the Ministry of Energy to GSIC to work on the EWRB Project.

## J. Performance Measures:

N/A

## K. Communications and Stakeholder Engagement:

N/A

## L. Proposed Minute

Treasury Board/Management Board of Cabinet decision requested:

- Approve a temporary transfer of 2 FTEs from ENERGY (Vote/Item 2902-01 Energy Development and Management) to MGCS (Vote/Item 1817-01), to support the Energy and Water Reporting and Benchmarking Project for 2017-18 only.

| | |
|---|---|
| **From:** | Salman Qadir |
| **To:** | John Kim |
| **Subject:** | Fwd: MoE - OFA MOU for OREC |
| **Date:** | Wednesday, December 07, 2016 8:19:51 AM |
| **Attachments:** | MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal).docx<br>ATT00001.htm |

---

Hi John,

See Kens comment in the attached. He has a good point in the sense as to what sort of "are in agreement" looks like, especially since we seen that Energys PRRT didn't really mention the OFA as playing a role in the forecasting.

Salman

Begin forwarded message:

> **From:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
> **Date:** December 6, 2016 at 3:28:07 PM EST
> **To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
> **Cc:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>
> **Subject: RE: MoE - OFA MOU for OREC**
>
> Salman
>
> My comments on your notes to the draft MOU are attached. I am not in a position to comment on the description of the program structure in the draft MOU.
>
> Ken
>
> ---
>
> **From:** Salman Qadir
> **Sent:** Monday, December 05, 2016 10:46 AM
> **To:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>; Kenneth Russell <Kenneth.Russell@ofina.on.ca>
> **Cc:** John Kim <John.Kim@ofina.on.ca>
> **Subject:** MoE - OFA MOU for OREC
>
> Hi Caroline/Ken,
>
> We have received a marked up version of the MOU between the OFA and MoE related to the OREC regulation. I did a quick blackline and there were actually other changes that were not highlighted and was advisable to check with you whether you see any issues/comments. The changes seem to revolve around the definitions of the program etc.

V3_clean = what we had last sent over
DAP Nov 25 = the latest markup we received
Track changes to v3_clean - quick blackline to show additional changes not shown in the markup received.

Hoping you can take a quick look.

Thank you,
Salman

**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the [*Ontario Rebate for Electricity Consumers Act, 2016*] – NTD, pending the legislature considering the Bill], including and the regulations thereunder (the "Act"), certain consumers will be entitled to receive a credit, known as the financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers (" or "OREC"), against", in respect of the cost of electricity consumed by them during the period commencing January 1, 2017;

2. Funds in respect of the Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to mostspecified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act, its regulations and the Market Rules;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the ORECReimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f)of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

1. **Payment Authorization**

   (i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

   (ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

   (iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

      i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

      ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

2. **Payment Process**

   ~~a) The Ministry is registered with the IESO as an IESO Program Participant.~~

   a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

   ~~c)~~b) The Ministry will take all necessary steps to provide the OFA with access to the ~~Ministry's~~ IESO ~~account and will arrange for~~Portal so that the OFA ~~to~~will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

   ~~d)~~c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

   ~~e)~~d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

   ~~f)~~e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

3. **Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ensure that the Ministry has full access to such records.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

e)

**Commented [SQ22]:** What would this access look like? Are they expecting us to set up up an external site with all of our files/modeling as well?

Just need to clarify expectations.

**Commented [KR3]:** I would not expect this ti be anything other than physical access. You may wish to clarify this point.

## 4. OREC Cost Forecasting

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to ~~complete and accurate~~ data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process .

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.

e) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement ~~of~~on the forecasts.

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**Formatted:** Indent: Left: 0.25", Hanging: 0.25"

**Commented [SQ24]:** The only change outlined in the latest version.

**Commented [KR5]:** Does the OFA agree that there should be a provision contemplating agreement on the forecasts? Would it be sufficient to simply reqire tht senior management be briefed?

## 5. Limited Role of the OFA

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

## 6. Review and Termination

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

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c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

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d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:
email:

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c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy
880 Bay Street, 5th Floor
Attention:
email:

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**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

**From:** Ronald Kwan
**To:** John Kim
**Subject:** Fwd: OFA-IESO loan
**Date:** Saturday, January 21, 2017 12:14:48 PM

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Hi John,

FYI.

Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 20, 2017 at 10:37:09 PM EST
> **To:** "Bharat Patel (MOF)" <Bharat.Patel3@ontario.ca>, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> **Cc:** John Psinas <John.Psinas@ofina.on.ca>, "Nadine Petsche (MOF)" <Nadine.Petsche@ontario.ca>, "Veinot, Cindy (TBS)" <Cindy.Veinot@ontario.ca>
> **Subject: RE: OFA-IESO loan**
>
> Hi Bharat,
>
> Thanks for looking into how the two OEFC facilities with IESO are recorded, and agreed that it's important to have IESO explain how it what it records in its operating statements and in its market books.
>
> Did you see where IESO recorded the credit facility from the OFA? A main area of interest discussed at the meeting today was on how the IESO records the Regulated Price Plan amounts, and it's the RPP balances that the OFA credit facility is in place for the IESO to be able to access for financing if it needs to.
>
> Ron
>
> -----Original Message-----
> From: Patel, Bharat (TBS) [mailto:Bharat.Patel3@ontario.ca]
> Sent: January-20-17 7:30 PM
> To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> Cc: John Psinas <John.Psinas@ofina.on.ca>; Nadine Petsche (MOF) <Nadine.Petsche@ontario.ca>; Veinot, Cindy (TBS) <Cindy.Veinot@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> Subject: Re: OFA-IESO loan
>
> But all this items are on accounting books. IESO has $90M loan payable to OEFC and $95M line of credit see not#6 of IESO f/s.
>
> Cindy,
>
> I don't expect any loan amount would be off the books. This is cash and if they use the market book concept, the question is how they reconciled banks?
>
> May be IESO can revisit it's documents and explain to us how market books vs. Accounting books work from the perspective of IESO.
>
> Thanks,
> Bharat
>
> Sent from my BlackBerry 10 smartphone on the Rogers network.
> From: Ken Kandeepan
> Sent: Friday, January 20, 2017 7:15 PM
> To: Patel, Bharat (TBS)
> Cc: John Psinas; Petsche, Nadine (TBS); Veinot, Cindy (TBS); Kwan, Ronald (OFA)
> Subject: Re: OFA-IESO loan
>
> Sorry one small correction, pls replace OEFC with OFA in my previous email. As Ron pointed out earlier the loan is with the OFA.
>
> Thanks
>
> Ken k
>
> On Jan 20, 2017, at 6:45 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca<mailto:Ken.Kandeepan@ofina.on.ca>> wrote:
>
> Hi Bharat
>
> Ron has provided details with regard to the loan itself so I will stick to the accounting. The loan is presented as an asset in OEFC's books and financial statements and the interest on the loan is treated as interest revenue. Obviously, the OEFC funds any drawdowns by IESO on the credit facility by borrowing.
>
> Since IESO is also line by line consolidated I was under impression that upon consolidation in the PA the OEFC's asset is eliminated by the IESO loan, however given that the latter is part of IESO's market books I am not sure how the consolidation works.
>
> Hope this is helpful, if you have any questions pls don't hesitate to email or call on my cell 647-202-4373.
>
> Thanks
>
> Ken k
>
> On Jan 20, 2017, at 5:13 PM, Patel, Bharat (TBS) <Bharat.Patel3@ontario.ca<mailto:Bharat.Patel3@ontario.ca>> wrote:
>
> Ken/John,
>
> Not sure if you are the right person to ask, but can you please help to get the answer for $100M RRP program support that OFA provides to IESO? We are interested in how this loan is recorded (i.e. on the books vs. market)? if on the books where? And if market how it works?
>
> Thanks,
> Bharat
>
> From: Veinot, Cindy (TBS)
> Sent: January-20-17 5:05 PM
> To: Patel, Bharat (TBS)
> Cc: Petsche, Nadine (TBS)
> Subject: FW: OFA-IESO loan
>
> See below – can you see how OFA has this amount recorded – its apparently on the market books.
>
> From: Kim Marshall [mailto:Kim.Marshall@ieso.ca]
> Sent: January-20-17 3:36 PM
> To: Veinot, Cindy (TBS)
> Subject: RE: OFA-IESO loan
>
> market
>
> Kimberly Marshall | VP, Corporate Services & CFO Independent Electricity System Operator (IESO) | T: (416) 969-6232 | C: (416) 545-7202
> 120 Adelaide Street West, Suite 1600, Toronto, ON M5H 1T1
> Web: www.ieso.ca[ieso.ca]<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.ieso.ca&d=CwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=sDTjf9tVmfT9K92u269doOHn6NwIN5Soa0mhVrZmimM&m=yQLw9Izwuirx0rmH856eKtI62jHpveSR-3WViN3OVIs&s=9lCuRuL_UEDHOp7oe0TUvOfbg3HsKeR0SpMVmBwm7mM&e=> | Twitter: IESO_Tweets[twitter.com]<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.twitter.com_ieso-5Ftweets&d=CwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=sDTjf9tVmfT9K92u269doOHn6NwIN5Soa0mhVrZmimM&m=yQLw9Izwuirx0rmH856eKtI62jHpveSR-3WViN3OVIs&s=VvE25PluOlvzmmCqpKoFADRbNM0UUXJcOwIPJag89B0&e=> | LinkedIn: IESO[linkedin.com]<https://urldefense.proofpoint.com/v2/url?u=https-3A__www.linkedin.com_company_ieso&d=CwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=sDTjf9tVmfT9K92u269doOHn6NwIN5Soa0mhVrZmimM&m=yQLw9Izwuirx0rmH856eKtI62jHpveSR-3WViN3OVIs&s=JK274cHtsLd4Cz3TOGOkzccQ1CK9027K4woVE4nkb5o&e=>
>
> Corporate Services collaborates with you to deliver solutions and expertise that enable the IESO to achieve its goals.
>
> Conservation: www.saveONenergy.ca[saveONenergy.ca]<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.saveONenergy.ca&d=CwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=sDTjf9tVmfT9K92u269doOHn6NwIN5Soa0mhVrZmimM&m=yQLw9Izwuirx0rmH856eKtI62jHpveSR-3WViN3OVIs&s=yi6_Z_OUN1JdIkAFBC3pNh34-3cXr-pe3HRqQpV5e-c&e=> | Twitter: saveONenergyOnt[twitter.com]<https://urldefense.proofpoint.com/v2/url?u=https-3A__twitter.com_saveonenergyont&d=CwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=sDTjf9tVmfT9K92u269doOHn6NwIN5Soa0mhVrZmimM&m=yQLw9Izwuirx0rmH856eKtI62jHpveSR-3WViN3OVIs&s=7r9AX80Sz4kCMZlytq8t6KT-czxWdp25p9TQgj2cJTM&e=> | LinkedIn: saveONenergy[linkedin.com]<https://urldefense.proofpoint.com/v2/url?u=https-

3A__www.linkedin.com_company_saveonenergy-2Dontario&d=CwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=sDTjf9tVmfT9K92u269doOHn6NwIN5Soa0mhVrZmimM&m=yQLw9Izwuirx0rmH856eKtI62jHpveSR-3WViN3OVIs&s=OFQuM39y1dm-V8E8NKFSdvormiaC_jRRg6I-cRCvE7c&e=>

From: Veinot, Cindy (TBS) [mailto:Cindy.Veinot@ontario.ca]
Sent: January 20, 2017 3:35 PM
To: Kim Marshall
Subject: RE: OFA-IESO loan

*** EXTERNAL email. Please be cautious and evaluate before you click on links, open attachments, or provide credentials. ***

Thanks – is this loan recorded on the accounting books (vs. the market books?)

Cindy

From: Kim Marshall [mailto:Kim.Marshall@ieso.ca]
Sent: January-20-17 3:32 PM
To: Veinot, Cindy (TBS)
Subject: OFA-IESO loan

Cindy, the IESO currently has a monthly payable to the OFA. Right now it is in the 100million range support the rpp program. Not sure how that is currently treated by the OFA. thanks

Kimberly Marshall | VP, Corporate Services & CFO Independent Electricity System Operator (IESO) | T: (416) 969-6232 | C: (416) 545-7202
120 Adelaide Street West, Suite 1600, Toronto, ON M5H 1T1
Web: www.ieso.ca[ieso.ca]<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.ieso.ca&d=CwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=sDTjf9tVmfT9K92u269doOHn6NwIN5Soa0mhVrZmimM&m=yQLw9Izwuirx0rmH856eKtI62jHpveSR-3WViN3OVIs&s=9lCuRuL_UEDHOp7oe0TUvOfbg3HsKeR0SpMVmBwm7mM&e=> | Twitter: IESO_Tweets[twitter.com]<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.twitter.com_ieso-5Ftweets&d=CwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=sDTjf9tVmfT9K92u269doOHn6NwIN5Soa0mhVrZmimM&m=yQLw9Izwuirx0rmH856eKtI62jHpveSR-3WViN3OVIs&s=VvE25PluOlvzmmCqpKoFADRbNM0UUXJcOwIPJag89B0&e=> | LinkedIn: IESO[linkedin.com]<https://urldefense.proofpoint.com/v2/url?u=https-3A__www.linkedin.com_company_ieso&d=CwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=sDTjf9tVmfT9K92u269doOHn6NwIN5Soa0mhVrZmimM&m=yQLw9Izwuirx0rmH856eKtI62jHpveSR-3WViN3OVIs&s=JK274cHtsLd4Cz3TOGOkzccQ1CK9027K4woVE4nkb5o&e=>

Corporate Services collaborates with you to deliver solutions and expertise that enable the IESO to achieve its goals.

Conservation: www.saveONenergy.ca[saveONenergy.ca]<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.saveONenergy.ca&d=CwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=sDTjf9tVmfT9K92u269doOHn6NwIN5Soa0mhVrZmimM&m=yQLw9Izwuirx0rmH856eKtI62jHpveSR-3WViN3OVIs&s=yi6_Z_OUN1JdIkAFBC3pNh34-3cXr-pe3HRqQpV5e-c&e=> | Twitter: saveONenergyOnt[twitter.com]<https://urldefense.proofpoint.com/v2/url?u=https-3A__twitter.com_saveonenergyont&d=CwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=sDTjf9tVmfT9K92u269doOHn6NwIN5Soa0mhVrZmimM&m=yQLw9Izwuirx0rmH856eKtI62jHpveSR-3WViN3OVIs&s=7r9AX80Sz4kCMZlytq8t6KT-czxWdp25p9TQgj2cJTM&e=> | LinkedIn: saveONenergy[linkedin.com]<https://urldefense.proofpoint.com/v2/url?u=https-3A__www.linkedin.com_company_saveonenergy-2Dontario&d=CwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=sDTjf9tVmfT9K92u269doOHn6NwIN5Soa0mhVrZmimM&m=yQLw9Izwuirx0rmH856eKtI62jHpveSR-3WViN3OVIs&s=OFQuM39y1dm-V8E8NKFSdvormiaC_jRRg6I-cRCvE7c&e=>

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| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon; John Kim; Emily Kerr; Darren Scanlan |
| **Subject:** | Fwd: Potential Rate Mitigation |
| **Date:** | Monday, December 05, 2016 8:14:25 PM |
| **Attachments:** | Price Mitigation Proposals_Dec5-16_v11.pptx<br>ATT00001.htm |

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Hi,

Lets meet in the morning to discuss.

We'll need a product for EOD. Could be an annotated slide deck, as well as a markup. Suggestion on any other formats?

Ron

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Date:** December 5, 2016 at 8:02:36 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
> **Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>
> **Subject: Fw: Potential Rate Mitigation**
>
> Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.
>
> From: Katona, Keley (ENERGY)
> Sent: December 5, 2016 7:44 PM
> To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)
> Subject: FW: Potential Rate Mitigation
>
> Hi,
>
> See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?
>
> If there are questions, I’m happy to discuss.

Thanks,
Keley

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II); and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.

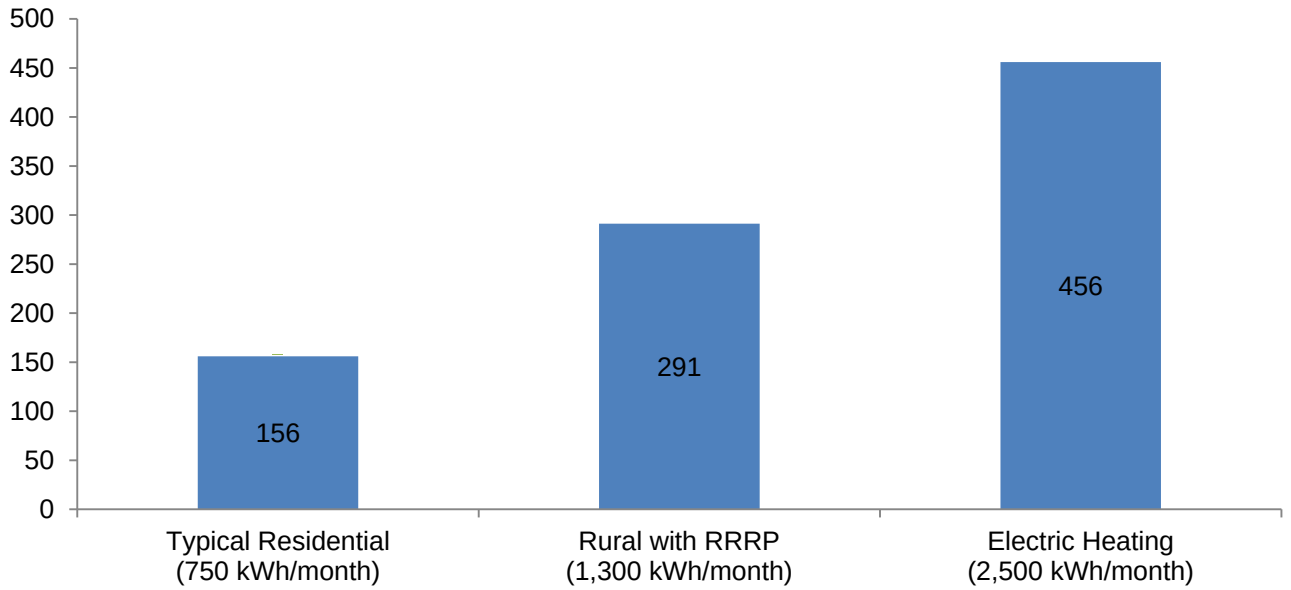
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

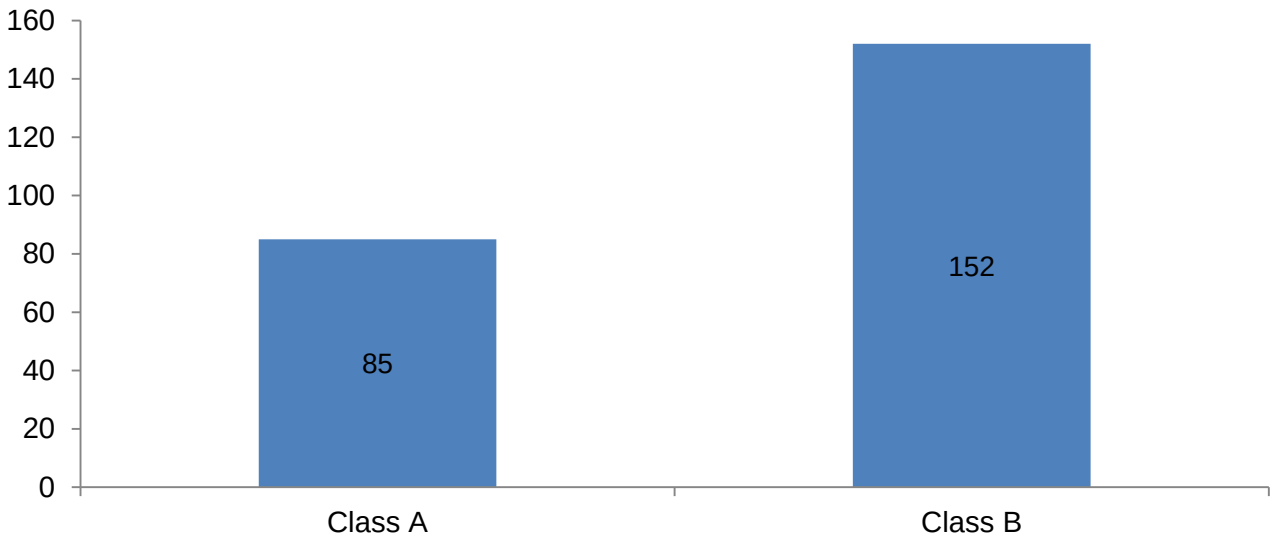



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of $xx [placeholder for OFA] on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $20 to $35 million annual fiscal pressure to the province [TBC by OPG / OFA].

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESB) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.
- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.
- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

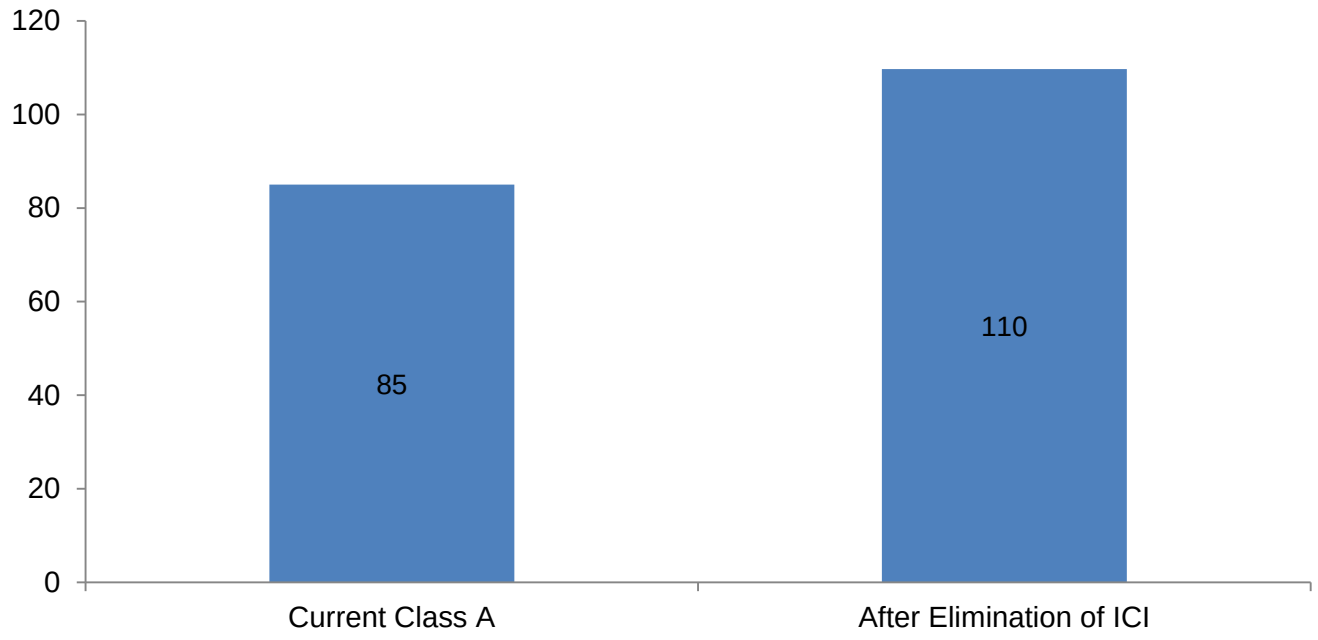
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

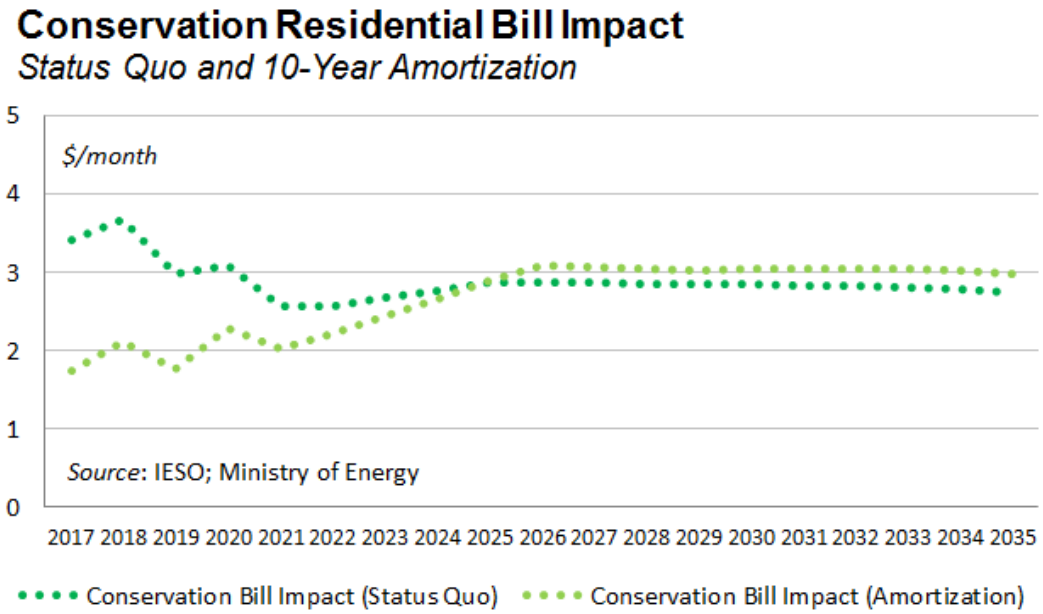
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

# Electricity Consumer Classes

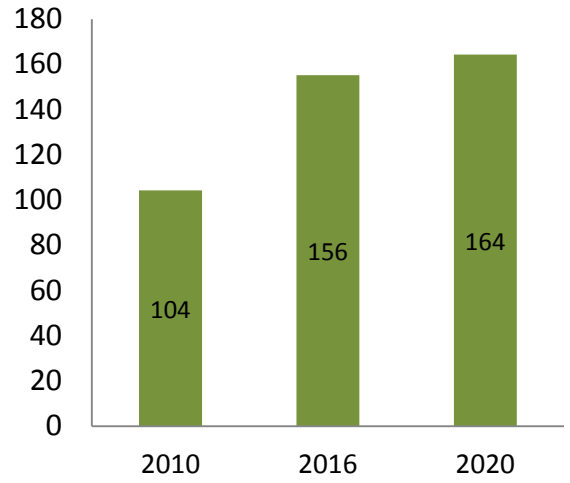
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

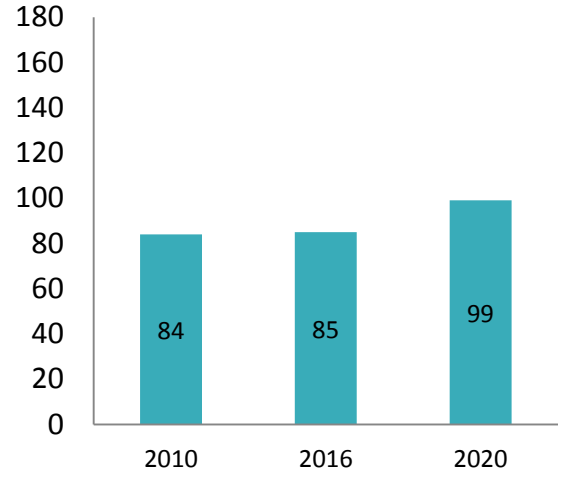
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

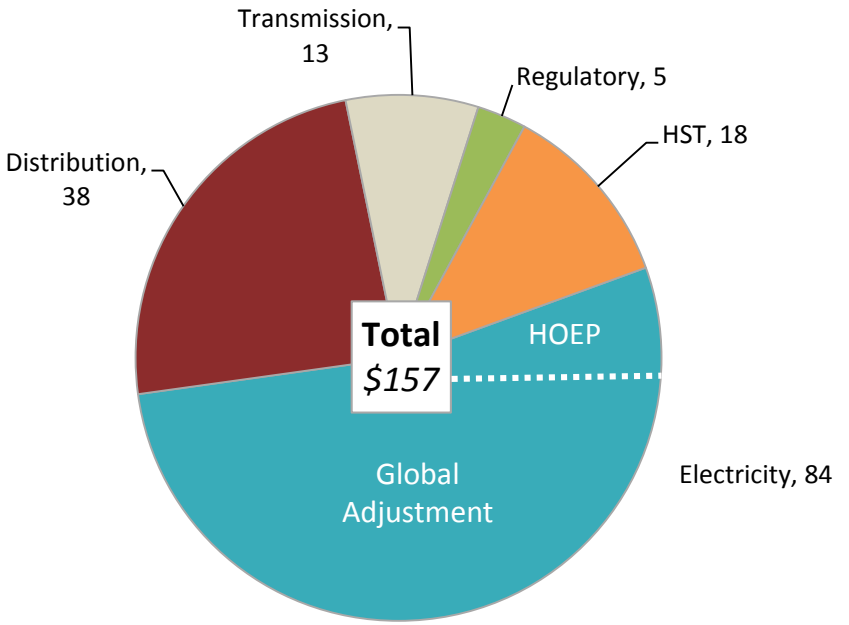
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



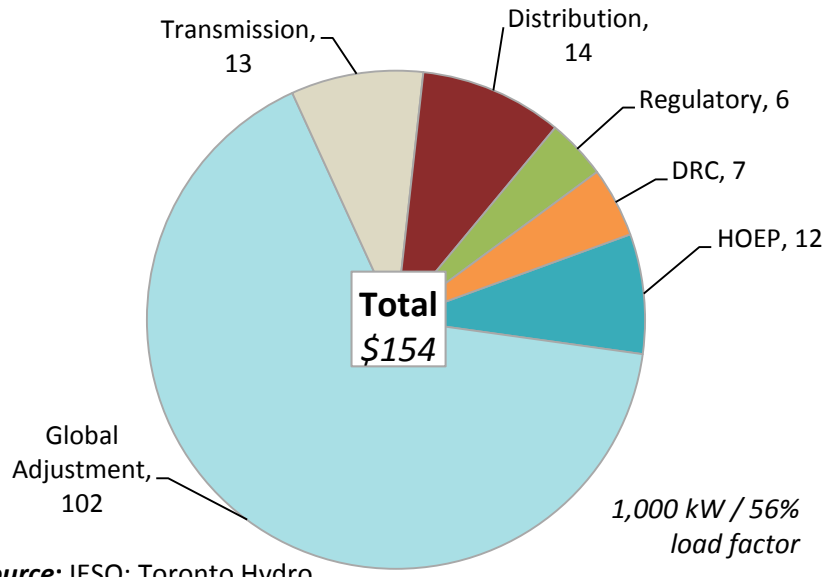

***Source*:** OEB, Toronto Hydro

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

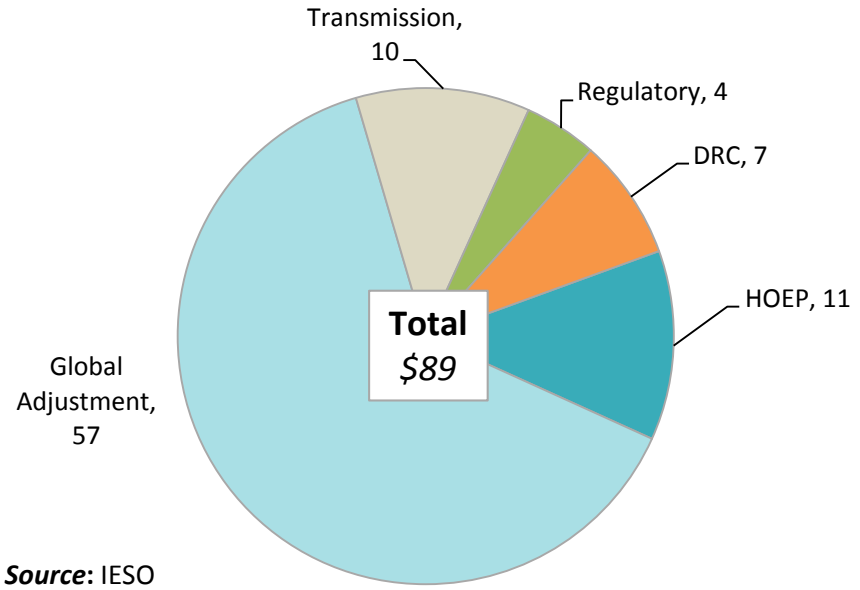
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



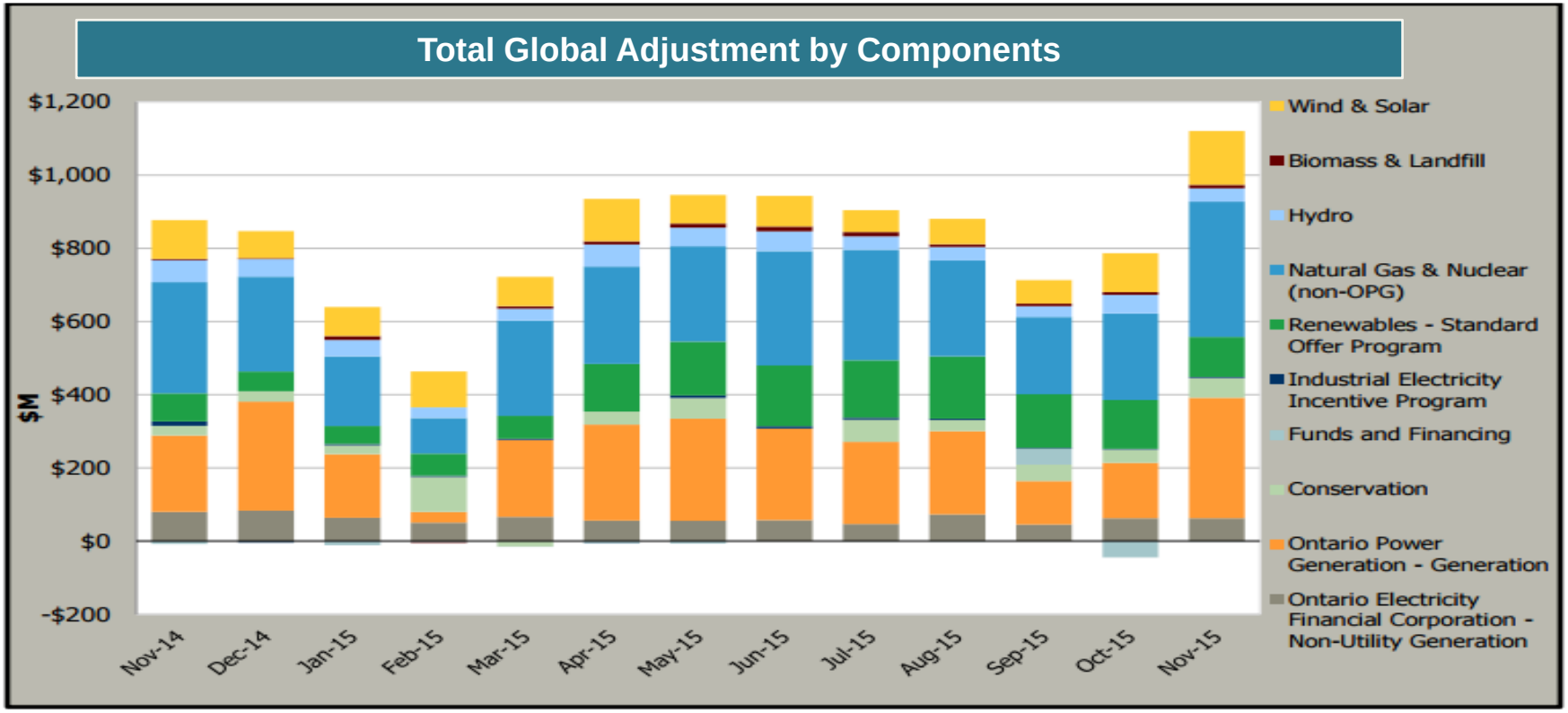

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

| | |
|---|---|
| **From:** | Gavin He |
| **To:** | John Kim; Emily Kerr |
| **Cc:** | Ronald Kwan |
| **Subject:** | Fwd: Potential Rate Mitigation |
| **Date:** | Monday, December 05, 2016 8:12:56 PM |
| **Attachments:** | Price Mitigation Proposals_Dec5-16_v11.pptx<br>ATT00001.htm |

---

Hi John/Emily,

Please see attached the Potential Rate Mitigation deck prepared by Energy. Any feedback/comments are due back to them by EOD tomorrow.

Regards,
Gavin He

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Date:** December 5, 2016 at 20:02:36 EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
> **Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>
> **Subject: Fw: Potential Rate Mitigation**
>
> Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.
>
> From: Katona, Keley (ENERGY)
> Sent: December 5, 2016 7:44 PM
> To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)
> Subject: FW: Potential Rate Mitigation
>
> Hi,
>
> See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?
>
> If there are questions, I'm happy to discuss.

Thanks,
Keley

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II); and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.

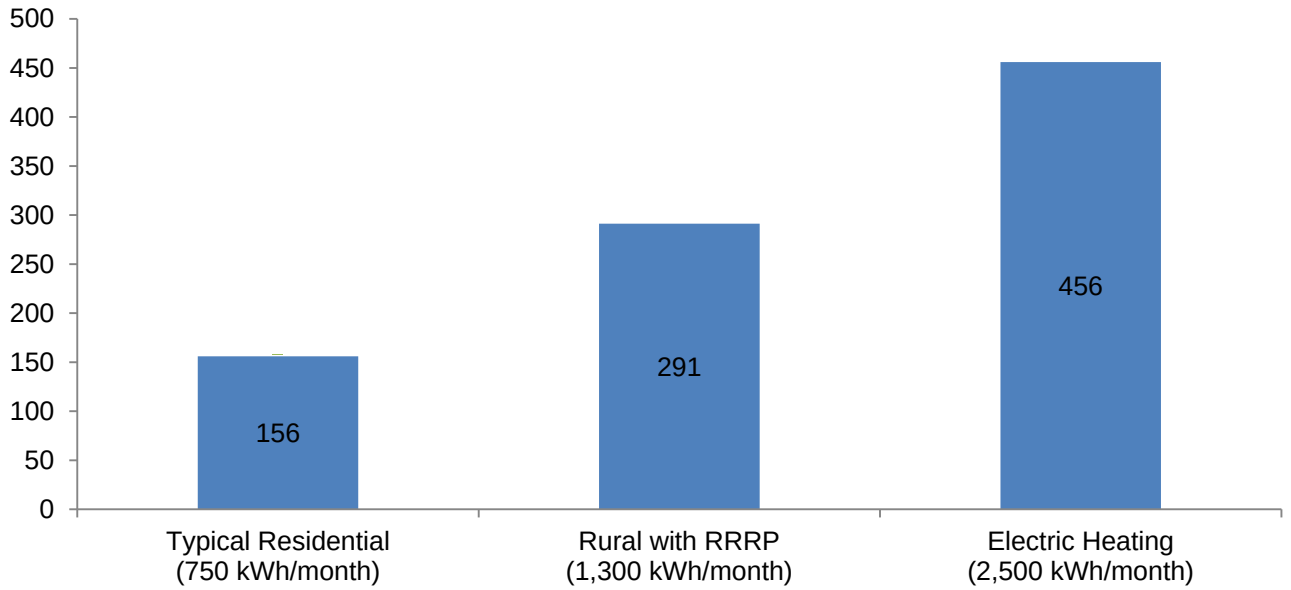
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

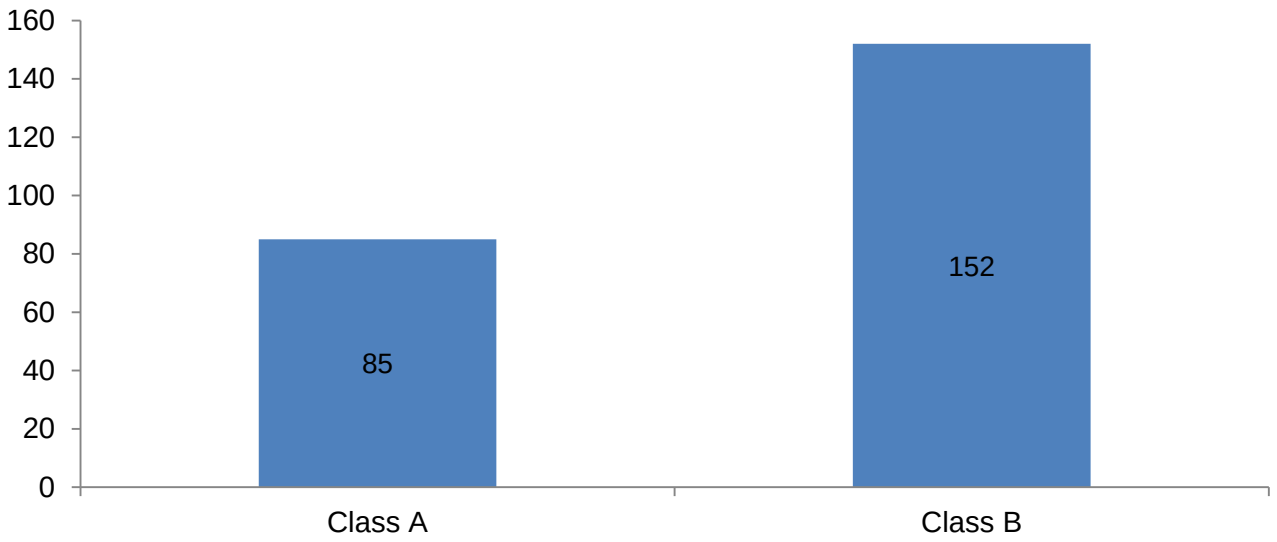



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of $xx [placeholder for OFA] on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $20 to $35 million annual fiscal pressure to the province [TBC by OPG / OFA].

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESB) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.
- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.
- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

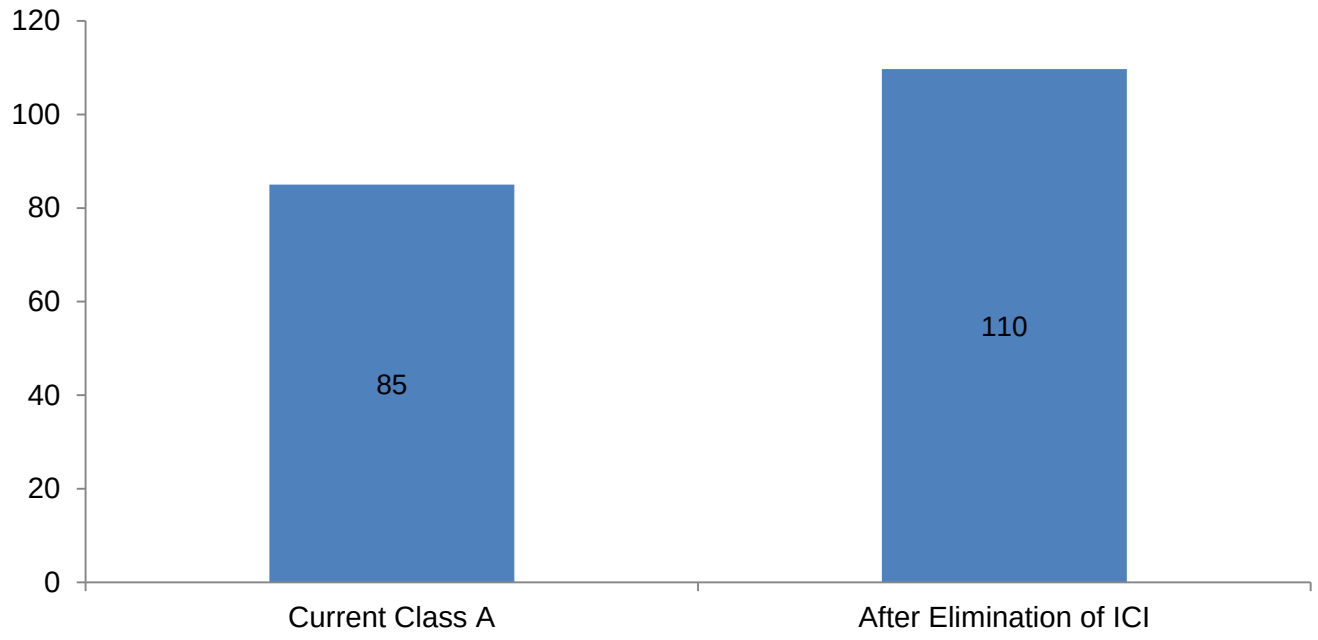
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

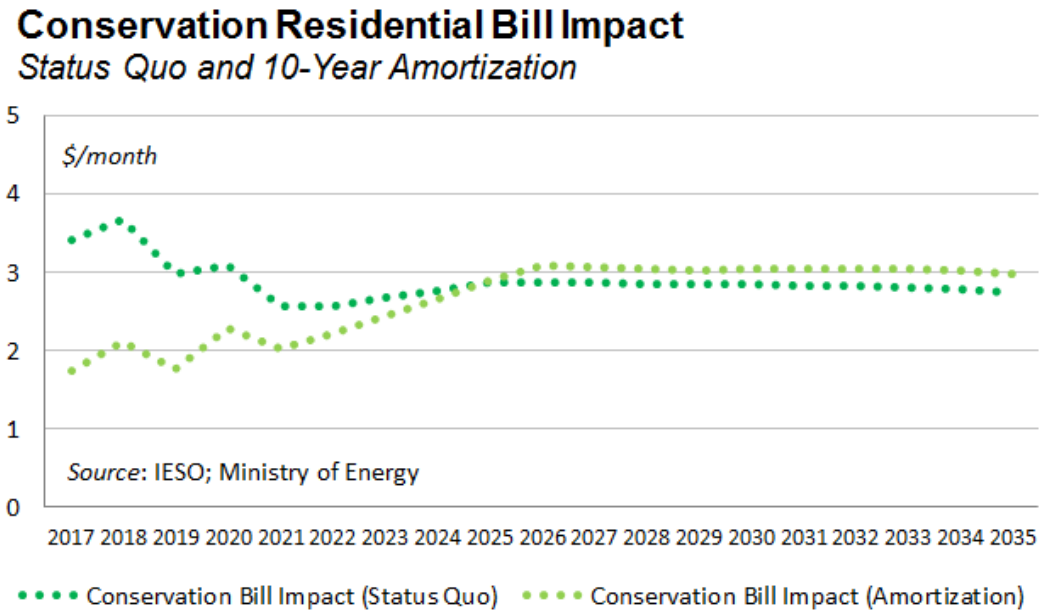
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

# Electricity Consumer Classes

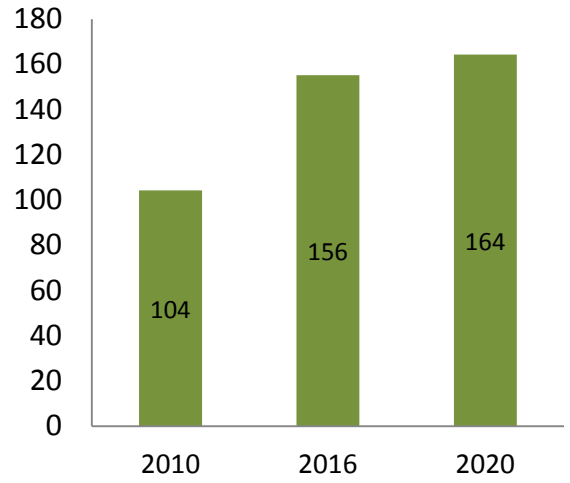
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

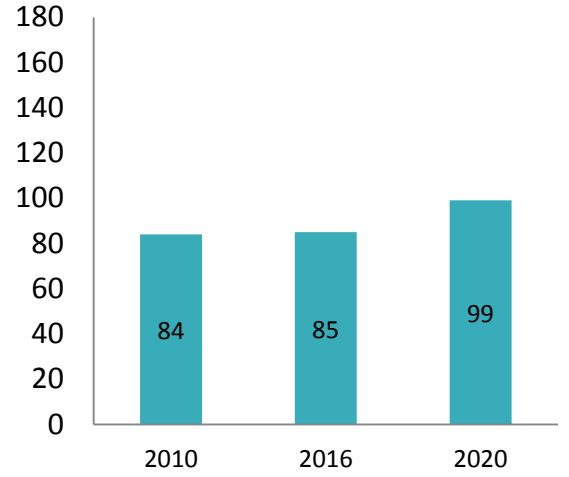
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

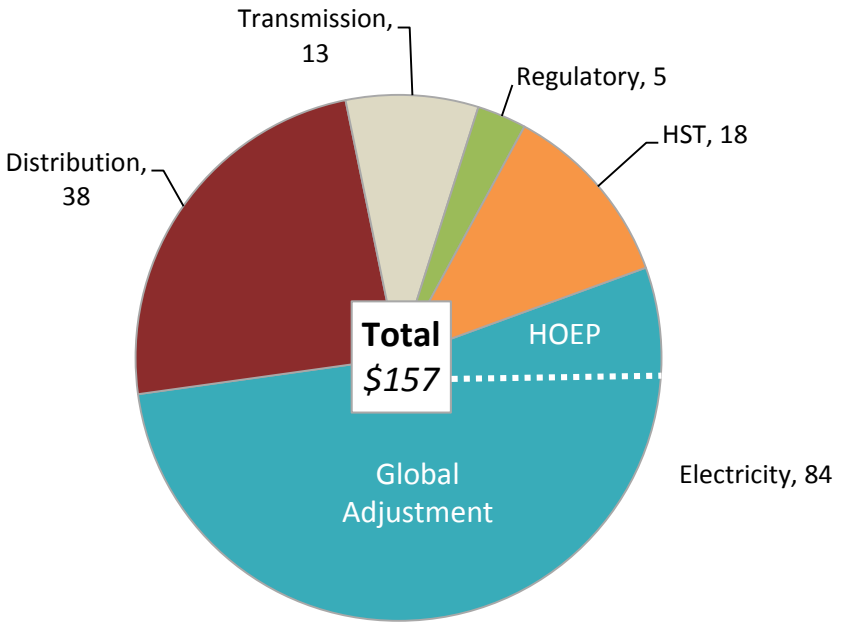
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



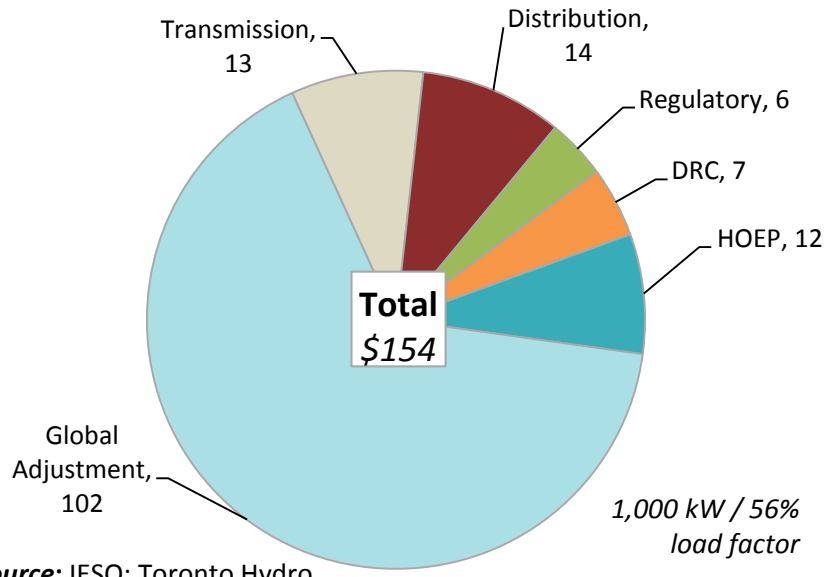

***Source*:** OEB, Toronto Hydro

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

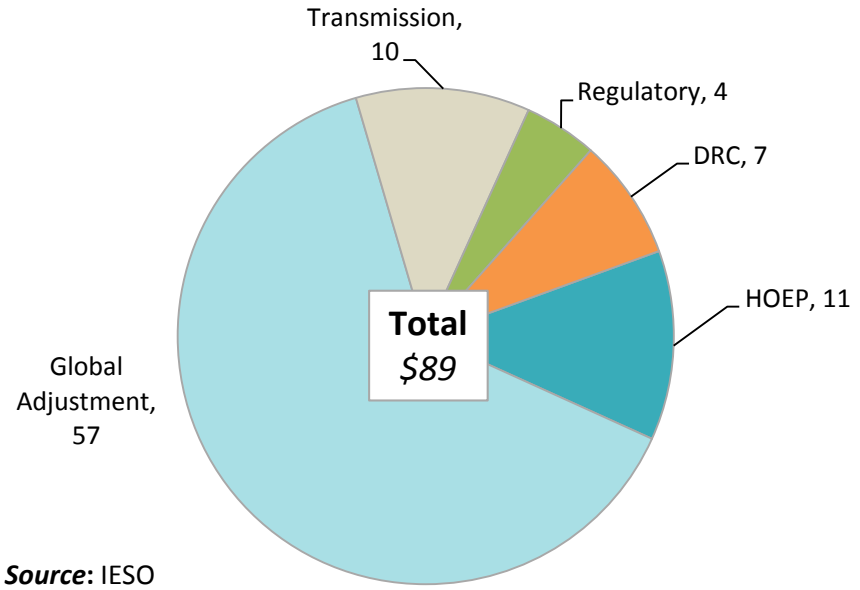
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



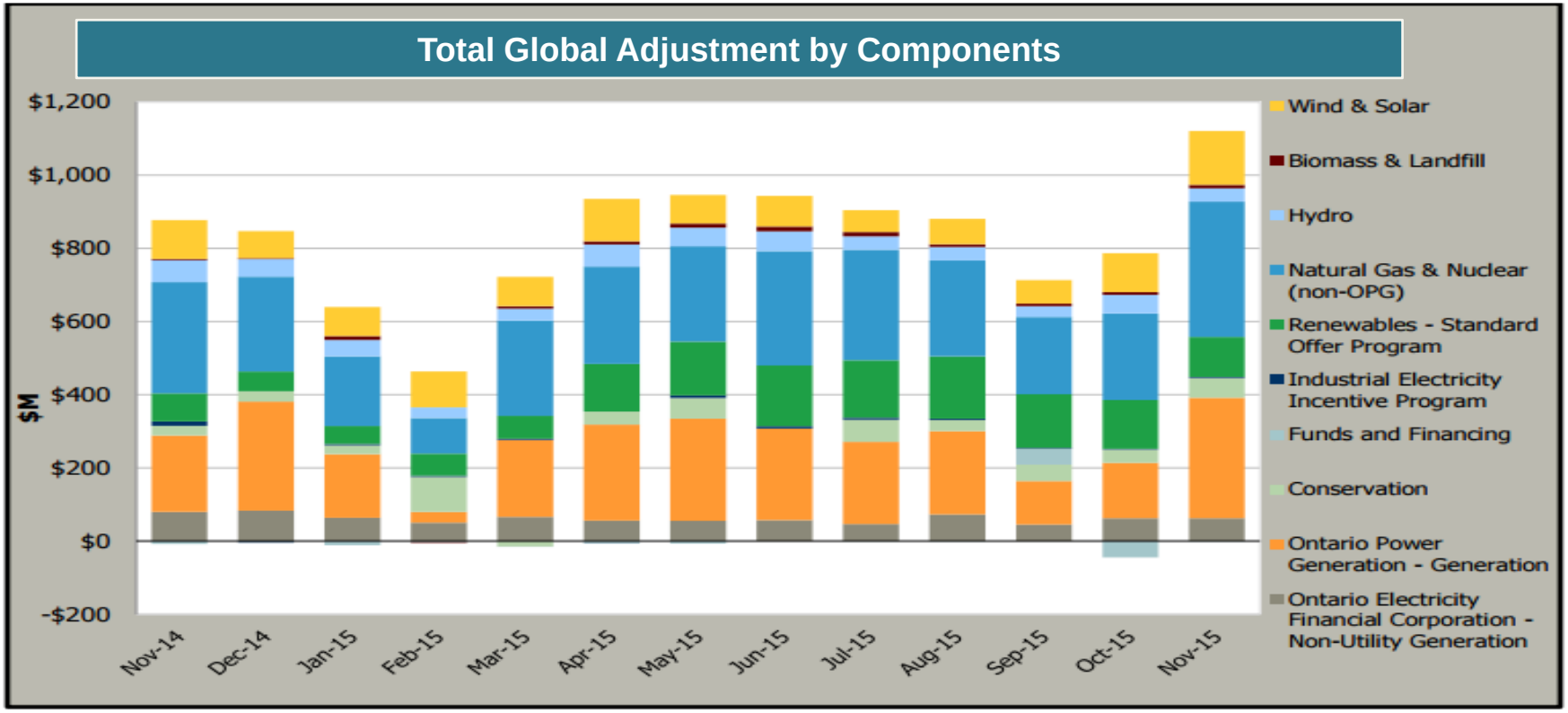

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

**From:** Gavin He
**To:** John Kim; Emily Kerr
**Subject:** Fwd: Potential Rate Mitigation
**Date:** Monday, December 05, 2016 9:21:07 PM

---

Hi John/Emily,

Just forwarding the following up communications on this with you.

Regards,
Gavin He

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** December 5, 2016 at 21:18:37 EST
> **To:** Gadi Mayman <Gadi.Mayman@ofina.on.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, "Tim Schuurman (MOF)" <Tim.Schuurman@ontario.ca>, "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, Christina Zhang <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "David McLean (MOF)" <David.McLean@ontario.ca>
> **Subject: Re: Potential Rate Mitigation**
>
> Hi Gadi,
>
> If you recall, we did that table a couple weeks ago on existing fiscally funded mitigation programs. We can suggest adding that in. And, as for the GGRA, I think one of the challenges is it was supposed to be for incremental measures to reduce GHGs (not replacing funding for existing measures. But, that said, that was notion I noodled on too, but it would require at least a change in positioning, convincing the Minister of MOECC, as the arbiter of such and/or change the legislation.
>
> Ron
>
> > On Dec 5, 2016, at 9:08 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:
> >
> > Big numbers, and I didn't in my scan through see much credit given to the fiscal sacrifices already made. Maybe those amounts could be added in the context section?

Would any of the fiscal plan hits be eligible as offsets for our Cap and Trade revenues? I suppose because so little of our electricity production is carbon producing, probably not, but if ICI moves consumption off-peak does it reduce the need for gas plants to operate?

And at least the idea of offsetting the federal portion of the HST is gone

> On Dec 5, 2016, at 8:03 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> Hi Chris,
>
> Will do.
>
> Ron
>
> > On Dec 5, 2016, at 8:02 PM, Pearce, Christopher (MOF) <Christopher.Pearce@ontario.ca> wrote:
> >
> > Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.
> >
> > From: Katona, Keley (ENERGY)
> >
> > Sent: December 5, 2016 7:44 PM
> >
> > To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB);

Kwamena, Boafoa (CAB)

Subject: FW: Potential Rate Mitigation

Hi,

See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?

If there are questions, I'm happy to discuss.

Thanks,

Keley

From: Imbrogno, Serge (ENERGY)

Sent: December-05-16 7:41 PM

To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)

Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives

that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

<Price Mitigation Proposals_Dec5-16_v11.pptx>

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon; John Kim |
| **Subject:** | Fwd: Price Mitigation & Accounting Meeting |
| **Date:** | Saturday, January 21, 2017 12:13:29 PM |

---

Hi,

FYI and comments -- and not for further distribution.

Thanks,
Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 21, 2017 at 12:09:55 PM EST
> **To:** Gadi Mayman <Gadi.Mayman@ofina.on.ca>
> **Cc:** "Scott Thompson (CAB)" <Scott.Thompson@ontario.ca>, "Nancy Kennedy (MOHLTC)" <Nancy.Kennedy@ontario.ca>
> **Subject: Re: Price Mitigation & Accounting Meeting**
>
> I think Steen is putting his hopes on the RPP as a model, writ larger. There seemed to be quite a lot of interest in IESO"s "market books" treatment  That said, Cindy did raise the issue of how the AG might feel about this, and her general dislike of rate-regulated accounting.
>
> And That said on the RPP.  I agree that an LDC plus model should be explored more fully, but, like other options, it arguably can be seen as a shift  from past policies & narrative of the government on LDCs.
>
> The risk on recovery and impact on the balance sheet, even with the government offering to help out, could be seen as creating a disincentive for further private-sector interest in the sector. Not sure if it would no net push for or impede consolidation, but likely at a lower value for municipalities.
>
> LDC consolidation could be seen as more of an Energy interest than Finance's, though we have supported it in various documents and initiatives.
>
> If government policy is to take on more responsibility for financing the sector, maybe it is consistent to also have the government take on more equity and rely less on private sector capital, debt or equity. But that would be seen as a policy shift too.
>
> Good to flesh out the options, so that the government can make a decision with more information on accounting and other considerations than was provided at MPC
>
> Ron

On Jan 21, 2017, at 11:51 AM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

I can't imagine that there's a perfect solution to this challenge, but if we aren't able to come up with something that, blemishes and all, gets the 25% reduction they're looking for, we're going to end up swallowing all of it in the fiscal plan. Maybe something complex but reasonably viable allows an announcement to be made soon with implementation later in the year - summer might be a good time when bills peak - to allow time to work out the wrinkles.

Original Message

From: Ronald Kwan

Sent: Saturday, January 21, 2017 11:41 AM

To: Gadi Mayman

Cc: Scott Thompson (CAB); Nancy Kennedy (MOHLTC)

Subject: Re: Price Mitigation & Accounting Meeting

A few quick comments:

There are non-LDC direct connects, so the policy would have to deal with those. Presumably they are not to be debt-financing. Could be carved out and the cost variance for their load still done through the Province, but without the rate-regulated accounting. It would limit the fiscal impact.

For LDCs there are municipally-owned and private sector ones. So they may respond differently.

And we may need to not just finance this but also their capex (IO has a program for municipally-owned ones) depending on how public capital markets view the balance sheets with the preferred equity.

LDCs (as should the Province) would also be concerned about people going off grid and never paying in the future "their share" of the accumulated debt. They may argue for exit fees that other jurisdictions have had for their "stranded debt". But I think the government would be sensitive to visibility of a debt amount accruing by customer and a view of forced borrowing by the customer (as compared to debt-financed by the government).

Not sure if Steen had discussed the external advisors' views on the LDC option yet.

Ron

> On Jan 21, 2017, at 10:53 AM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:
>
> So let's get creative here. The LDCs would give us the accounting treatment we need, but lack the balance sheet. The Province has the balance sheet space, arguably, but not the appropriate accounting ability, which, I assume, is because of the way OEFC or the IESO are consolidated on the Province's books and because neither of us can use rate regulated accounting. As a solution, what if the IESO bills the LDCs, but instead of the LDCs taking on debt to pay the IESO, we have OEFC borrow the money and invest in an equal amount of equity of the LDC (could be common, but maybe preferred is better so it doesn't mess up the other shareholders in privately, or partially privately, held LDCs like Hydro One). As we get later in the process many years from now and the repayment begins, we'd begin unwinding the equity and paying down OEFC debt.
>
> Sounds crazy, but maybe this, or something like it, puts the debt where it's affordable, gives the accounting treatment we need to not have this impact the fiscal plan, and achieves the policy goal of spreading the GA costs over the actual life, rather then the contractual life, of the contracts.

Is it worth suggesting this to Energy and the internal and external accountants?

Original Message

From: Thompson, Scott (MOF)

Sent: Saturday, January 21, 2017 7:33 AM

To: Ronald Kwan; Gadi Mayman; Nancy Kennedy (MOHLTC)

Subject: Re: Price Mitigation & Accounting Meeting

Thanks Ron. Good update

Scott

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Ronald Kwan

Sent: Friday, January 20, 2017 11:39 PM

To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Kennedy, Nancy (MOF)

Subject: Price Mitigation & Accounting Meeting

Hi Scott, Gadi, Nancy,

Steen organised a meeting this afternoon with OPCD, IESO and KPMG, as well as various government / OPS staff.

Steen had asked me to talk about the OEFC and DRC, as he had said that some folks were under the impression that OEFC and the DRC could be a model that could be useful for a structure for the GA option.

I explained at the meeting that OEFC was not a rate regulated entity and does not have regulatory assets, and that it's consolidated into Public Accounts such that its shortfalls in revenues vs expense negatively affect the Province's bottom line. I noted that was the case when OEFC did not recover its full NUG contract costs and when it funded the 2002 price freeze. I noted that even with the current structure with legislative cost recovery of NUG costs since 2005, OEFC still records the NUG contract-related expenses and revenues, and if they were ever different there would be a bottomline impact.

Steen was aware of that, but just wanted to have that recounted and move on in the meeting to look at another potential structure/option.

There was also a brief mention of the LDC option; however, it seemed to have been discussed earlier with KPMG and Pelino (who was there as an external consultant supporting KPMG it seemed) and the view was it was not a viable option, as it would destroy LDC balance sheets by adding too much debt to them relative to their balance sheets. It was also viewed as an option that would take too long to put in place, though there was a feeling that the desired accounting would work in this structure.

Most of the discussion was on how the IESO records the regulated price plan (RPP) variances. Note that in any given period the inflows from RPP customers for electricity does vary from the outflows to pay for the power -- since RPP prices are set every six months to recover costs on a forecast basis, and actuals differ from forecasts, there's a variance. The IESO has a credit facility from the OFA that it can access to cover balances, though the variances are small and short-term compared to the amounts under discussion in the GA

option.

The meeting ran long. There was going to be further discussions amongst the accountants from OPCD, IESO and KPMG on how the IESO records the RPP. It wasn't clear if the RPP case would work in the case of the GA option such that there would not be a bottomline impact.

There was also a brief aside from KPMG and Pelino on how the accounting would work if a third party financial institution got in the middle of this, which was thought to be feasible from a procurement perspective, but way more costly than a government financing of the deferral. As such, folks dismissed this option at the meeting , but I wanted to mention it should it be brought up again. I would think Gadi might have some views on such an option.

I'm not sure if Energy will hold another multi-party meeting or if it will meet just with the various accountants as it prepares to report in to FPC next week.

If I do hear more in the interim, I'll provide an update.

Ron

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**From:** Ronald Kwan
**To:** Francisco Chinchon; John Kim
**Subject:** Fwd: Price Mitigation & Accounting Meeting
**Date:** Saturday, January 21, 2017 12:41:04 PM

---

FYI.

Ron

Begin forwarded message:

> **From:** "Imbrogno, Serge (ENERGY)" <Serge.Imbrogno@ontario.ca>
> **Date:** January 21, 2017 at 12:35:04 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Thompson, Scott (MOF)" <Scott.Thompson@ontario.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Kennedy, Nancy (MOF)" <Nancy.Kennedy@ontario.ca>, "Veinot, Cindy (TBS)" <Cindy.Veinot@ontario.ca>, "Hughes, Karen (TBS)" <Karen.Hughes@ontario.ca>, "Hume, Steen (ENERGY)" <Steen.Hume@ontario.ca>, "Angus, Helen (TBS)" <Helen.Angus@ontario.ca>
> **Subject: Re: Price Mitigation & Accounting Meeting**
>
> Hi Gadi. Also agree that this is worth exploring. As with all the options we'll need to think a strong policy rationale for our actions, including the mechanics.
> Serge
>
> Sent from my BlackBerry 10 smartphone on the Rogers network.
> Original Message
> From: Gadi Mayman
> Sent: Saturday, January 21, 2017 11:20 AM
> To: Thompson, Scott (MOF); Kwan, Ronald (OFA); Kennedy, Nancy (MOF); Imbrogno, Serge (ENERGY); Veinot, Cindy (TBS); Hughes, Karen (TBS); Hume, Steen (ENERGY); Angus, Helen (TBS)
> Subject: Re: Price Mitigation & Accounting Meeting
>
> Serge and Cindy, what do you think? Is this worth exploring?
>
> Original Message
> From: Thompson, Scott (MOF)
> Sent: Saturday, January 21, 2017 11:12 AM
> To: Gadi Mayman; Ronald Kwan; Nancy Kennedy (MOHLTC)
> Subject: Re: Price Mitigation & Accounting Meeting
>
> Yes I think it is worth suggesting this be explored. I think we have to get creative, as you say
> Thanks

Scott

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Gadi Mayman
Sent: Saturday, January 21, 2017 10:53 AM
To: Thompson, Scott (MOF); Kwan, Ronald (OFA); Kennedy, Nancy (MOF)
Subject: Re: Price Mitigation & Accounting Meeting

So let's get creative here. The LDCs would give us the accounting treatment we need, but lack the balance sheet. The Province has the balance sheet space, arguably, but not the appropriate accounting ability, which, I assume, is because of the way OEFC or the IESO are consolidated on the Province's books and because neither of us can use rate regulated accounting. As a solution, what if the IESO bills the LDCs, but instead of the LDCs taking on debt to pay the IESO, we have OEFC borrow the money and invest in an equal amount of equity of the LDC (could be common, but maybe preferred is better so it doesn't mess up the other shareholders in privately, or partially privately, held LDCs like Hydro One). As we get later in the process many years from now and the repayment begins, we'd begin unwinding the equity and paying down OEFC debt.

Sounds crazy, but maybe this, or something like it, puts the debt where it's affordable, gives the accounting treatment we need to not have this impact the fiscal plan, and achieves the policy goal of spreading the GA costs over the actual life, rather then the contractual life, of the contracts.

Is it worth suggesting this to Energy and the internal and external accountants?

Original Message
From: Thompson, Scott (MOF)
Sent: Saturday, January 21, 2017 7:33 AM
To: Ronald Kwan; Gadi Mayman; Nancy Kennedy (MOHLTC)
Subject: Re: Price Mitigation & Accounting Meeting

Thanks Ron. Good update
Scott

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Ronald Kwan
Sent: Friday, January 20, 2017 11:39 PM
To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Kennedy, Nancy (MOF)
Subject: Price Mitigation & Accounting Meeting

Hi Scott, Gadi, Nancy,

Steen organised a meeting this afternoon with OPCD, IESO and KPMG, as well as various government / OPS staff.

Steen had asked me to talk about the OEFC and DRC, as he had said that some folks were under the impression that OEFC and the DRC could be a model that could be useful for a structure for the GA option.

I explained at the meeting that OEFC was not a rate regulated entity and does not have regulatory assets, and that it's consolidated into Public Accounts such that its shortfalls in revenues vs expense negatively affect the Province's bottom line. I noted that was the case when OEFC did not recover its full NUG contract costs and when it funded the 2002 price freeze. I noted that even with the current structure with legislative cost recovery of NUG costs since 2005, OEFC still records the NUG contract-related expenses and revenues, and if they were ever different there would be a bottomline impact.

Steen was aware of that, but just wanted to have that recounted and move on in the meeting to look at another potential structure/option.

There was also a brief mention of the LDC option; however, it seemed to have been discussed earlier with KPMG and Pelino (who was there as an external consultant supporting KPMG it seemed) and the view was it was not a viable option, as it would destroy LDC balance sheets by adding too much debt to them relative to their balance sheets. It was also viewed as an option that would take too long to put in place, though there was a feeling that the desired accounting would work in this structure.

Most of the discussion was on how the IESO records the regulated price plan (RPP) variances. Note that in any given period the inflows from RPP customers for electricity does vary from the outflows to pay for the power -- since RPP prices are set every six months to recover costs on a forecast basis, and actuals differ from forecasts, there's a variance. The IESO has a credit facility from the OFA that it can access to cover balances, though the variances are small and short-term compared to the amounts under discussion in the GA option.

The meeting ran long. There was going to be further discussions amongst the accountants from OPCD, IESO and KPMG on how the IESO records the RPP. It wasn't clear if the RPP case would work in the case of the GA option such that there would not be a bottomline impact.

There was also a brief aside from KPMG and Pelino on how the accounting would work if a third party financial institution got in the middle of this, which was thought to be feasible from a procurement perspective, but way more costly than a government financing of the deferral. As such, folks dismissed this option at the meeting , but I wanted to mention it should it be brought up again. I would think Gadi might have some views on such an option.

I'm not sure if Energy will hold another multi-party meeting or if it will meet just with the various accountants as it prepares to report in to FPC next week.

If I do hear more in the interim, I'll provide an update.

Ron

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| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon; John Kim; Darren Scanlan; Shajee Kathirgamanathan |
| **Cc:** | Gavin He |
| **Subject:** | Fwd: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Friday, January 06, 2017 10:25:19 AM |

---

Hi All,

Please see the request. Lease start drafting a thorough analysis.

Thanks,
Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 6, 2017 at 10:23:12 AM EST
> **To:** "David McLean (MOF)" <David.McLean@ontario.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, Gavin He <Gavin.He@ofina.on.ca>
> **Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Hi David,
>
> Yes, we can work on that for early next week.
>
> Ron
>
> > On Jan 6, 2017, at 10:20 AM, McLean, David (MOF) <David.McLean@ontario.ca> wrote:
> >
> > Hi Ron,
> >
> > The DM has asked if you and your team could build on the analysis contained in this note on the departure tax component. He'd like something thorough focused specifically on that proposal.
> >
> > If possible, he'd like to see something as early as feasible next week. Is that doable?

Thanks,

Dave

-----Original Message-----

From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]

Sent: December 13, 2016 7:21 AM

To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)

Cc: McLean, David (MOF); Pearce, Christopher (MOF)

Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----

From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]

Sent: December-12-16 9:18 AM

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----

From: Thompson, Scott (MOF)

Sent: December 11, 2016 12:25 PM

To: McLean, David (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

---

From: Orsini, Steve (CAB)

Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)

To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)

Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: December-11-16 12:04 PM

To: Orsini, Steve (CAB)

Subject: Proposed Initiatives to Transform Ontario's Electricity

Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

---

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<Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx>

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Shajee Kathirgamanathan |
| **Cc:** | Francisco Chinchon; John Kim |
| **Subject:** | Fwd: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Thursday, December 22, 2016 1:54:18 PM |

---

FyI Shajee.

Can you update the chart. I believe you had a run at it last month.

Need to add new scenarios, though.

Ron

Begin forwarded message:

> **From:** "Nelms, Scott (ENERGY)" <Scott.Nelms@ontario.ca>
> **Date:** December 22, 2016 at 1:41:45 PM EST
> **To:** "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>
> **Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Thanks Ron. Do you mind sharing those out year forecasts? Latest OEFC board materials that I have seen only forecast this fiscal.
>
> The table in your presentation also goes back to 2011-12, so assume that the all-in fiscal impact of the electricity sector might have been very different. Might be interesting to show the evolution from a net positive to net drain, as you describe below. Your comment around DRC is a good one. I wondered in the table whether it might be helpful to show DRC revenues (rather than "ending DRC"). That will show the decline, but that it is still a positive to the Province even out to 2017-18.
>
> However, take my comments with a grain of salt as I am outside my area of expertise.
>
> Thanks again for sharing,
> Scott
>
> -----Original Message-----
> From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
> Sent: December 21, 2016 5:11 PM
> To: Nelms, Scott (ENERGY); Kennedy, Nancy (MOF)
> Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
>
> Hi Scott,

Thanks.

On your comment as you may recall, we used to do that roll-up (initially when Serge was ADM), but that would also include all the OEFC expenses too. And not all the GRC is OEFC related, but helps with MNR and its costs, so not completely straightforward.

Post-DRC, and post much lower Hydro One net income to the Province and lost PILs, as Nancy may recall from some OEFC board presentations (Serge likely missed those Board presentations), OEFC may be close to flat.

Ron

-----Original Message-----
From: Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
Sent: December-21-16 16:55
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

I have not seen a draft since last week. Likely same version you last saw Ron. I did have a chance to speak with folks who are more in the know on this and I can confirm that none of the OPG options are likely to show up in the next iteration.

One suggestion on the note, Ron: if you are going to show all the existing fiscal pressures, it may be helpful to also show the fiscal benefits from the electricity system (OPG/H1 revenues, PILs, GRC etc.).

Thanks,
Scott

-----Original Message-----
From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: December 21, 2016 4:14 PM
To: Kennedy, Nancy (MOF); Nelms, Scott (ENERGY)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Nancy, Scott,

As discussed yesterday, I have not seen any iterations of an Energy deck or other materials on price mitigation options since early last week, when the DMO shared a "bootleg" copy. We sent back some comments on that deck to the Deputy, as attached.

Also attached, for your information, are some comments and a deck we did for the Deputy the previous week, in advance of the Major Projects Committee meeting

that week. I had understood that the Deputy shared back the comments with Energy DMO at that time.

As discussed yesterday, CEFD is looking forward to being able to input into the contemplation of potential initiatives. Having said that, staff availability over the next couple weeks will be very limited.

Ron

-----Original Message-----
From: Ronald Kwan
Sent: December-13-16 07:21
To: Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>
Cc: David McLean (MOF) <David.McLean@ontario.ca>; Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

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From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
Sent: December-12-16 9:18 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----
From: Thompson, Scott (MOF)
Sent: December 11, 2016 12:25 PM
To: McLean, David (MOF)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx _____

From: Orsini, Steve (CAB)
Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)
To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)
Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----
From: Imbrogno, Serge (ENERGY)
Sent: December-11-16 12:04 PM
To: Orsini, Steve (CAB)
Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

---

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**From:** Ronald Kwan
**To:** John Kim; Emily Kerr
**Subject:** Fwd: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx
**Date:** Monday, January 16, 2017 2:49:00 PM

---

Hi,

Please add the point.

Thanks,
Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 16, 2017 at 2:48:12 PM EST
> **To:** "Sriram Subrahmanyan (MOF)" <Sriram.Subrahmanyan@ontario.ca>
> **Cc:** Gadi Mayman <Gadi.Mayman@ofina.on.ca>, "Jenarra DeSouza (MEDTE/MRI)" <Jenarra.DeSouza@ontario.ca>
> **Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Thanks Sriram. Good reminder on that point.
>
> Ron
>
> > On Jan 16, 2017, at 2:16 PM, Subrahmanyan, Sriram (MOF) <Sriram.Subrahmanyan@ontario.ca> wrote:
> >
> > There's a risk that some proposals may be seen by the feds as taxable benefits. E.g., we worked with Finance Canada and Energy to make sure that OESP was excluded; not sure if this proposal would change their view. You may want to add the risk to your note. thanks
> >
> > -----Original Message-----
> >
> > From: Schuurman, Tim (MOF)
> >
> > Sent: January 16, 2017 1:23 PM
> >
> > To: Subrahmanyan, Sriram (MOF)
> >
> > Cc: DeSouza, Jenarra (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Tim Schuurman

Assistant Deputy Minister

Office of the Budget, Ministry of Finance

7 Queen's Park Cres.

Toronto ON M7A 1Z1

Tel:  416-327-0173

-----Original Message-----

From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]

Sent: January-16-17 8:31 AM

To: Thompson, Scott (MOF)

Cc: Mayman, Gadi (OFA); Schuurman, Tim (MOF); McLean, David (MOF); Pearce, Christopher (MOF)

Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Scott,

We revised and updated the note to reflect the two decks that Energy circulated on Saturday.  The basic messages in the Energy decks are the same on the proposals, and the basic comments are the same as well -- significant fiscal exposure with limited price mitigation, aside from the Global Adjustment proposal, which has an even larger fiscal exposure, depending on the scenario.

I understand Energy reached out late last week to TBS/OPCD for an accounting review, but I have not seen OPCD's BN. I understood that it would be hard to see the GA proposal as not having a fiscal impact -- but TBC.

Scott N. has not reviewed this version of the BN yet.

Ron

-----Original Message-----

From: Ronald Kwan

Sent: January-12-17 8:45 AM

To: Scott Thompson (CAB) <Scott.Thompson@ontario.ca>

Cc: Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>; David McLean (MOF) <David.McLean@ontario.ca>; Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>

Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Scott,

Will do. Scott N. has it already. I'll find out who the right person is to send it to at Energy (Steen likely).

Ron

> On Jan 12, 2017, at 6:59 AM, Thompson, Scott (MOF) <Scott.Thompson@ontario.ca> wrote:
>
> Thanks Ron. Also received your deck on Departure Tax.

Can you make sure that Scott Nelms and Min of Energy have a copy of this. You should approach it as draft advice and seek their input.

Thanks

Scott

-----Original Message-----

From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]

Sent: December-13-16 7:21 AM

To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)

Cc: McLean, David (MOF); Pearce, Christopher (MOF)

Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

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Sent: December-12-16 9:18 AM

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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Sent: December 11, 2016 12:25 PM

To: McLean, David (MOF)

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From: Orsini, Steve (CAB)

Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)

To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)

Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: December-11-16 12:04 PM

To: Orsini, Steve (CAB)

Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

---

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| | |
|---|---|
| **From:** | John Kim |
| **To:** | John Kim |
| **Subject:** | Fwd: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 3:35:03 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx<br>ATT00001.htm<br>Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy_SIFBEFBmarkup.pptx<br>ATT00002.htm |

---

Begin forwarded message:

**From:** Gavin He <Gavin.He@ofina.on.ca>
**Date:** January 14, 2017 at 12:27:47 PM EST
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>, John Kim <John.Kim@ofina.on.ca>, Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject: RE: Rate Mitigation**

Hi Directors,

FYI - In case you don't have it, please attached the note that was shared with DMO back in December. In addition, I have attached the "Proposed Initiatives to Transform Ontario's Electricity Sector" deck with edits from your Branch last month.

Regards,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,

Ron

Begin forwarded message:

> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation
>
> Good morning,
>
> Attached are materials for Monday's rate mitigation meeting.
>
> Keley
>
> Original Message
>
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
>
> Sent: Saturday, January 14, 2017 7:49 AM
>
> To: Orsini, Steve (CAB)
>
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
>
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

Sent from my iPad

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its deck.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

Energy's proposals generally involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value, including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |
| **E**nd the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

<u>OESP & RRRP (Total of about $0.4 to 0.45 Billion/year</u>):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

<u>Fund Conservation Programs through the Tax-Base</u>:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**December 12, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8%  per cent rebate ($11/month savings), updating RRRP ($45/month savings, combined with the 8% rebate), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured,  the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP),  which provides an opportunity to consider a range of policy changes to  how the Ontario energy sector operates.

# Broad Policy Themes / Rationale

- No longer use rate-base to pay for social programs [despite the system benefit rationale] by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.
- Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.
- Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" beyond the Moving Ontario Forward initiative to make certain investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties ~~and expansion of natural gas to rural areas~~, etc. (note that expanding access to natural gas is already included under Moving Ontario Forward.)
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" a single rate plan as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time.
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.16 | 2.31 | 2.41 | 2.49 | 2.54 | 2.58 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.13 | 0.13 | 0.14 | 0.14 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.88 | 3.08 | 3.21 | 3.33 | 3.39 | 3.44 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 2.82 | 3.05 | 2.47 | 2.56 | 2.13 | 2.14 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.10 | 0.10 | 0.11 | 0.11 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Taxpayer Funded Electricity Price Mitigation

| *($M)* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | | 398 | 419 | 433 | 447 |
| 2. Expand the OESP (i.e., 50% increase) | TBD | TBD | TBD | TBD | TBD |
| 3. Fund Conservation Programs Through The Tax-Base | 110 | 450 | 450 | 450 | 450 |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC efficiencies | - | - | - | - | - |
| c. OPG – Borrowing | - | - | - | - | - |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | 110 | 450 | - | - | - |
| 8. Cancel / Adjust FIT | - | - | - | - | - |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| 2. Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy

# Considerations / Outcomes

- The proposed initiatives provide the following opportunities to:
  - Lower the cost of electricity for all consumers;
  - Re-set how electricity programs and energy infrastructure is funded (i.e., shifting costs to the tax-base from rate-base);
  - Provide electricity consumers with greater choices (i.e., signal rate plan);
  - Provide system benefits (e.g., market renewal); and
  - Increase cost effectiveness and improve efficiency.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | John Kim |
| **Subject:** | Fwd: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 3:19:10 PM |
| **Attachments:** | Revised - Debt-Financing GA 170112 - ESPD ADM Approved w LSB CLEAN.PPTX<br>ATT00001.htm<br>Proposed Initiatives to Transform Ontarios Electricity Sector 20170113.pptx<br>ATT00002.htm |

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Begin forwarded message:

> **From:** "Ronald Kwan" <Ronald.Kwan@ofina.on.ca>
> **To:** "Francisco Chinchon" <Francisco.Chinchon@ofina.on.ca>, "John Kim" <John.Kim@ofina.on.ca>, "Emily Kerr" <Emily.Kerr@ofina.on.ca>
> **Cc:** "Gavin He" <Gavin.He@ofina.on.ca>
> **Subject: Fwd: Rate Mitigation**
>
> Hi,
>
> There's a meeting on Monday on Energy's rate mitigation decks.
>
> Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?
>
> Apologies on the timing.
>
> Thanks,
> Ron
>
> Begin forwarded message:
>
> > Original Message
> >
> > From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> >
> > Sent: Saturday, January 14, 2017 8:16 AM
> >
> > To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> >
> > Subject: Fw: Rate Mitigation

Good morning,

Attached are materials for Monday's rate mitigation meeting.

Keley

Original Message

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>

Sent: Saturday, January 14, 2017 7:49 AM

To: Orsini, Steve (CAB)

Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

Hi Steve,

Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

Sent from my iPad

Ontario

MINISTRY OF
ENERGY

# Financing the Global Adjustment

January 13, 2017

*Working Draft for Discussion Purposes Only*

# Purpose

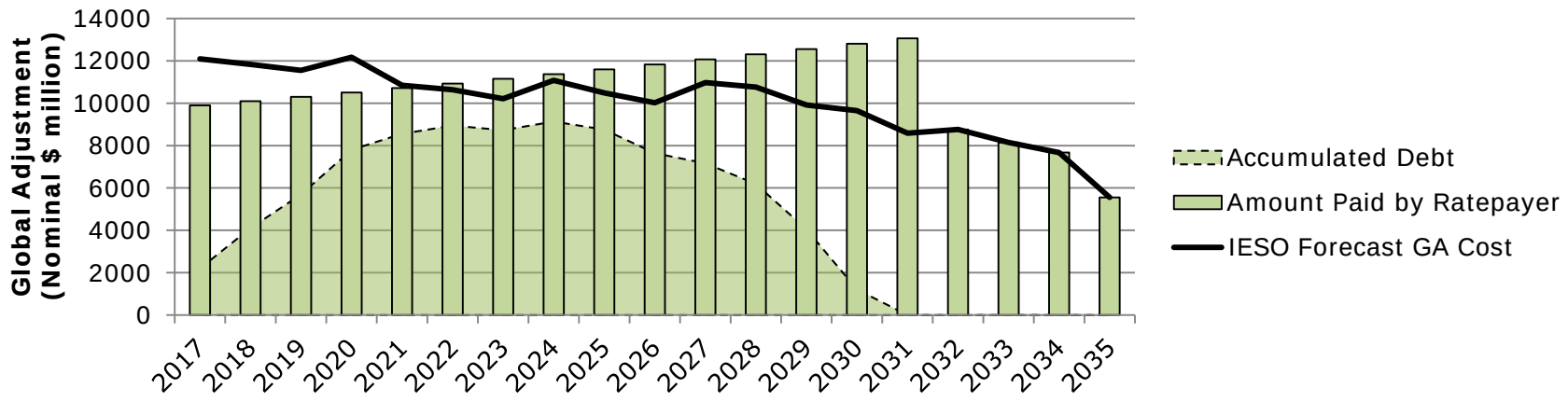
- To analyze the impact of partially financing the cost of the global adjustment (GA) to defer some of the cost to later years.
- The economic, legal and fiscal risks to ratepayers, stakeholders and government are qualitatively discussed.
- The remainder of the presentation quantitatively examines several different scenarios for financing the GA, showing:
  - The impact on residential bills; and
  - The amount of debt incurred.

# Rationale for Financing the GA

- The GA is comprised of costs for regulated and contracted generation, as well as conservation.
- Some contracted generation assets are expected to have a useful life that extends beyond the term of their current financial contracts (typically 20-years).
- Similarly, conservation costs are recovered through the GA on an annual basis while conservation initiatives provide benefits to the electricity system over the course of many years.
- Since the GA only includes costs related to the contractual life of these assets, there may be an opportunity to recognize the longer-term benefit of these assets to the electricity system and “bring forward” that benefit for ratepayers today, while deferring some of the current costs.
- An indicative GA financing proposal is presented that lowers ratepayers costs over the short term by borrowing money but increases costs over the long term when GA costs are forecast to be lower.
- Note that not all generating assets will continue operations at the end of their contract term. Regulatory constraints (i.e., nuclear licences) or low demand conditions (i.e., as experienced with current expiring NUGs) would mean that some generators will shutdown at the expiry of their contract. Future ratepayers would be paying for these assets that are no longer producing power.

# Indicative Proposal to Finance the Global Adjustment

- For the purpose of discussion, it is proposed that the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the total amount of money borrowed has been completely paid back.
- All scenarios are assumed to begin January 1, 2017, setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "smoothed" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- All analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook and assumes a 5% borrowing interest rate.




**Sample financing**: Ratepayers pay less than the cost of GA in early years, borrowing up to $9 billion that is fully paid off in 2031 by charging ratepayers more than the cost of GA in later years.

# Considerations and Risks – Ratepayer

Ratepayer:

- Borrowing money to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves borrowing large amounts of money over a long period of time (16-30 years, depending on the scenario) to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on electricity rates. A long-term interest rate of 5% is assumed for this analysis.

- GA and HOEP provide a natural hedge against each other – when one goes up, the other goes down – keeping total electricity costs relatively stable and predictable. Smoothing only the GA would lead to greater price volatility for consumers.

    - For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate described in the indicative proposal.

- Should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumption, further increasing future costs for individual ratepayers.

# Considerations and Risks – Fiscal and Stakeholder

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.
    - It is unclear whether legislation could determine the manner in which this initiative is accounted for. Further work is required.
- Historically electricity sector financing has been conducted by the Ontario Financing Authority, e.g., managing OEFC's stranded debt and borrowing on behalf of IESO. Further consultation with the OFA will be required to determine the appropriate vehicle for additional borrowing.
- The significant amount of additional Provincial borrowing needed to finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating and overall borrowing capacity. Further analysis is required and would suggest early engagement with the OFA through which money will be borrowed.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" in the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

# Considerations and Risks – Legal

Legal:

- Legislation would be required to authorize the financing proposal.
  - Amendments to the *Electricity Act, 1998* (EA) could authorize the financing of certain costs within or part of the GA. However, whether any other legislation requires amendment is not known at this time.
  - The GA regime currently provides that “true costs” represent the true costs of making payments to generators or counter parties to contracts, not the incurring of discretionary financing or interest costs.
  - Considerations such as the need to analyze legal risks or the need to address costs retroactively (if the proposal requires a January 1, 2017 start) could add to the legal and drafting complexity;

- Introduction of a bill in the week of February 20th is an aggressive timeline that could require diversion of resources from other initiatives.

# GA Debt Financing Scenarios

1. Status Quo

   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

2. Moderate short-term cost reductions with limits

   - The amount of GA paid by ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and increases at inflation (assumed to be 2%) in each subsequent year until the total amount of money borrowed is paid off.
   - Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

3. Maximized short-term cost reductions with limits

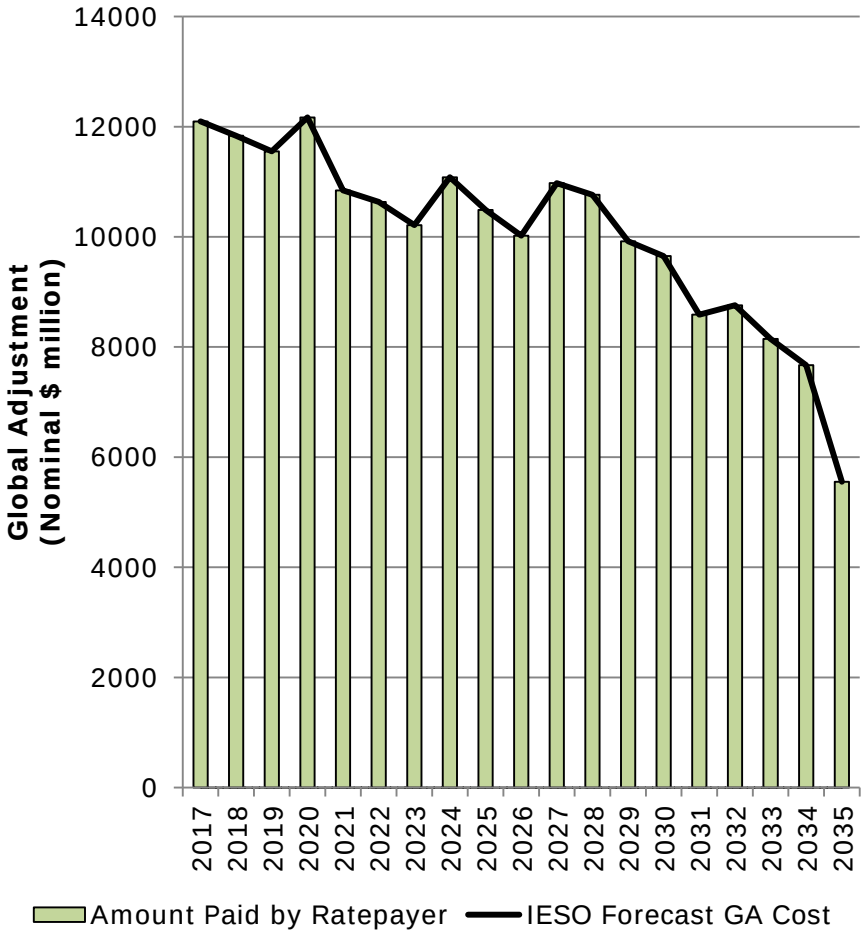
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the total amount of money borrowed is paid off over a 25-30 year financing period.
   - Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

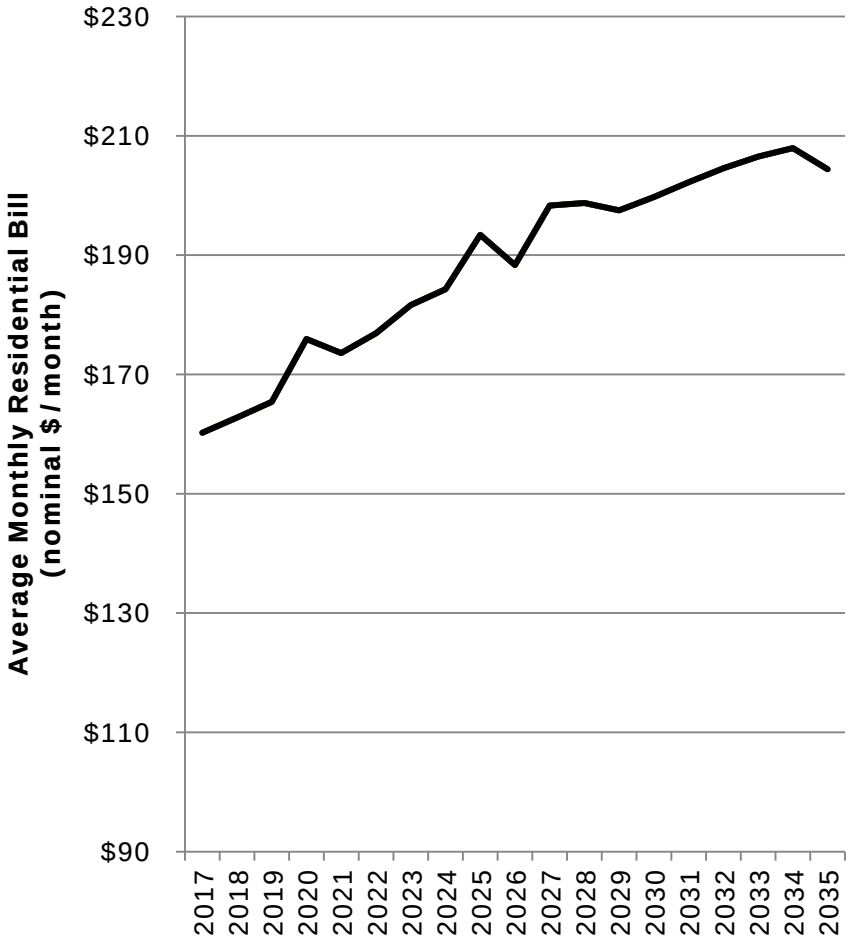
4. Maximized short-term cost reductions, no limits

   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the total amount of money borrowed is paid off over a 25-30 year financing period.
   - No limit is placed on the amount charged to ratepayers above the true cost of GA.

# 1. Status Quo – Global and Residential Impacts

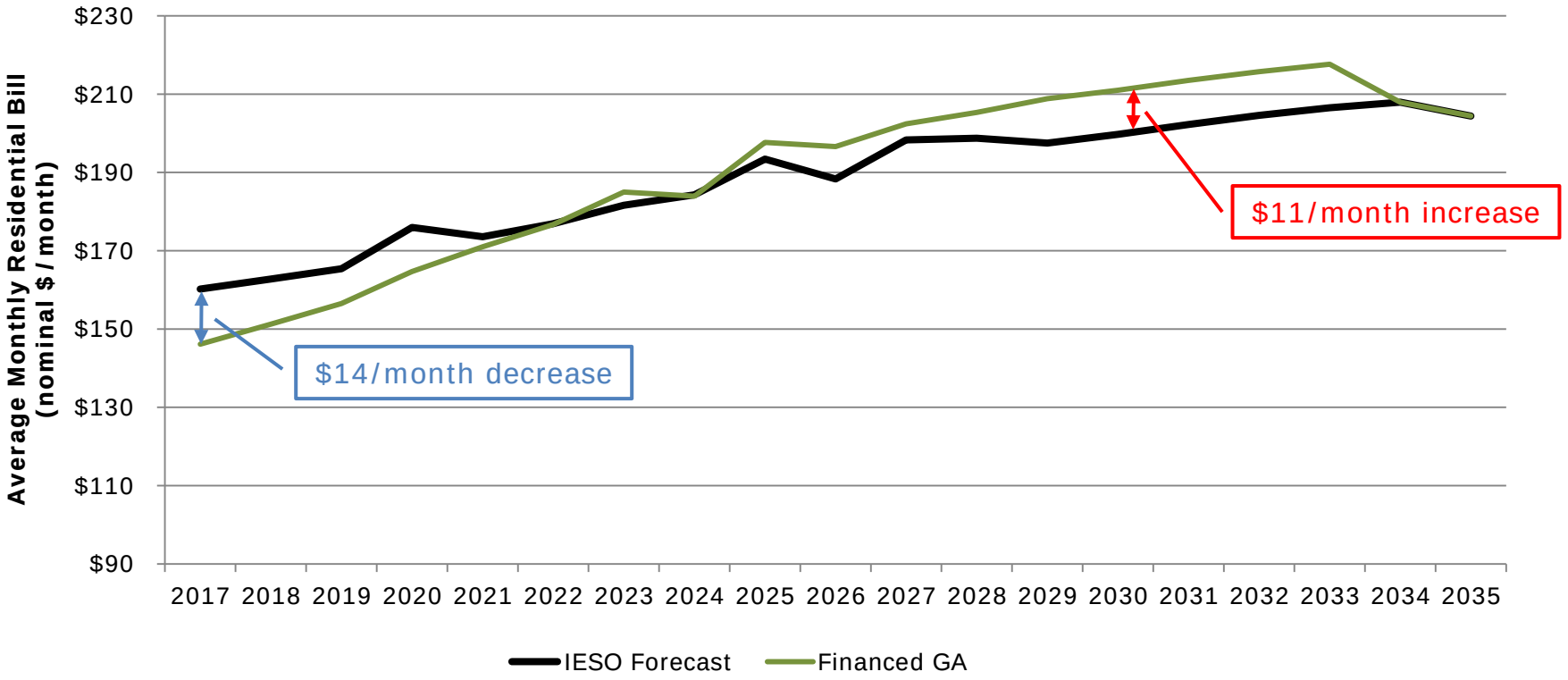
- Ratepayers continue paying the true cost of GA.



# 2. Moderate Short-term Cost Reduction with limits – Residential Impacts

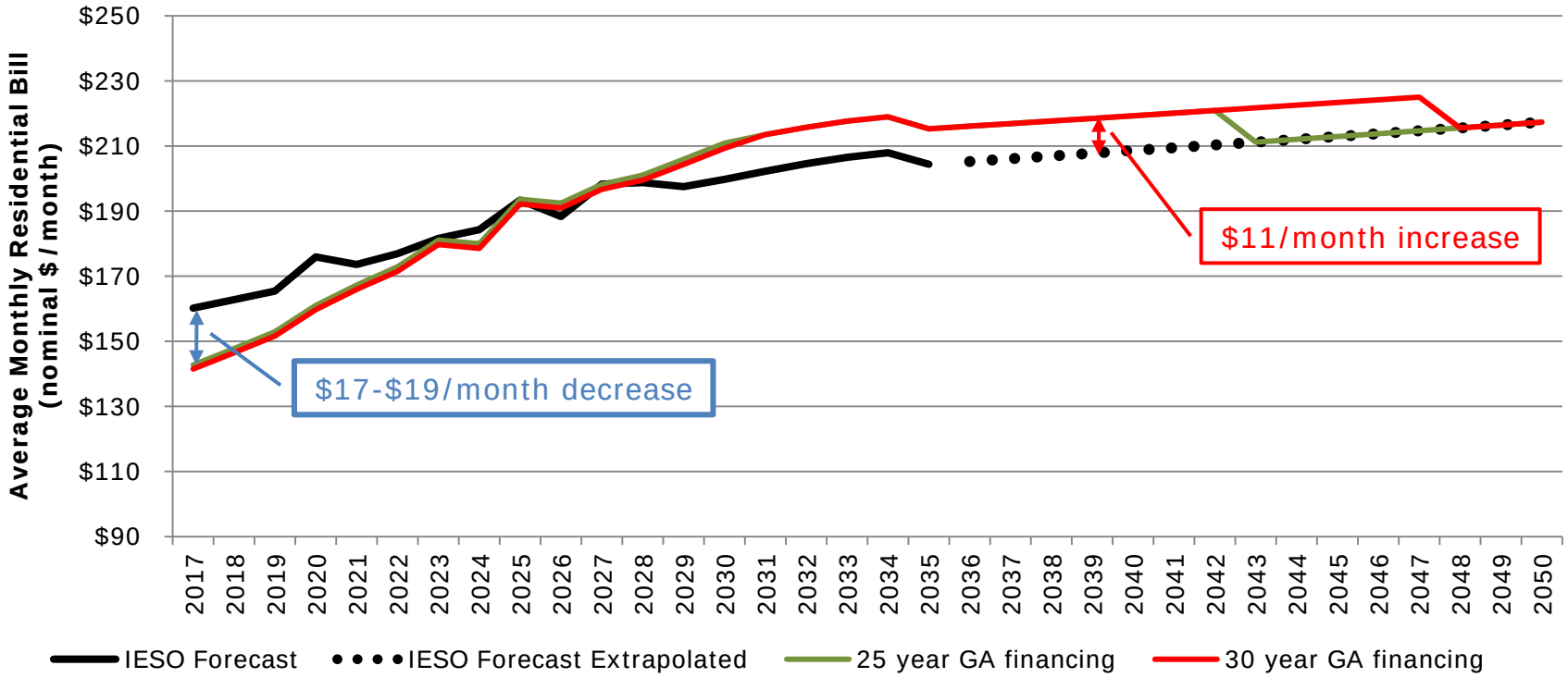
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and is increased at inflation in subsequent years – subject to a cap of no more than $2 billion above the true cost of GA in any given year – until the borrowed money is repaid.




- By **borrowing up to $10.7 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $14/month** at the cost of **a long-term increase over 12 years of up to $11/month** above the true cost of electricity production.

# 3. Maximized Short-term Cost Reduction with limits – Residential Impacts

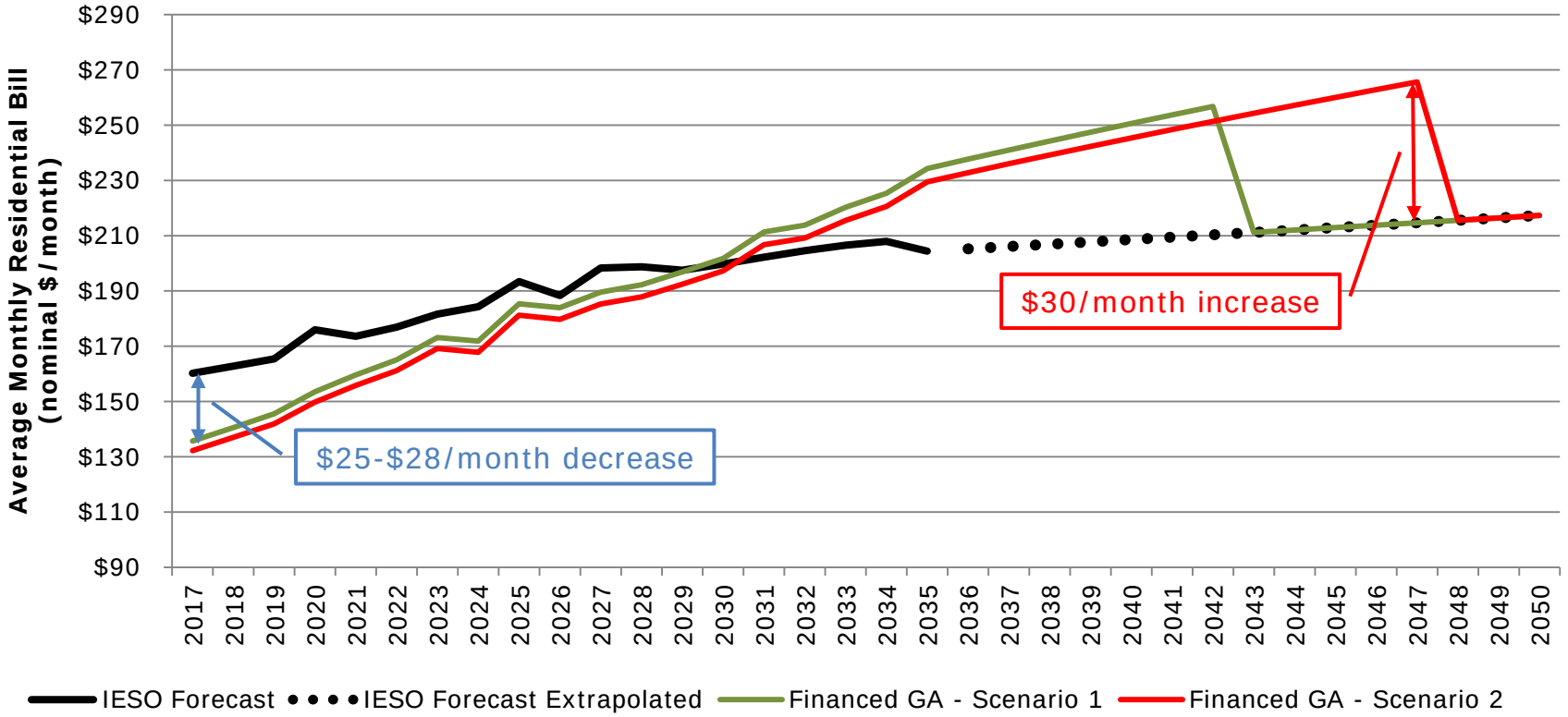
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered as much as possible and is increased at inflation in subsequent years – subject to a cap of no more than $2 billion above the true cost of GA in any given year – such that the borrowed money is paid back in 25 years (green line) and 30 years (red line) respectively.




- By **borrowing up to $23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $17-$19/month** at the cost of **a long-term increase over 17-22 years of up to $11/month** above the true cost of electricity production.

# 4. Maximized Short-term Cost Reduction, no limits – Residential Impacts

- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered as much as possible and is increased at inflation in subsequent years such that the borrowed money is paid back in 25 years (green line) and 30 years (red line) respectively. No limit is placed on the ratepayer GA over-payments in later years.




- By **borrowing up to $66 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $25-$28/month** at the cost of **a long-term increase over 12-17 years of up to $25-$30/month** above the true cost of electricity production.

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

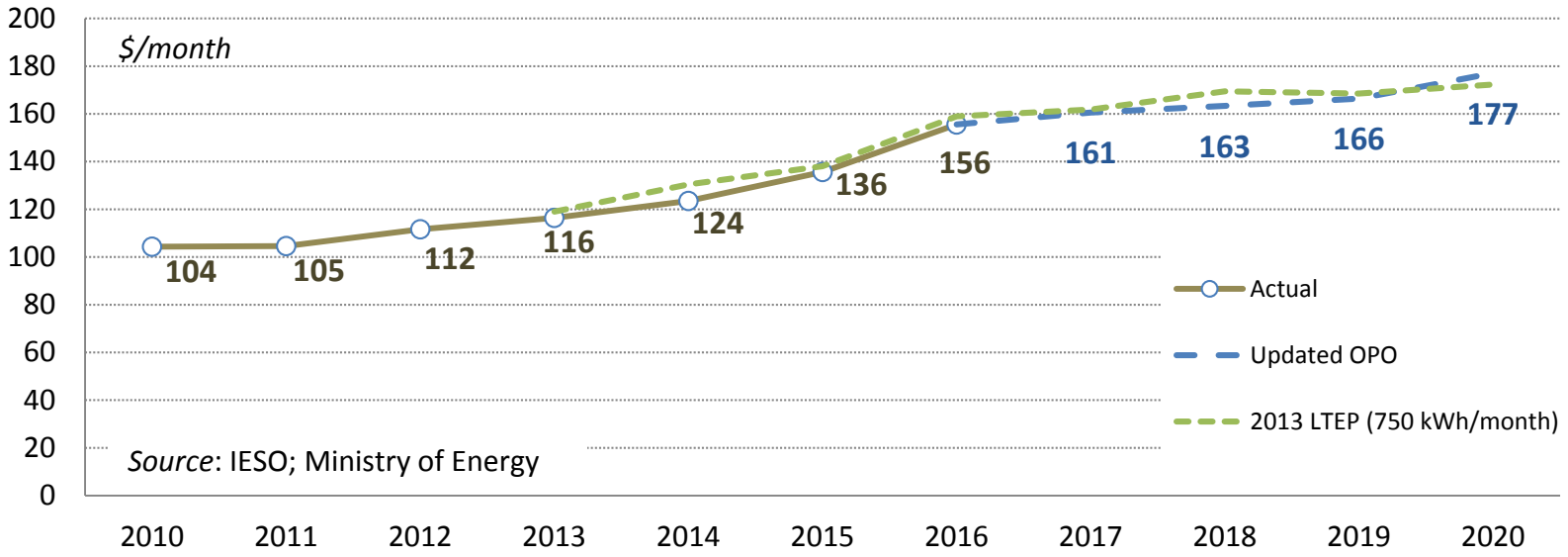
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast*




**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Broad Policy Themes / Rationale

- Support the continued reduction in the differential across distribution rates (as charged by Local Distribution Companies) across the Province through the potential enhancement of Rural or Remote Electricity Rate Protection, (RRRP). In order to not increase regulatory costs to customers as a result, this program can be moved to the tax-base.
- Provide a greater focus and support on lower income Ontarians by funding the Ontario Electricity Support Program (OESP) through the tax-base, as well as enhancing the support available through the program.
- Amortize electricity conservation and demand management (DM) programs over 15-years to provide lower costs for electricity consumers.
  - Alternatively, pay for conservation/DM programs through the tax-base and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties and expansion of natural gas to underserved areas (i.e., rural and remote communities), etc.
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" an alternative rate plan, based on a flat electricity rate, as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time. Also give consumer greater transparency with respect to electricity costs by providing more details regarding the Global Adjustment (GA).
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers, a benefit of $7/MWh.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 1.53 | 1.58 | 1.61 | 1.66 | 1.70 | 1.74 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.57 | 0.79 | 0.98 | 1.13 | 1.29 | 1.44 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC Efficiencies/Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.71 | 0.89 | 1.08 | 1.22 | 1.35 | 1.24 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. v Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 2.04 | 2.10 | 2.15 | 2.22 | 2.27 | 2.32 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.76 | 1.05 | 1.31 | 1.51 | 1.71 | 1.92 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC Efficiencies / Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.59 | 0.74 | 0.89 | 1.01 | 1.12 | 1.03 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Taxpayer Funded Electricity Price Mitigation

| *$M* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. Fund RRRP through the Tax-Base* | - | 666 | 684 | 700 | 719 |
| 2. Fund OESP through the Tax-Base | | | | | |
| a. Enhance OESP Benefit | | 162 | 226 | 279 | 322 |
| b. Expand OESP Eligibility | | TBD | TBD | TBD | TBD |
| 3. Conservation Funding Options | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | - | - | - | - | - |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | 100 | 390 | 390 | 390 | 390 |
| 5. Dedicate Departure Tax | 260 | 260 | 260 | 260 | 260 |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC Efficiencies / Rates | - | - | - | - | - |
| c. OPG – Operational Efficiencies | - | - | - | - | - |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers) | 110 | 450 | - | - | - |
| 9. Extend the Length of Existing Wind/Solar Contracts at Lower Prices | - | - | - | - | - |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| Fund Conservation Programs Through The Tax-Base | 154 | 632 | 649 | 567 | 568 |
| Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy
**Note:** *Assumes RRRP enhancement to reduce distribution rates to $30 for LDCs and **Assumes increase OESP credit by 50%.
Not included in chart is additional $18M/year to fund potential First Nations rate program through the Tax-Base.

# Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are aimed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

- Given that these programs focus on promoting equity between different areas of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.
  - These enhancements would also work in conjunction with the Ontario Energy Board's focus on reducing LDC costs outlined in option 6b.

# 1. Rural or Remote Rate Protection (RRRP) Expansion

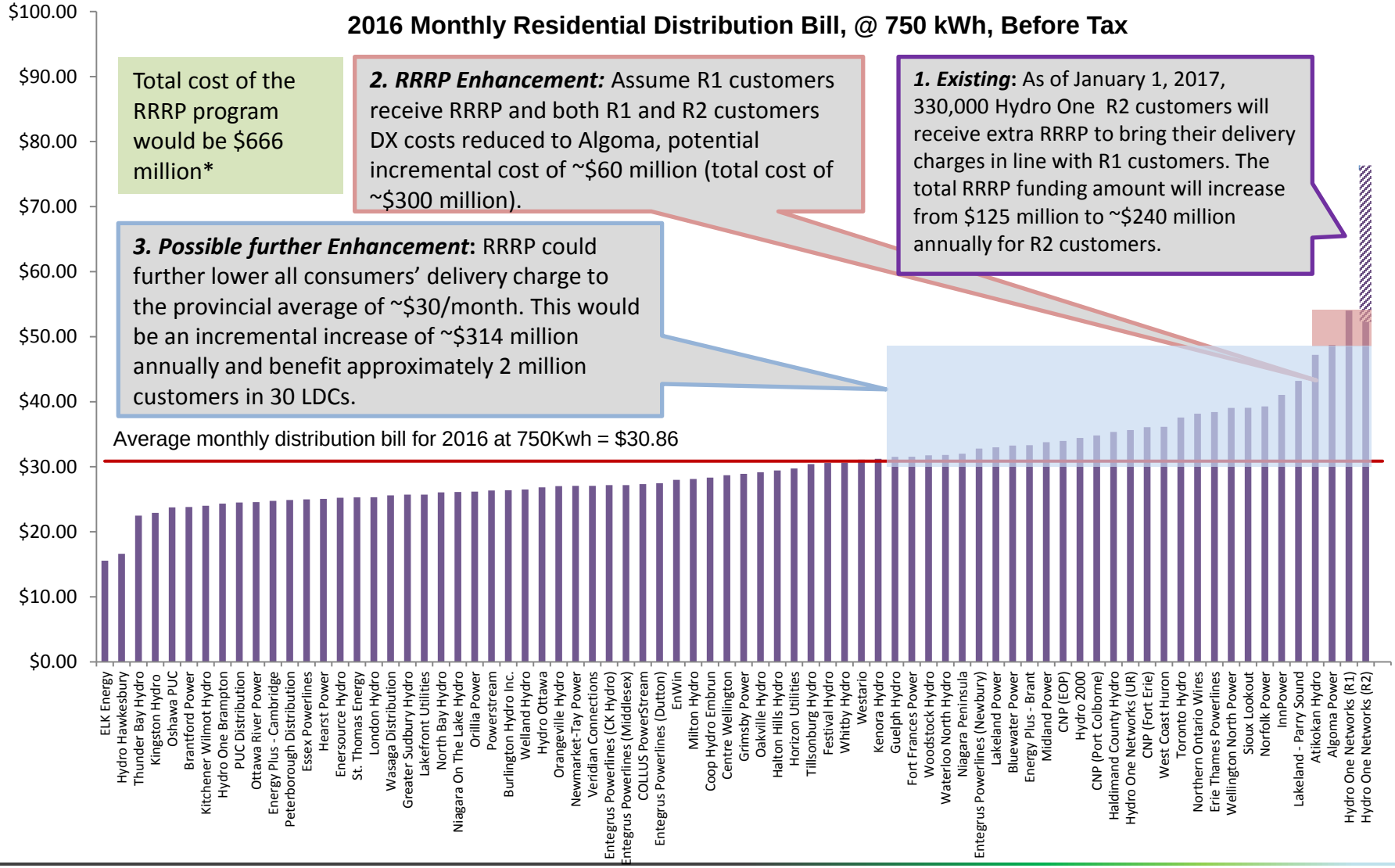
- The Rural or Remote Rate Protection (RRRP) program supports the most costly-to-serve distribution customers in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
  - Costs to these Hydro One customers are higher than average because of their relatively low density. The OEB mandates that they pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies.
  - To mitigate these costs, the RRRP was recently enhanced to help lower the bills of Hydro One's R2 customers to around those of its R1 (medium density) customers.
- Although other LDCs do not have medium- and high-density rates, there is a wide range of distribution costs between LDCs. The RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - Could be done on its own or as part of exploring an Ontario-wide uniform "postage stamp" delivery rate.

**Considerations**

- RRRP will be enhanced for R2 customers on January 1, 2017 to have their costs reduced to approximately R1 distribution costs levels. The RRRP could be further enhanced to include R1 customers, and have R2 and R1 customers reduce their costs down to Algoma (see next slide). This would cost $300 million in the first year (and would adjust year over year).
- If there was a desire to reduce costs for all LDCs, a simple average of distribution cost before tax, across all rate zones is $30.86 per month, for a residential customer consuming 750 kWh per month.** Bringing all delivery rates down to this average would cost approximately $500 million for the first year, with escalation in line with average distribution rate increases.
  - This assumes Hydro One R2 consume 1,200 kWh and H1 R1 customers consume 1,000 kWh per month.
- If all customers were brought down to the average costs (see the chart on the next slide for more detail):
  - It is assumed that residential customers with bills less than the provincial average see no change;
  - Majority of the enhanced benefit would go to Hydro One R1 and Toronto Hydro customers; and
  - Mechanism to ensure that LDCs continue to be motivated to achieve efficiencies would need to be designed (see section 4).
- Enhanced RRRP support may be best provided from the tax-base, because if funded from the rate-base, it would increase the costs for all customers who may argue that it is unfair that they are being asked to pay more to subsidize those in other LDCs.
- In conjunction with using the tax-base to reduce delivery charges to the provincial average, the OEB could be asked to explore moving to a province-wide "postage stamp" delivery rate that would be the same across the province to be implemented over time.
  - Could be "winners and losers" as delivery rates less than the average would go up in a postage stamp model;
  - A "postage stamp" model could help incent LDC consolidation.

**Note:** This is based on preliminary estimates and the amount will fluctuate on monthly consumption from customers and LDCs have different customer base with different consumption types.

# 1. Rural or Remote Rate Protection (RRRP) Expansion (cont'd)




*Note: this includes the ~$50M currently supporting Algoma Power and Hydro One Remotes.*

# 2a. Enhance Ontario Electricity Support Program (OESP) Benefit

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills. The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices and at launch, it was estimated ~560,000 families could be eligible and some 261,000 applications have been submitted.

- The OESP program benefits could be increased across the board by 50%, which would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).

- The OESP program could also be further enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).

**Considerations**

- If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible.
  - At the time of program design, advice was given that a 40-50% participation rate would be high for an application-based program delivered through electricity bills.
  - The province would need to work with LDCs if the rebate was to appear on electricity bills rather than be delivered via the income tax system (e.g., through the Trillium Benefit).

# 1 & 2a. Fiscal Impacts of RRRP, OESP and First Nation Rate

- Table below shows estimates of program costs up to 2022:

| Year | OESP ($M) | OESP + 50%($M) | RRRP($M) | RRRP Enhancement ($M) | First Nations Delivery Rate($M) | TOTAL RANGE ($M) (from status quo to OESP and RRRP enhancements) |
|---|---|---|---|---|---|---|
| 2017 | $108 | $162 | $292 | $374 | $18 | $418 to $846 |
| 2018 | $150 | $226 | $300 | $384 | $18 | $468 to $928 |
| 2019 | $186 | $279 | $306 | $394 | $18 | $510 to $997 |
| 2020 | $215 | $322 | $315 | $404 | $18 | $548 to $1,059 |
| 2021 | $243 | $365 | $322 | $415 | $18 | $583 to $1,120 |
| 2022 | $272 | $408 | $329 | $426 | $18 | $619 to $1,181 |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections above assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
   - The second column forecast also assumes the existing credit amounts increase by 50%.
     - Forecast assumes 10% administration costs
     - Forecast does not account for the approximately 142,000 low-income households that OEB estimated are not eligible because they do not directly receive an electricity bill.

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.
   - Expansion to cap distribution rates for other customers is based at $374M and assumes escalation of 2.6% (historical average dx rate increase). This is a conservative estimate, as Hydro One and Toronto Hydro increases could drive program costs beyond the average increase.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 2b. Expand OESP Eligibility

**Expanded Coverage**

- When OESP was being created, the OEB estimated that are 713,000 low-income households, of which 20% do not receive electricity bills. Thus, only 571,000 would potentially be eligible for OESP.
- If moved to the tax base, the OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity.

**Eligibility Categories**

- OESP has two credits amounts:
    1) Basic credit of $30-50 per month, based on the level of income and the number of residents.
    2) Enhanced credit of $45-75 per month for those with unique electricity needs:
        a) Electric heating,
        b) Indigenous customers, and
        c) Certain electrically intensive medical devices.
- The enhanced credit can be expanded to include additional eligibility categories of customers. For example, a new “Low Density Consumer” category could be introduced that provides Hydro One R2 customers (highest distribution rates) eligible for OESP the enhanced credit.

**Considerations**

- Potential costs for expanded coverage and new eligibility categories depend on updated estimates and changes to program design and delivery.
- There would be value in keeping the OESP as an income-tested program to distinguish it from other initiatives (e.g. RRRP, which is designed to address disparity between rural and urban distribution costs).

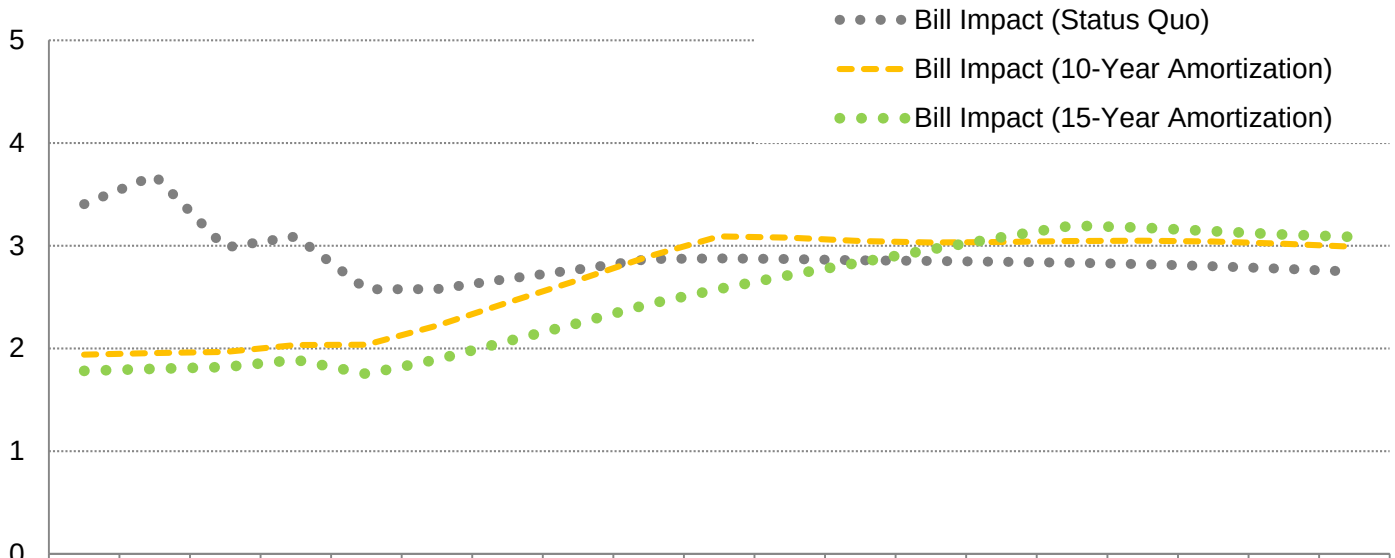
# 3a. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized. This would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs).
  - The time period over which costs could be amortized would be over the lifetime of funded CDM measures.
  - ENERGY is working with IESO to determine the appropriate lifetime period – the graph on the next slide, which illustrates residential bill impacts, presents two cases: **10-year and 15-year measure lifetimes**.
- In both cases, amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020. Over time the benefit would decrease and turn into a cost (higher electricity rates than would otherwise occur), as interest charges begin to grow. Estimated interest charges are as follows (a 3% interest rate is assumed; increases in interest rates could result in higher overall interest charges):
  - $712 million ($2016) – Amortizing eligible 2017-2035 CDM costs for 10-year period; and
  - $1.3 billion ($2016) – Amortizing eligible 2017-2035 CDM costs for 15-year period .
- Legislative changes would be needed to allow recovery of interest payments from ratepayers, or these costs could be recovered from the Consolidated Revenue Fund (CRF, or taxes).
- An alternative that could be explored would be to pay for CDM costs, or for a portion of these, from the tax-base (*see Appendix for more detail on tax funding option*).

# 3a. Amortize Conservation Program Costs (cont'd)

## Conservation Residential Bill Impact – Status Quo, 10-Year and 15-Year Amortization

***CDM Bill Impact ($/month)***




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bill Impact (Status Quo) | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | 2.68 | 2.77 | 2.87 | 2.88 | 2.87 | 2.86 | 2.85 | 2.84 | 2.83 | 2.82 | 2.80 | 2.78 | 2.75 |
| Bill Impact (10-Year Amortization) | 1.94 | 1.95 | 1.97 | 2.03 | 2.04 | 2.22 | 2.45 | 2.67 | 2.90 | 3.09 | 3.08 | 3.05 | 3.03 | 3.04 | 3.04 | 3.05 | 3.04 | 3.02 | 2.99 |
| Bill Impact (15-Year Amortization) | 1.78 | 1.80 | 1.82 | 1.89 | 1.75 | 1.89 | 2.07 | 2.25 | 2.43 | 2.58 | 2.71 | 2.84 | 2.96 | 3.08 | 3.20 | 3.18 | 3.14 | 3.11 | 3.09 |

Source: IESO; Ministry of Energy

**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10 of 15-year borrowing rate of 3.0%.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.
- Legislative amendments would be needed to allow recovery of loan interest charges from GA.
- ENERGY staff have developed a note to seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
- ENERGY is working with IESO to seek an opinion on the proposal from IESO's external auditor.
- ENERGY would then send the IESO external auditor's opinion along with ENERGY's explanatory note to the Ontario Provincial Controller (OPC) to seek a formal opinion on whether CDM costs could be amortized according to rate-regulated accounting standards.
- Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 3b. Rate Smoothing of Conservation Program Costs

- "Rate smoothing" could achieve the same rate reduction effect as amortization.
- Instead of taking out a loan to amortize conservation costs, a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Each year, IESO would defer recovery of a portion of annual conservation costs. Financing would also be required, such as from the OFA, to pay the interest on the deferral account. Interest would accrue on the deferred amounts, likely at the same rates as for the amortization option.
- Deferred costs could be recovered over any time period. If a 10 or 15 year-period was chosen, the rate impacts would be the same as in the amortization option.

**Considerations**

- Option would **not** require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open the Ministry to criticism by the Controller and/or Auditor General since the rate impact is the same.
- The Ministry would have more control under this option to change deferred amounts each year, as opposed to the terms set by a loan agreement under the amortization example.
- There is precedence to this approach for nuclear investments, which otherwise would result in volatile increases and decreases for Ontario ratepayers over the investment period. In 2015, the Ministry amended a regulation that requires the Ontario Energy Board (OEB) to set "smoothed" nuclear rates for OPG's Darlington and Pickering nuclear stations over a 20-year period.
  - The regulation allows OPG to defer recovery in rates of a portion of its nuclear revenue during the Darlington refurbishment (expected to be complete in 2026) and recover these deferred costs over the remaining ten years.
  - OPG will establish a "deferral account" to record the deferred amounts each year up to 2026 plus accumulated interest on the balance to reflect OPG's financing costs as a result of rate smoothing. The deferral account is then drawn down on a straight-line basis between 2026 and 2036.
- At minimum, new regulation would be required. However, further analysis is needed to determine the relevant regulation or legislation, to be amended for IESO (e.g., OEB regulation of IESO costs and fees, GA regulation for how IESO recovers its conservation costs from ratepayers).

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure

- Fund investments in specific energy infrastructure projects through the tax-base. **Note:** This could include the provincial portion of funding for the Remote First Nation Connection Project, a fund to support projects that improve adequacy and reliability in areas where new transmission would unlock economic growth and expansion of natural gas service to underserved communities.

**Considerations**

- Tax-base funding would allow for energy infrastructure to be built without impacting electricity and natural gas rates.

*Remote Connection Project:*

- Ontario ratepayers currently support costs of remote electricity service through RRRP on the order of $28 million/year
- Connecting 21 remote communities to the Ontario grid is supported by a positive business case due to diesel cost savings over time. If RRRP is funded through the tax base as proposed above, this project represents an opportunity to reduce impacts from RRRP.
- Direct investment in Ontario's portion of the capital costs of the project through a provincial fund (e.g., Trillium Trust) could also be considered along with mechanisms for cost recovery through transmission rates to refresh the fund as industry benefits from the transmission investment.
- The amount of investment and long-term savings depend on a federal contribution to the project and ENERGY is currently in discussions with Canada with the goal of concluding a cost-sharing agreement by spring 2017.
- A move to tax-based funding may have implications for cost oversight, since the OEB's mandate is to have oversight of ratepayer impacts. Alternative methods to review cost prudence of tax-based funding may be needed.

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (cont'd)

**Considerations (cont'd)**

*Transmission Projects to Enhance Economic Growth:*

- A tax-based fund could target investments in projects that have been identified in IESO regional plans and that would stimulate economic growth but are not proceeding due to cost barriers under the OEB's beneficiary pays principle. Investments could also target areas where the existing system poses challenges for delivering reliable service such as in parts of Northern Ontario with long single circuits.
- Potential opportunities for investment could include a transmission reinforcement in the **Greenstone area**, upgrades south of **Red Lake** and others TBD based on program design.
- This approach would allow a potion of project costs to be socialized to advance key projects without impacting rates or OEB's principles of cost allocation. Scope and scale of fund would be refined through program design.

*Natural Gas Expansion to Underserved Communities:*

- The Government has currently committed to expanding natural gas access to more communities in Ontario (i.e., $200 million Natural Gas Access Loan and $30 million Natural Gas Economic Development Grant).
  - Natural gas is an affordable heating source in Ontario. Its continues to be less expensive than alternative sources such as electric baseboards, heating oil and propane. For example, switching from oil to natural gas can save an average consumer an estimated $1,500 annually.
  - Increasing access to other energy sources such as natural gas, provides Ontarians with more options to meet their needs, reduce their energy costs and improve their quality of life.
  - Expansion of natural gas delivery infrastructure is widely supported in underserved communities (i.e., a recurring theme at ROMA) as a means to provide consumers and businesses in underserved communities with more affordable energy choices, attract new industry to Ontario and benefit agricultural producers.
- A grant program complements the Ontario Energy Board's recent decision enabling greater rate-based expansion to unserved areas, including rural and remote communities.
  - Applying Trillium Trust funding would make it possible to enhance the Grant Program and service more communities.

# 5. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.
- If the Province were to transfer $2.6 billion in economic benefits to the rate base over 10 years suggest the following impacts (assuming 140TWh per year):
  - Residential Ratepayer Impact (if spread over 10 years): up to $1.39 per month on a typical bill; and
  - Industrial Ratepayer Impact (if spread over 10 years): up to $1.86 / MWh

**Considerations**

- Cost savings to ratepayers and associated fiscal impacts would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- The departure tax was effectively a true-up for lower PILs payments from Hydro One in previous years – it was not a one-time windfall for the Province. In other words, it ensures that Hydro One paid all its tax obligations under the PILs regime before moving into the normal corporate tax regime.
- The related ~$2.4 billion fiscal benefit to the Province (from the deferred tax benefit) has already been credited to the Trillium Trust to be used to build infrastructure under Moving Ontario Forward.
- Repurposing funds paid to OEFC may have an impact on the defeasance of electricity stranded debt.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).

# 6a. Empower Energy Agencies – IESO / Market Renewal

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 6b. LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
  - Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
    - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.

**Considerations**

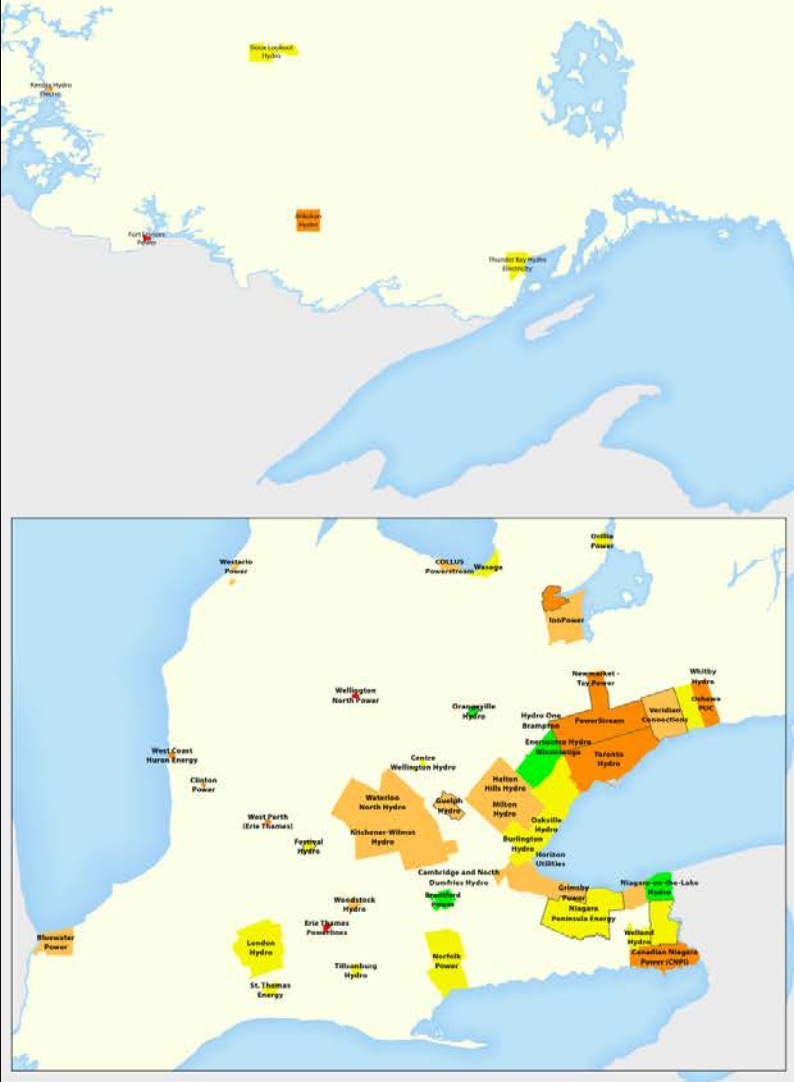
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.

- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
  - To further help address the costs associated with the Delivery line of the electricity bill, program such as the RRRP (previous slide) could be expanded to include other customers that may face higher costs.

- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.

- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation. Further changes to the tax incentives and/or revisiting legislated consolidation could be considered.

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

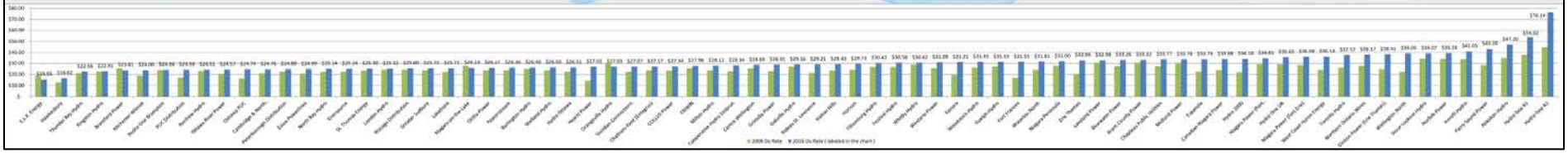
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# 6c. Empower Energy Agencies – OPG / Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

**Considerations**

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.
- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available, providing customers with pricing choice.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- Would provide consumers with electricity pricing choice.
- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro- November 2016 rates)

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7b. Give Consumers More Rate Choices and Greater Transparency – Detailed Global Adjustment

- Provide electricity consumers greater transparency with respect to electricity generation costs by providing more details regarding the Global Adjustment (e.g., adding a line on hydro bills, quarterly energy reports, etc).

**Considerations**

- As electricity bills have increased, many consumers have complained about a lack of transparency on the drivers of electricity costs. In particular, consumers and legislative officers have singled out the GA.

- Providing consumers with additional information on the cost components and amounts recovered through the GA would help consumers understand how the different forms of electricity generation in Ontario contribute to consumers costs.

- Providing additional information to consumers on electricity commodity cost drivers without sufficient context or background could simply lead to increased complaints about particular generating technologies that make up large shares of costs (e.g., nuclear).

- Adding a breakout of the amount of GA on residential electricity bills could lead to further confusion due to the existing breakout of multiple time-of-use buckets.

- Alternatively, the existing quarterly Ontario Energy Report, which provides various energy sector data, could be leveraged to show a breakout of quarterly GA costs by fuel type. A link on electricity bills could point to this information.

# 8. Help Small Business Manage Their Electricity Cost – End DRC Early for Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the proponents agreeing to a lower price in the near term.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period ; discussions/consultation may be required in advance of this potential option moving forward.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- Since the Minister of Energy is not a party, IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms would also reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.

- Projects over 500 kW would offer the most savings potential as they represent the majority of installed renewables capacity and are spread across fewer contracts.

- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.

- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh;
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
  - **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 million | $582 million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - For example, the New contract is $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 million | $632 million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# 10. Tax Relief for Solar and Wind Contracts

- In 2010 and 2011 Ontario procured large scale projects (>500 kW) through the FIT program at standard offer pricing.

- The FIT program was the centerpiece of the GEA which established the economic and social goals of growing the green economy, including establishing a local renewable energy manufacturing base, supporting the development of green energy jobs, and providing incentives for Indigenous participation.

- To help achieve these economic and social goals, the FIT program offered pricing at above competitive procurement rates, and provided Indigenous and Community participation adders, which resulted in economic benefits to all Ontarians, but resulted in additional costs borne by Ontario's electricity ratepayers.

- Ontario could fund the added cost of some or all of these economic and social incentives by shifting their costs from the rate-base to the tax-base.
    1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
    2. The tax base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT.

**Considerations**

- If applied to projects in commercial operation the benefit to the ratepayer would be immediate.
- Comparing FIT pricing to competitive procurement pricing could provide a reasonable representation of energy procurement without the added cost of economic and social incentives.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
   - For example, from 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
   - The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
   - If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
   - The $3.3 billion difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.
   - This represents estimated average ratepayer savings of $1.50/ month relative to OPO forecasts.
   - The same approach could be considered for solar projects however, prior to LRP I in 2016, Ontario had not procured solar capacity competitively and international cost comparisons are challenging given differences in regional development costs.
   - This example does not include the value of participation price adders available for community and indigenous participation.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

2. The tax-base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT 1 solar and wind projects.

   - For example, 17 large FIT 1 wind and solar projects have Indigenous and/or Community participation making them eligible for a price adder in addition to their base contract price.

   - The estimated value of these price adders is approximately $17.1 million (NPV 2017) over the expected remaining term of their contracts.

   - This represents estimated ratepayer savings of approximately $0.01/month relative to OPO forecasts.

# FIT 1 and GEIA Wind Projects in Commercial Operation
(source: IESO Active Contracts List, October 31, 2016)

| Count | Program | MW | COD |
|---|---|---|---|
| 1 | FIT 1 | 0.8 | Oct-10 |
| 2 | FIT 1 | 18 | Jul-15 |
| 3 | FIT 1 | 23 | Aug-15 |
| 4 | FIT 1 | 40 | Jan-15 |
| 5 | FIT 1 | 10 | Sep-14 |
| 6 | FIT 1 | 10 | Sep-14 |
| 7 | FIT 1 | 10 | Jun-14 |
| 8 | FIT 1 | 99 | May-13 |
| 9 | FIT 1 | 100 | Oct-15 |
| 10 | FIT 1 | 4 | Sep-12 |
| 11 | FIT 1 | 100 | Apr-16 |
| 12 | FIT 1 | 15 | Jun-15 |
| 13 | FIT 1 | 18 | Mar-12 |
| 14 | FIT 1 | 104.4 | Nov-13 |
| 15 | FIT 1 | 40 | Dec-15 |
| 16 | FIT 1 | 60 | May-14 |

| Count | Program | MW | COD |
|---|---|---|---|
| 17 | FIT 1 | 125 | Aug-13 |
| 18 | FIT 1 | 73.5 | Aug-14 |
| 19 | FIT 1 | 102 | Jan-15 |
| 20 | FIT 1 | 9 | Jan-12 |
| 21 | FIT 1 | 4.1 | Dec-15 |
| 22 | FIT 1 | 0.5 | Oct-13 |
| 23 | FIT 1 | 82.8 | Nov-11 |
| 24 | FIT 1 | 18.45 | Sep-16 |
| 25 | FIT 1 | 60 | Jul-14 |
| 26 | FIT 1 | 10 | Oct-16 |
| 27 | FIT 1 | 6.15 | Nov-14 |
| 28 | FIT 1 | 2.3 | Aug-15 |
| 29 | FIT 1 | 10 | Feb-16 |
| 30 | FIT 1 | 8.2 | Nov-14 |
| 31 | FIT 1 | 150 | Nov-14 |
| 32 | FIT 1 | 91.39 | Dec-14 |

| Count | Contract | MW | COD |
|---|---|---|---|
| 33 | FIT 1 | 25 | May-15 |
| 34 | FIT 1 | 82.8 | Nov-11 |
| 35 | FIT 1 | 30 | Mar-14 |
| 36 | FIT 1 | 17.6 | May-16 |
| 37 | FIT 1 | 23 | Dec-12 |
| 38 | FIT 1 | 99 | May-13 |
| 39 | FIT 1 | 48.6 | Dec-11 |
| 40 | FIT 1 | 19.44 | Aug-15 |
| 41 | FIT 1 | 10.8 | Mar-12 |
| 42 | FIT 1 | 38.88 | Sep-15 |
| 43 | FIT 1 | 60 | Aug-14 |
| 44 | GEIA | 270 | Mar-14 |
| 45 | GEIA | 180 | Dec-15 |
| 46 | GEIA | 148.6 | Dec-14 |
| 47 | GEIA | 270 | May-15 |

# Key Outcomes / Next Steps

- The proposed initiatives provide the following opportunities to:
  - Provide a greater focus on vulnerable consumers by funding electricity support programs through the tax-base.
    - Enhance existing and new support programs targeted at the most vulnerable consumers (i.e., OESP and RRRP); and
    - Better harmonize delivery rates across the province.
  - Re-set how energy infrastructure is funded by shifting costs to the tax-base from the rate-base.
  - Provide electricity consumers with greater choices and transparency (e.g., alternative rate plan based on a flat electricity rate, unpacking the Global Adjustment costs, etc);
  - Provide system benefits (e.g., market renewal);
  - Increase cost effectiveness and improve efficiency; and
  - Lower the cost of electricity for all consumers.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require legislative and/or regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

A. Rural or Remote Rate Protection (RRRP) – Overview and Enhancements
B. Fund Conservation Programs Through the Tax-Base
C. Eliminate the Industrial Conservation Initiative (ICI)
D. Cancel Large Renewable Procurement I (LRP I)

# A. RRRP Overview and Enhancements

- The Delivery line of the electricity bill is composed of Distribution and Transmission Costs. While transmission costs are uniform across the province, LDC costs vary by distributor and account for about 20% of the total bill for the electricity customers.
  - See slide X for a map of delivery rate increases between 2006 and 2016.
- The Rural or Remote Rate Protection (RRRP) framework was put in place in 2001 to help offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations.
- RRRP is available to: residential Hydro One R2 customers (~350,000 customers), Algoma Power customers (~11,600 customers); H1 remote customers (~3,500 customers).
  - To date, R2 customers receive a fixed amount of $125 million a year distributed amongst the customers. Algoma and Remote customers have RRRP calculated by the OEB each year that fluctuates based on average provincial distribution increases.
- Because the amount had been fixed for over a decade, the Province recently increased funding of the RRRP program for Hydro One R2 customers from $125 million to $240 million. This will be effective as of January 1, 2017, and will bring their delivery charges in line with the next highest charges from Hydro One's R1 customer class.

# B. Fund Conservation Programs Through the Tax-Base

- Propose to fund 2017-2020 electricity conservation and demand management program costs* using tax dollars instead of ratepayer dollars.
  - Funds received through the Hydro One Departure Tax could potentially be repurposed towards this.
- Total remaining 2017-2020 electricity conservation program costs are expected to be ~$2.1 billion.
- Post 2020, this option could evolve to funding conservation programs through the Greenhouse Gas Reduction Account.

**Considerations**

- Electricity conservation programs provide a number of benefits to society, however, Ontario's ratepayers have been covering these costs:
  - Avoiding/deferring future energy infrastructure investments, reducing disruption in communities (e.g., avoiding the need to build new natural gas generation);
  - Environmental benefits (e.g., reduced natural gas peaking generation and GHG emissions); and
  - Social and economic benefits (e.g., job creation and assistance managing electricity bills).
- There is precedence for using tax dollars to fund conservation programs.
  - Between 2007 and 2011, Ontario funded the Home Energy Savings retrofit program using tax dollars.
- Funding conservation programs though the tax-base is expected to result in a benefit of $3.40/month for residential electricity consumers in 2017. This could provide immediate short term relief to consumers while other rate mitigation initiatives are developed (e.g., market renewal, LDC efficiencies).

*** Note:** This includes costs towards the Conservation First Framework, Industrial Accelerator Program, Demand Response and the Conservation Fund)

# C. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

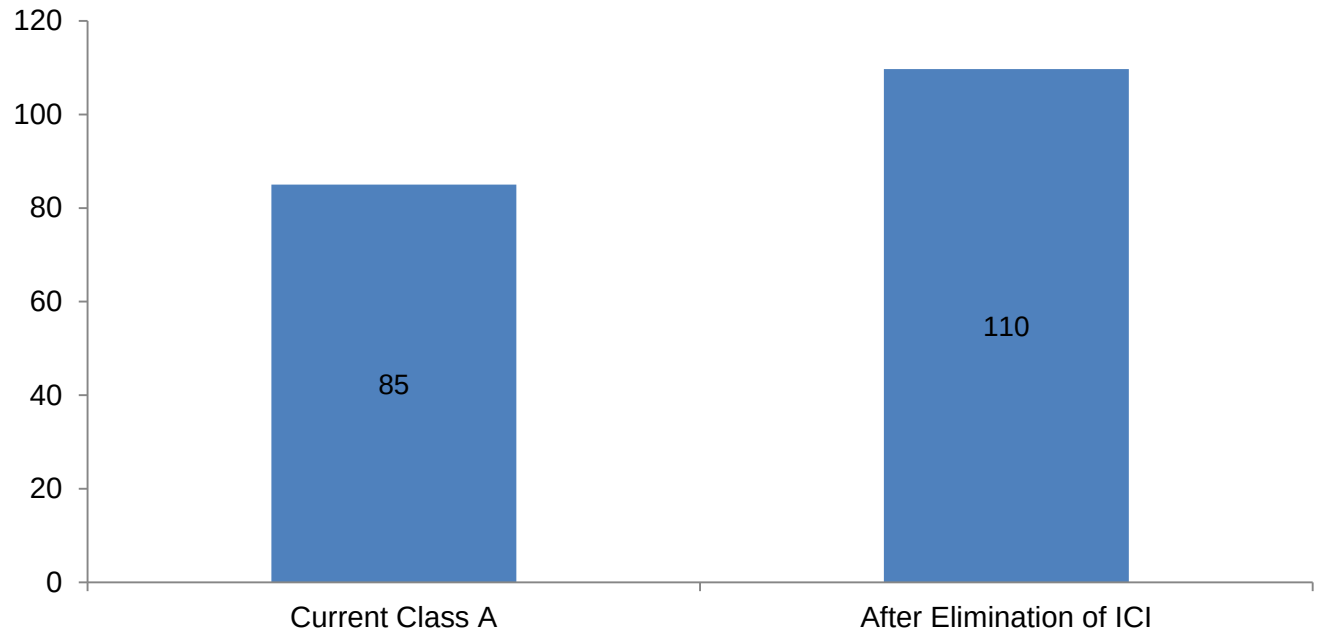
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# C. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# D. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period.
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g. rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

*Cancel/Adjust Announced Procurements:*

- Amendments to existing directions to IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

*Cancel Existing LRP I Contracts:*

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

**Legal Analysis**

- Any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements.
  - An amendment to an existing direction would not require Cabinet approval, however, further analysis is required to determine if direction to cancel LRP I contracts could be considered as amending existing direction.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights. This reasoning would likely apply equally to any direction to IESO to cancel LRP I contracts. Previous advice has also flagged a risk that the Province could be liable for damages in tort for inducing a breach of contract (or other claims).
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | John Kim |
| **Subject:** | Fwd: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 3:19:09 PM |
| **Attachments:** | Revised - Debt-Financing GA 170112 - ESPD ADM Approved w LSB CLEAN.PPTX<br>ATT00001.htm<br>Proposed Initiatives to Transform Ontarios Electricity Sector 20170113.pptx<br>ATT00002.htm |

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Begin forwarded message:

> **From:** "Ronald Kwan" <Ronald.Kwan@ofina.on.ca>
> **To:** "Francisco Chinchon" <Francisco.Chinchon@ofina.on.ca>, "John Kim" <John.Kim@ofina.on.ca>, "Emily Kerr" <Emily.Kerr@ofina.on.ca>
> **Cc:** "Gavin He" <Gavin.He@ofina.on.ca>
> **Subject: Fwd: Rate Mitigation**
>
> Hi,
>
> There's a meeting on Monday on Energy's rate mitigation decks.
>
> Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?
>
> Apologies on the timing.
>
> Thanks,
> Ron
>
> Begin forwarded message:
>
> > Original Message
> >
> > From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> >
> > Sent: Saturday, January 14, 2017 8:16 AM
> >
> > To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> >
> > Subject: Fw: Rate Mitigation

Good morning,

Attached are materials for Monday's rate mitigation meeting.

Keley

Original Message

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>

Sent: Saturday, January 14, 2017 7:49 AM

To: Orsini, Steve (CAB)

Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

Hi Steve,

Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

Sent from my iPad

Ontario

MINISTRY OF
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# Financing the Global Adjustment

January 13, 2017

*Working Draft for Discussion Purposes Only*

# Purpose

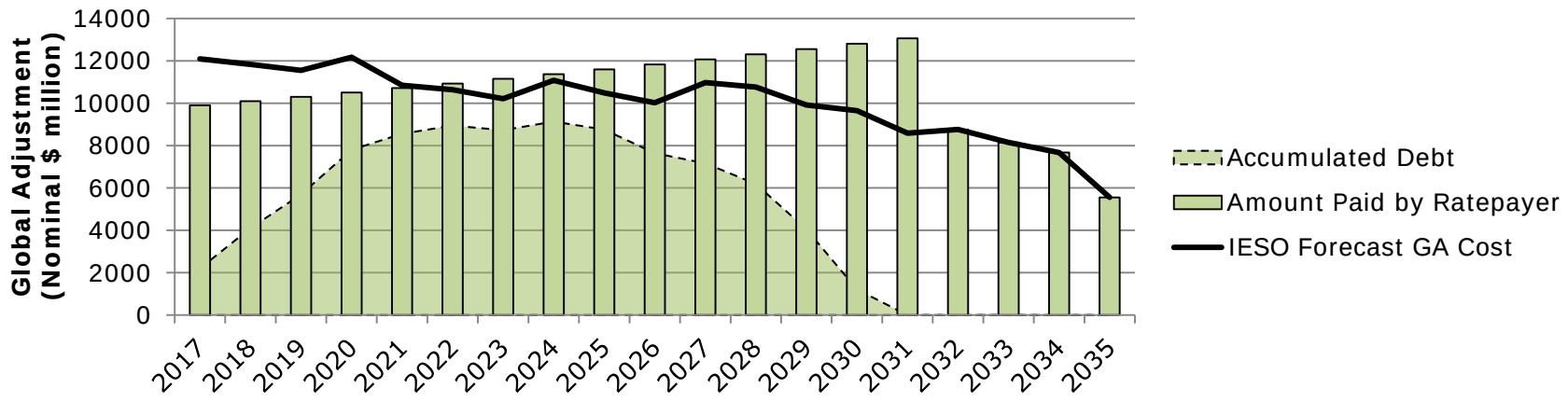
- To analyze the impact of partially financing the cost of the global adjustment (GA) to defer some of the cost to later years.
- The economic, legal and fiscal risks to ratepayers, stakeholders and government are qualitatively discussed.
- The remainder of the presentation quantitatively examines several different scenarios for financing the GA, showing:
  - The impact on residential bills; and
  - The amount of debt incurred.

# Rationale for Financing the GA

- The GA is comprised of costs for regulated and contracted generation, as well as conservation.
- Some contracted generation assets are expected to have a useful life that extends beyond the term of their current financial contracts (typically 20-years).
- Similarly, conservation costs are recovered through the GA on an annual basis while conservation initiatives provide benefits to the electricity system over the course of many years.
- Since the GA only includes costs related to the contractual life of these assets, there may be an opportunity to recognize the longer-term benefit of these assets to the electricity system and “bring forward” that benefit for ratepayers today, while deferring some of the current costs.
- An indicative GA financing proposal is presented that lowers ratepayers costs over the short term by borrowing money but increases costs over the long term when GA costs are forecast to be lower.
- Note that not all generating assets will continue operations at the end of their contract term. Regulatory constraints (i.e., nuclear licences) or low demand conditions (i.e., as experienced with current expiring NUGs) would mean that some generators will shutdown at the expiry of their contract. Future ratepayers would be paying for these assets that are no longer producing power.

# Indicative Proposal to Finance the Global Adjustment

- For the purpose of discussion, it is proposed that the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the total amount of money borrowed has been completely paid back.
- All scenarios are assumed to begin January 1, 2017, setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "smoothed" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- All analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook and assumes a 5% borrowing interest rate.




**Sample financing**: Ratepayers pay less than the cost of GA in early years, borrowing up to $9 billion that is fully paid off in 2031 by charging ratepayers more than the cost of GA in later years.

# Considerations and Risks – Ratepayer

Ratepayer:

- Borrowing money to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves borrowing large amounts of money over a long period of time (16-30 years, depending on the scenario) to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on electricity rates. A long-term interest rate of 5% is assumed for this analysis.

- GA and HOEP provide a natural hedge against each other – when one goes up, the other goes down – keeping total electricity costs relatively stable and predictable. Smoothing only the GA would lead to greater price volatility for consumers.

    - For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate described in the indicative proposal.

- Should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumption, further increasing future costs for individual ratepayers.

# Considerations and Risks – Fiscal and Stakeholder

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.
    - It is unclear whether legislation could determine the manner in which this initiative is accounted for. Further work is required.
- Historically electricity sector financing has been conducted by the Ontario Financing Authority, e.g., managing OEFC's stranded debt and borrowing on behalf of IESO. Further consultation with the OFA will be required to determine the appropriate vehicle for additional borrowing.
- The significant amount of additional Provincial borrowing needed to finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating and overall borrowing capacity. Further analysis is required and would suggest early engagement with the OFA through which money will be borrowed.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" in the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

# Considerations and Risks – Legal

Legal:

- Legislation would be required to authorize the financing proposal.
  - Amendments to the *Electricity Act, 1998* (EA) could authorize the financing of certain costs within or part of the GA. However, whether any other legislation requires amendment is not known at this time.
  - The GA regime currently provides that “true costs” represent the true costs of making payments to generators or counter parties to contracts, not the incurring of discretionary financing or interest costs.
  - Considerations such as the need to analyze legal risks or the need to address costs retroactively (if the proposal requires a January 1, 2017 start) could add to the legal and drafting complexity;

- Introduction of a bill in the week of February 20th is an aggressive timeline that could require diversion of resources from other initiatives.

# GA Debt Financing Scenarios

1. Status Quo

   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

2. Moderate short-term cost reductions with limits

   - The amount of GA paid by ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and increases at inflation (assumed to be 2%) in each subsequent year until the total amount of money borrowed is paid off.
   - Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

3. Maximized short-term cost reductions with limits

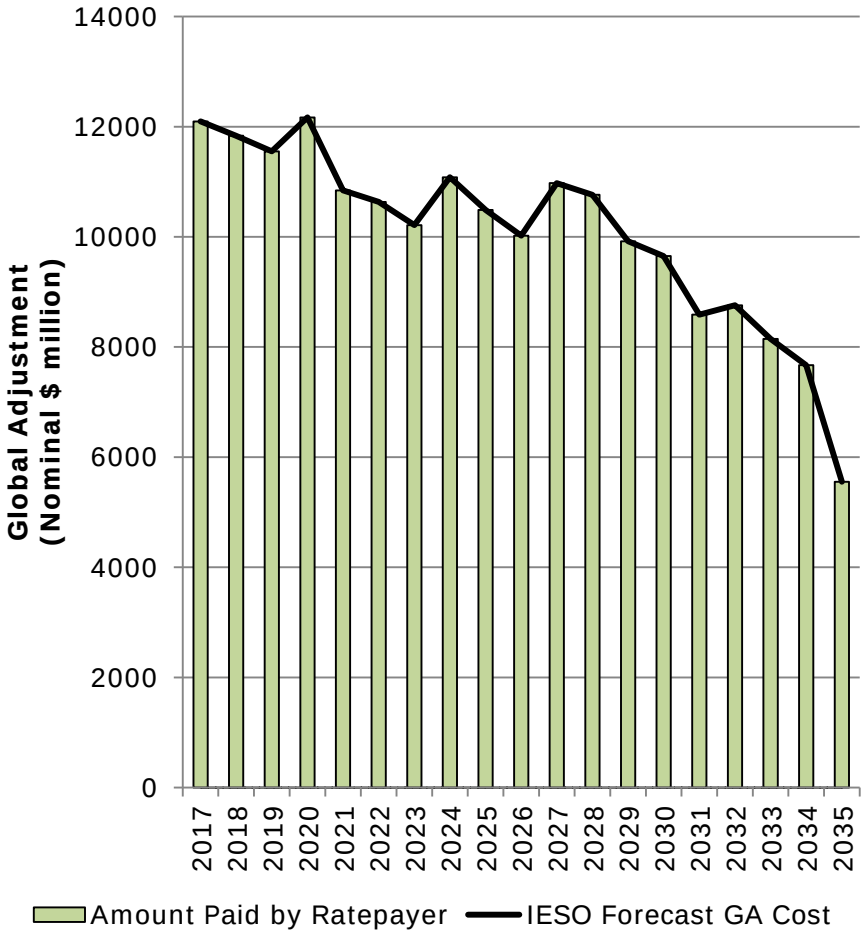
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the total amount of money borrowed is paid off over a 25-30 year financing period.
   - Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

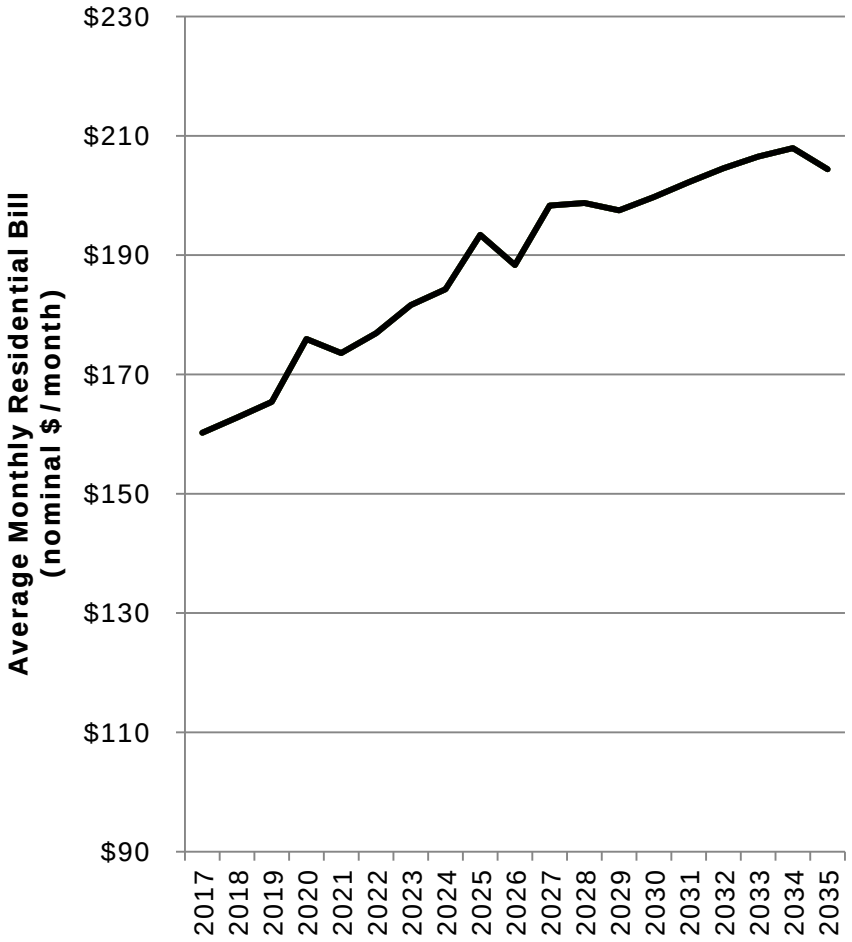
4. Maximized short-term cost reductions, no limits

   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the total amount of money borrowed is paid off over a 25-30 year financing period.
   - No limit is placed on the amount charged to ratepayers above the true cost of GA.

# 1. Status Quo – Global and Residential Impacts

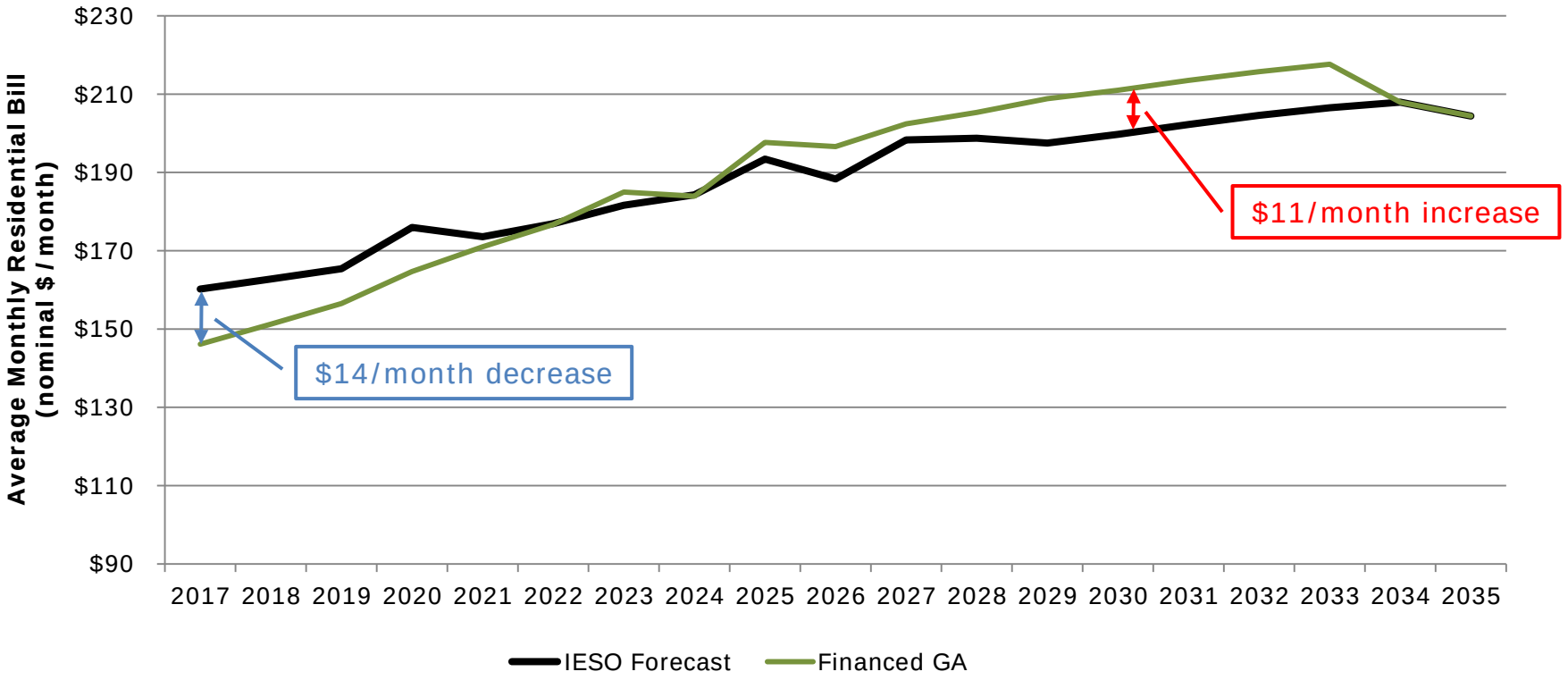
- Ratepayers continue paying the true cost of GA.



# 2. Moderate Short-term Cost Reduction with limits – Residential Impacts

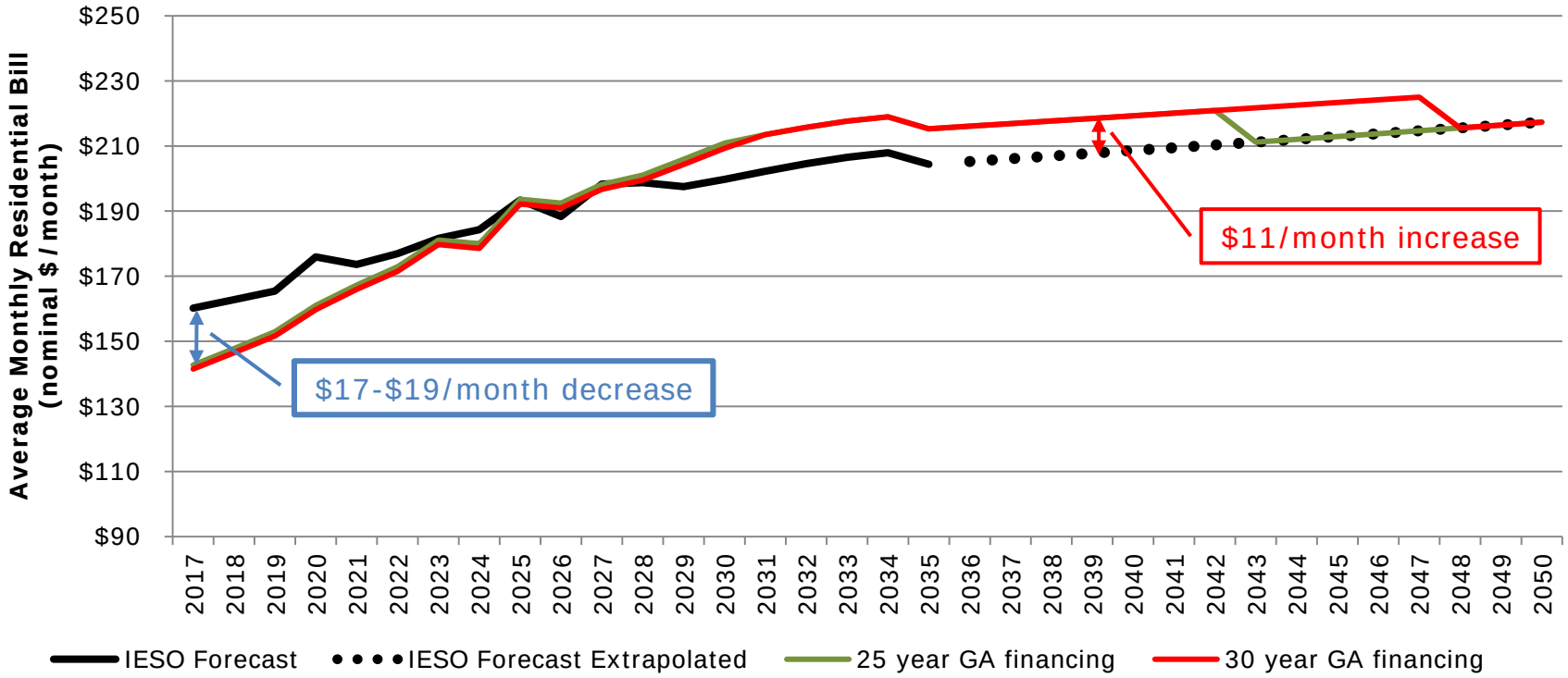
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and is increased at inflation in subsequent years – subject to a cap of no more than $2 billion above the true cost of GA in any given year – until the borrowed money is repaid.




- By **borrowing up to $10.7 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $14/month** at the cost of **a long-term increase over 12 years of up to $11/month** above the true cost of electricity production.

# 3. Maximized Short-term Cost Reduction with limits – Residential Impacts

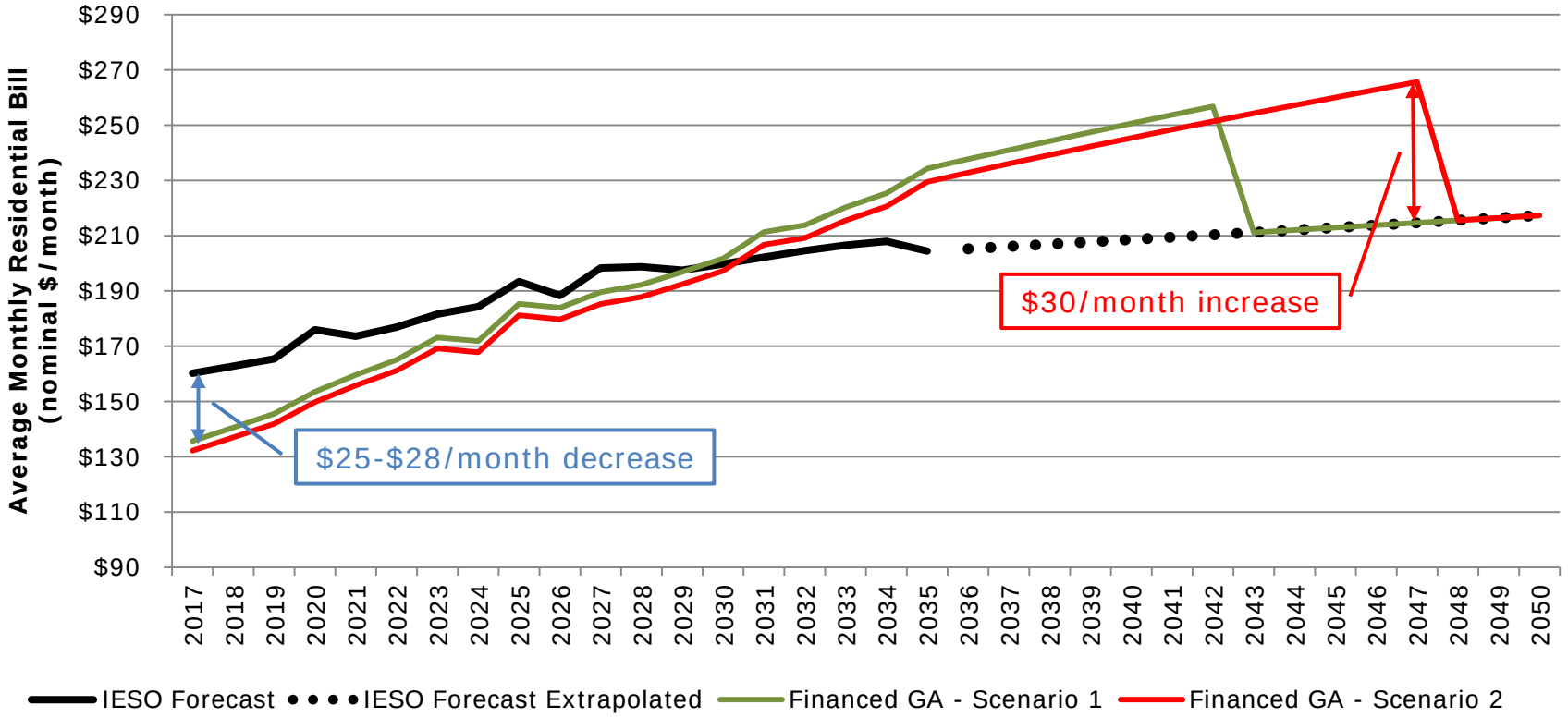
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered as much as possible and is increased at inflation in subsequent years – subject to a cap of no more than $2 billion above the true cost of GA in any given year – such that the borrowed money is paid back in 25 years (green line) and 30 years (red line) respectively.




- By **borrowing up to $23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $17-$19/month** at the cost of **a long-term increase over 17-22 years of up to $11/month** above the true cost of electricity production.

# 4. Maximized Short-term Cost Reduction, no limits – Residential Impacts

- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered as much as possible and is increased at inflation in subsequent years such that the borrowed money is paid back in 25 years (green line) and 30 years (red line) respectively. No limit is placed on the ratepayer GA over-payments in later years.




- By **borrowing up to $66 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $25-$28/month** at the cost of **a long-term increase over 12-17 years of up to $25-$30/month** above the true cost of electricity production.

Ontario

MINISTRY OF
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# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

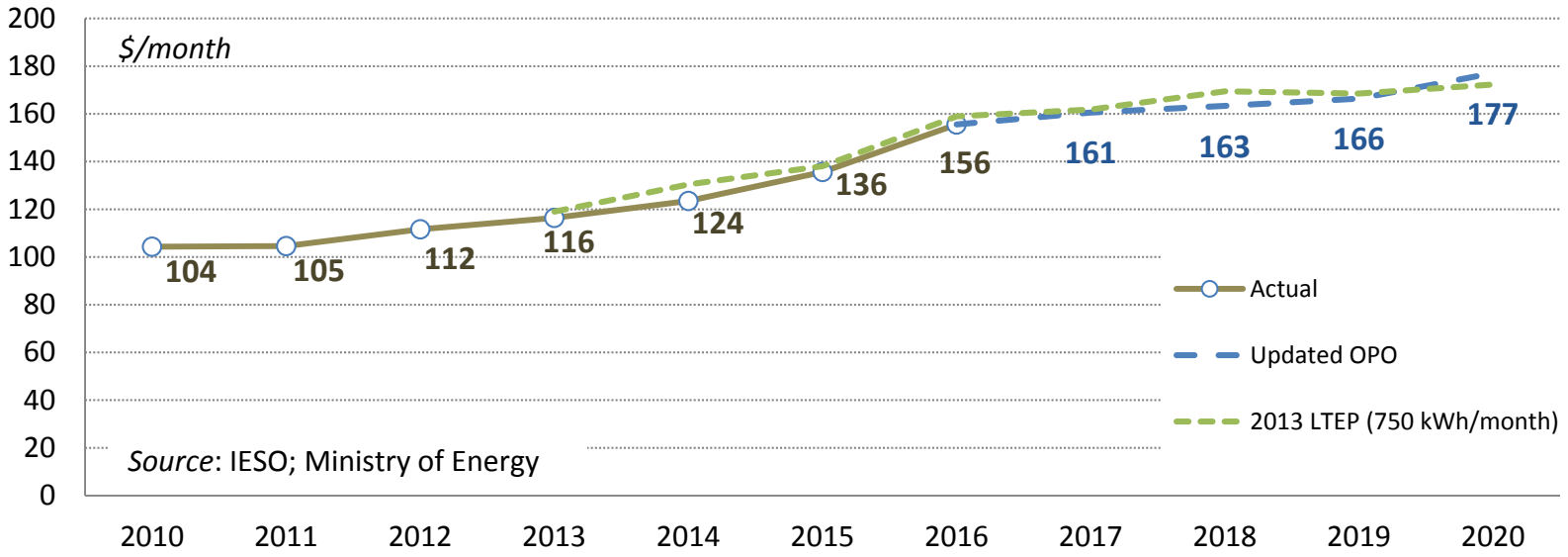
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast*




**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Broad Policy Themes / Rationale

- Support the continued reduction in the differential across distribution rates (as charged by Local Distribution Companies) across the Province through the potential enhancement of Rural or Remote Electricity Rate Protection, (RRRP). In order to not increase regulatory costs to customers as a result, this program can be moved to the tax-base.
- Provide a greater focus and support on lower income Ontarians by funding the Ontario Electricity Support Program (OESP) through the tax-base, as well as enhancing the support available through the program.
- Amortize electricity conservation and demand management (DM) programs over 15-years to provide lower costs for electricity consumers.
  - Alternatively, pay for conservation/DM programs through the tax-base and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties and expansion of natural gas to underserved areas (i.e., rural and remote communities), etc.
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" an alternative rate plan, based on a flat electricity rate, as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time. Also give consumer greater transparency with respect to electricity costs by providing more details regarding the Global Adjustment (GA).
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers, a benefit of $7/MWh.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 1.53 | 1.58 | 1.61 | 1.66 | 1.70 | 1.74 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.57 | 0.79 | 0.98 | 1.13 | 1.29 | 1.44 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC Efficiencies/Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.71 | 0.89 | 1.08 | 1.22 | 1.35 | 1.24 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. v Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 2.04 | 2.10 | 2.15 | 2.22 | 2.27 | 2.32 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.76 | 1.05 | 1.31 | 1.51 | 1.71 | 1.92 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC Efficiencies / Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.59 | 0.74 | 0.89 | 1.01 | 1.12 | 1.03 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Taxpayer Funded Electricity Price Mitigation

| *$M* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. Fund RRRP through the Tax-Base* | - | 666 | 684 | 700 | 719 |
| 2. Fund OESP through the Tax-Base | | | | | |
| a. Enhance OESP Benefit | | 162 | 226 | 279 | 322 |
| b. Expand OESP Eligibility | | TBD | TBD | TBD | TBD |
| 3. Conservation Funding Options | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | - | - | - | - | - |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | 100 | 390 | 390 | 390 | 390 |
| 5. Dedicate Departure Tax | 260 | 260 | 260 | 260 | 260 |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC Efficiencies / Rates | - | - | - | - | - |
| c. OPG – Operational Efficiencies | - | - | - | - | - |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers) | 110 | 450 | - | - | - |
| 9. Extend the Length of Existing Wind/Solar Contracts at Lower Prices | - | - | - | - | - |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| Fund Conservation Programs Through The Tax-Base | 154 | 632 | 649 | 567 | 568 |
| Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy
**Note:** *Assumes RRRP enhancement to reduce distribution rates to $30 for LDCs and **Assumes increase OESP credit by 50%.
Not included in chart is additional $18M/year to fund potential First Nations rate program through the Tax-Base.

# Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are aimed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

- Given that these programs focus on promoting equity between different areas of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.
  - These enhancements would also work in conjunction with the Ontario Energy Board's focus on reducing LDC costs outlined in option 6b.

# 1. Rural or Remote Rate Protection (RRRP) Expansion

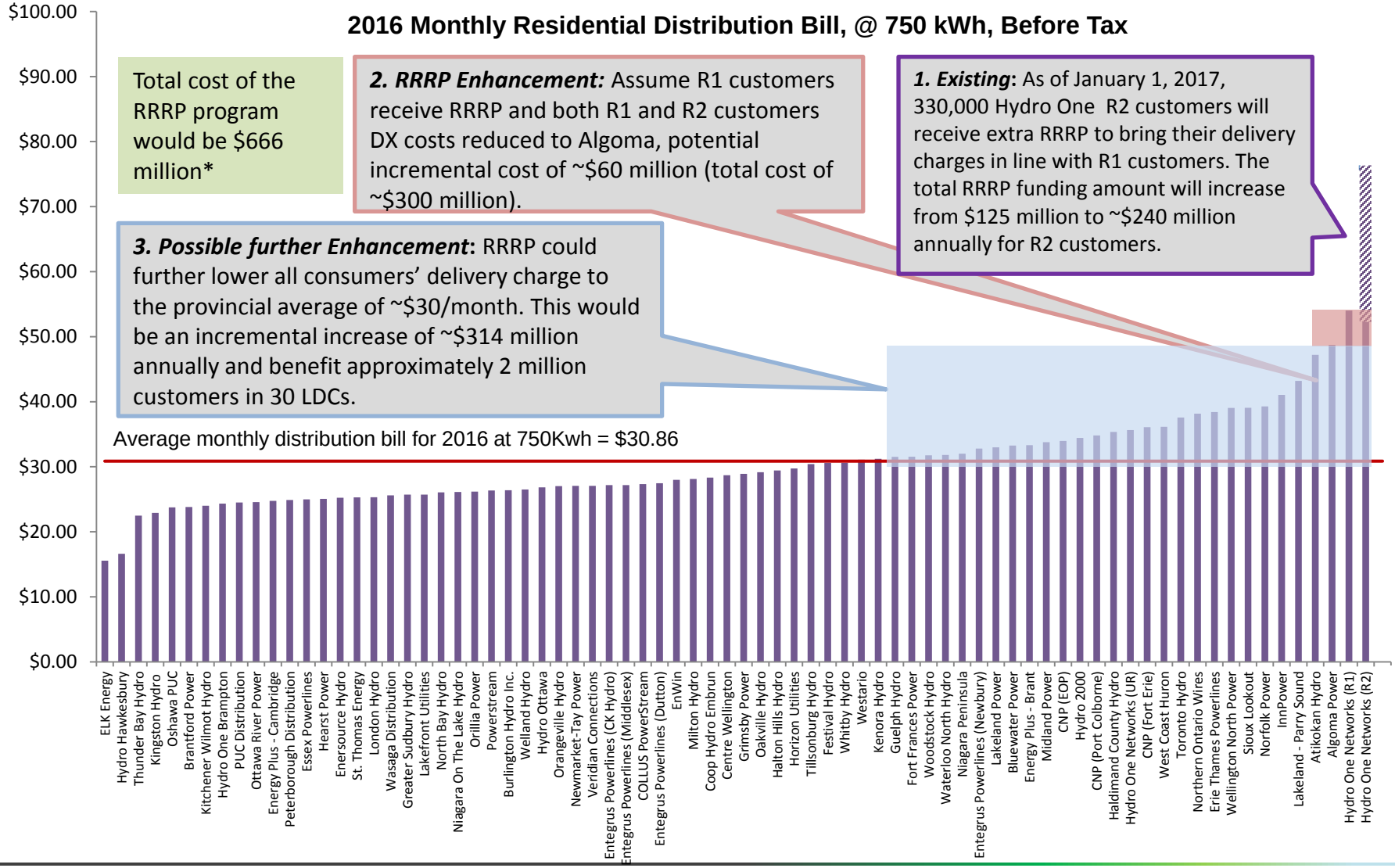
- The Rural or Remote Rate Protection (RRRP) program supports the most costly-to-serve distribution customers in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
  - Costs to these Hydro One customers are higher than average because of their relatively low density. The OEB mandates that they pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies.
  - To mitigate these costs, the RRRP was recently enhanced to help lower the bills of Hydro One's R2 customers to around those of its R1 (medium density) customers.
- Although other LDCs do not have medium- and high-density rates, there is a wide range of distribution costs between LDCs. The RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - Could be done on its own or as part of exploring an Ontario-wide uniform "postage stamp" delivery rate.

**Considerations**

- RRRP will be enhanced for R2 customers on January 1, 2017 to have their costs reduced to approximately R1 distribution costs levels. The RRRP could be further enhanced to include R1 customers, and have R2 and R1 customers reduce their costs down to Algoma (see next slide). This would cost $300 million in the first year (and would adjust year over year).
- If there was a desire to reduce costs for all LDCs, a simple average of distribution cost before tax, across all rate zones is $30.86 per month, for a residential customer consuming 750 kWh per month.** Bringing all delivery rates down to this average would cost approximately $500 million for the first year, with escalation in line with average distribution rate increases.
  - This assumes Hydro One R2 consume 1,200 kWh and H1 R1 customers consume 1,000 kWh per month.
- If all customers were brought down to the average costs (see the chart on the next slide for more detail):
  - It is assumed that residential customers with bills less than the provincial average see no change;
  - Majority of the enhanced benefit would go to Hydro One R1 and Toronto Hydro customers; and
  - Mechanism to ensure that LDCs continue to be motivated to achieve efficiencies would need to be designed (see section 4).
- Enhanced RRRP support may be best provided from the tax-base, because if funded from the rate-base, it would increase the costs for all customers who may argue that it is unfair that they are being asked to pay more to subsidize those in other LDCs.
- In conjunction with using the tax-base to reduce delivery charges to the provincial average, the OEB could be asked to explore moving to a province-wide "postage stamp" delivery rate that would be the same across the province to be implemented over time.
  - Could be "winners and losers" as delivery rates less than the average would go up in a postage stamp model;
  - A "postage stamp" model could help incent LDC consolidation.

**Note:** This is based on preliminary estimates and the amount will fluctuate on monthly consumption from customers and LDCs have different customer base with different consumption types.

# 1. Rural or Remote Rate Protection (RRRP) Expansion (cont'd)




*Note: this includes the ~$50M currently supporting Algoma Power and Hydro One Remotes.*

# 2a. Enhance Ontario Electricity Support Program (OESP) Benefit

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills. The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices and at launch, it was estimated ~560,000 families could be eligible and some 261,000 applications have been submitted.

- The OESP program benefits could be increased across the board by 50%, which would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).

- The OESP program could also be further enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).

**Considerations**

- If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible.
  - At the time of program design, advice was given that a 40-50% participation rate would be high for an application-based program delivered through electricity bills.
  - The province would need to work with LDCs if the rebate was to appear on electricity bills rather than be delivered via the income tax system (e.g., through the Trillium Benefit).

# 1 & 2a. Fiscal Impacts of RRRP, OESP and First Nation Rate

- Table below shows estimates of program costs up to 2022:

| Year | OESP ($M) | OESP + 50%($M) | RRRP($M) | RRRP Enhancement ($M) | First Nations Delivery Rate($M) | TOTAL RANGE ($M) (from status quo to OESP and RRRP enhancements) |
|---|---|---|---|---|---|---|
| 2017 | $108 | $162 | $292 | $374 | $18 | $418 to $846 |
| 2018 | $150 | $226 | $300 | $384 | $18 | $468 to $928 |
| 2019 | $186 | $279 | $306 | $394 | $18 | $510 to $997 |
| 2020 | $215 | $322 | $315 | $404 | $18 | $548 to $1,059 |
| 2021 | $243 | $365 | $322 | $415 | $18 | $583 to $1,120 |
| 2022 | $272 | $408 | $329 | $426 | $18 | $619 to $1,181 |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections above assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
   - The second column forecast also assumes the existing credit amounts increase by 50%.
     - Forecast assumes 10% administration costs
     - Forecast does not account for the approximately 142,000 low-income households that OEB estimated are not eligible because they do not directly receive an electricity bill.

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.
   - Expansion to cap distribution rates for other customers is based at $374M and assumes escalation of 2.6% (historical average dx rate increase). This is a conservative estimate, as Hydro One and Toronto Hydro increases could drive program costs beyond the average increase.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 2b. Expand OESP Eligibility

**Expanded Coverage**

- When OESP was being created, the OEB estimated that are 713,000 low-income households, of which 20% do not receive electricity bills. Thus, only 571,000 would potentially be eligible for OESP.
- If moved to the tax base, the OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity.

**Eligibility Categories**

- OESP has two credits amounts:
    1) Basic credit of $30-50 per month, based on the level of income and the number of residents.
    2) Enhanced credit of $45-75 per month for those with unique electricity needs:
        a) Electric heating,
        b) Indigenous customers, and
        c) Certain electrically intensive medical devices.
- The enhanced credit can be expanded to include additional eligibility categories of customers. For example, a new “Low Density Consumer” category could be introduced that provides Hydro One R2 customers (highest distribution rates) eligible for OESP the enhanced credit.

**Considerations**

- Potential costs for expanded coverage and new eligibility categories depend on updated estimates and changes to program design and delivery.
- There would be value in keeping the OESP as an income-tested program to distinguish it from other initiatives (e.g. RRRP, which is designed to address disparity between rural and urban distribution costs).

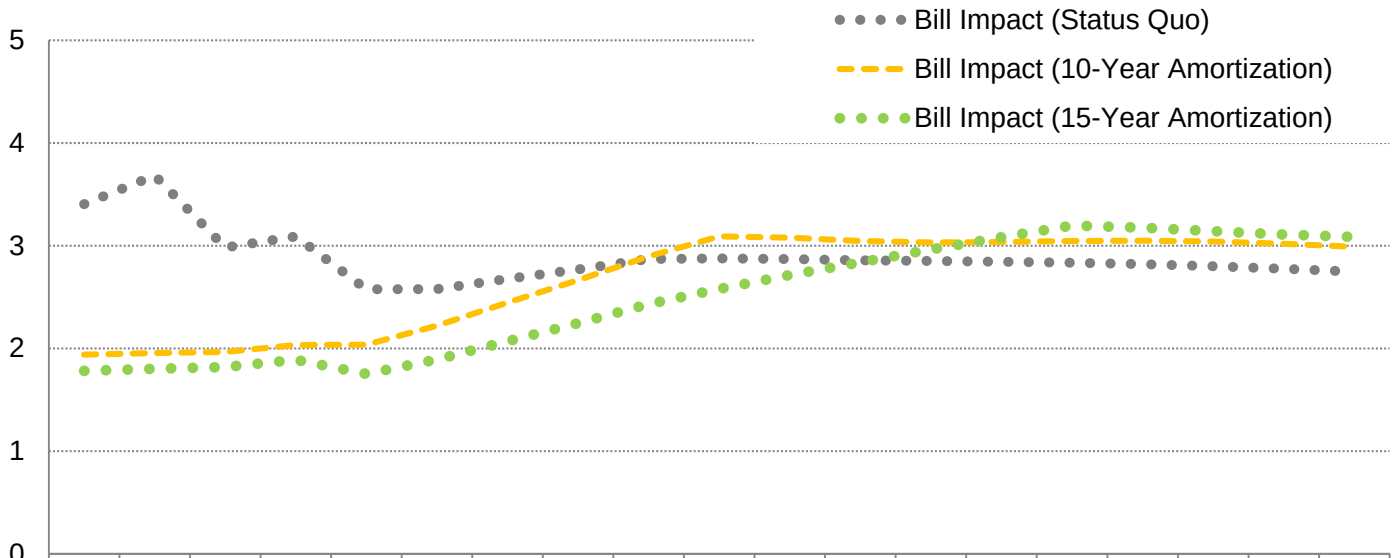
# 3a. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized. This would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs).
  - The time period over which costs could be amortized would be over the lifetime of funded CDM measures.
  - ENERGY is working with IESO to determine the appropriate lifetime period – the graph on the next slide, which illustrates residential bill impacts, presents two cases: **10-year and 15-year measure lifetimes**.
- In both cases, amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020. Over time the benefit would decrease and turn into a cost (higher electricity rates than would otherwise occur), as interest charges begin to grow. Estimated interest charges are as follows (a 3% interest rate is assumed; increases in interest rates could result in higher overall interest charges):
  - $712 million ($2016) – Amortizing eligible 2017-2035 CDM costs for 10-year period; and
  - $1.3 billion ($2016) – Amortizing eligible 2017-2035 CDM costs for 15-year period .
- Legislative changes would be needed to allow recovery of interest payments from ratepayers, or these costs could be recovered from the Consolidated Revenue Fund (CRF, or taxes).
- An alternative that could be explored would be to pay for CDM costs, or for a portion of these, from the tax-base (*see Appendix for more detail on tax funding option*).

# 3a. Amortize Conservation Program Costs (cont'd)

## Conservation Residential Bill Impact – Status Quo, 10-Year and 15-Year Amortization

***CDM Bill Impact ($/month)***




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bill Impact (Status Quo) | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | 2.68 | 2.77 | 2.87 | 2.88 | 2.87 | 2.86 | 2.85 | 2.84 | 2.83 | 2.82 | 2.80 | 2.78 | 2.75 |
| Bill Impact (10-Year Amortization) | 1.94 | 1.95 | 1.97 | 2.03 | 2.04 | 2.22 | 2.45 | 2.67 | 2.90 | 3.09 | 3.08 | 3.05 | 3.03 | 3.04 | 3.04 | 3.05 | 3.04 | 3.02 | 2.99 |
| Bill Impact (15-Year Amortization) | 1.78 | 1.80 | 1.82 | 1.89 | 1.75 | 1.89 | 2.07 | 2.25 | 2.43 | 2.58 | 2.71 | 2.84 | 2.96 | 3.08 | 3.20 | 3.18 | 3.14 | 3.11 | 3.09 |

Source: IESO; Ministry of Energy

**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10 of 15-year borrowing rate of 3.0%.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.
- Legislative amendments would be needed to allow recovery of loan interest charges from GA.
- ENERGY staff have developed a note to seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
- ENERGY is working with IESO to seek an opinion on the proposal from IESO's external auditor.
- ENERGY would then send the IESO external auditor's opinion along with ENERGY's explanatory note to the Ontario Provincial Controller (OPC) to seek a formal opinion on whether CDM costs could be amortized according to rate-regulated accounting standards.
- Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 3b. Rate Smoothing of Conservation Program Costs

- "Rate smoothing" could achieve the same rate reduction effect as amortization.
- Instead of taking out a loan to amortize conservation costs, a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Each year, IESO would defer recovery of a portion of annual conservation costs. Financing would also be required, such as from the OFA, to pay the interest on the deferral account. Interest would accrue on the deferred amounts, likely at the same rates as for the amortization option.
- Deferred costs could be recovered over any time period. If a 10 or 15 year-period was chosen, the rate impacts would be the same as in the amortization option.

**Considerations**

- Option would **not** require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open the Ministry to criticism by the Controller and/or Auditor General since the rate impact is the same.
- The Ministry would have more control under this option to change deferred amounts each year, as opposed to the terms set by a loan agreement under the amortization example.
- There is precedence to this approach for nuclear investments, which otherwise would result in volatile increases and decreases for Ontario ratepayers over the investment period. In 2015, the Ministry amended a regulation that requires the Ontario Energy Board (OEB) to set "smoothed" nuclear rates for OPG's Darlington and Pickering nuclear stations over a 20-year period.
  - The regulation allows OPG to defer recovery in rates of a portion of its nuclear revenue during the Darlington refurbishment (expected to be complete in 2026) and recover these deferred costs over the remaining ten years.
  - OPG will establish a "deferral account" to record the deferred amounts each year up to 2026 plus accumulated interest on the balance to reflect OPG's financing costs as a result of rate smoothing. The deferral account is then drawn down on a straight-line basis between 2026 and 2036.
- At minimum, new regulation would be required. However, further analysis is needed to determine the relevant regulation or legislation, to be amended for IESO (e.g., OEB regulation of IESO costs and fees, GA regulation for how IESO recovers its conservation costs from ratepayers).

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure

- Fund investments in specific energy infrastructure projects through the tax-base. **Note:** This could include the provincial portion of funding for the Remote First Nation Connection Project, a fund to support projects that improve adequacy and reliability in areas where new transmission would unlock economic growth and expansion of natural gas service to underserved communities.

**Considerations**

- Tax-base funding would allow for energy infrastructure to be built without impacting electricity and natural gas rates.

*Remote Connection Project:*

- Ontario ratepayers currently support costs of remote electricity service through RRRP on the order of $28 million/year
- Connecting 21 remote communities to the Ontario grid is supported by a positive business case due to diesel cost savings over time. If RRRP is funded through the tax base as proposed above, this project represents an opportunity to reduce impacts from RRRP.
- Direct investment in Ontario's portion of the capital costs of the project through a provincial fund (e.g., Trillium Trust) could also be considered along with mechanisms for cost recovery through transmission rates to refresh the fund as industry benefits from the transmission investment.
- The amount of investment and long-term savings depend on a federal contribution to the project and ENERGY is currently in discussions with Canada with the goal of concluding a cost-sharing agreement by spring 2017.
- A move to tax-based funding may have implications for cost oversight, since the OEB's mandate is to have oversight of ratepayer impacts. Alternative methods to review cost prudence of tax-based funding may be needed.

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (cont'd)

**Considerations (cont'd)**

*Transmission Projects to Enhance Economic Growth:*

- A tax-based fund could target investments in projects that have been identified in IESO regional plans and that would stimulate economic growth but are not proceeding due to cost barriers under the OEB's beneficiary pays principle. Investments could also target areas where the existing system poses challenges for delivering reliable service such as in parts of Northern Ontario with long single circuits.
- Potential opportunities for investment could include a transmission reinforcement in the **Greenstone area**, upgrades south of **Red Lake** and others TBD based on program design.
- This approach would allow a potion of project costs to be socialized to advance key projects without impacting rates or OEB's principles of cost allocation. Scope and scale of fund would be refined through program design.

*Natural Gas Expansion to Underserved Communities:*

- The Government has currently committed to expanding natural gas access to more communities in Ontario (i.e., $200 million Natural Gas Access Loan and $30 million Natural Gas Economic Development Grant).
  - Natural gas is an affordable heating source in Ontario. Its continues to be less expensive than alternative sources such as electric baseboards, heating oil and propane. For example, switching from oil to natural gas can save an average consumer an estimated $1,500 annually.
  - Increasing access to other energy sources such as natural gas, provides Ontarians with more options to meet their needs, reduce their energy costs and improve their quality of life.
  - Expansion of natural gas delivery infrastructure is widely supported in underserved communities (i.e., a recurring theme at ROMA) as a means to provide consumers and businesses in underserved communities with more affordable energy choices, attract new industry to Ontario and benefit agricultural producers.
- A grant program complements the Ontario Energy Board's recent decision enabling greater rate-based expansion to unserved areas, including rural and remote communities.
  - Applying Trillium Trust funding would make it possible to enhance the Grant Program and service more communities.

# 5. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.
- If the Province were to transfer $2.6 billion in economic benefits to the rate base over 10 years suggest the following impacts (assuming 140TWh per year):
  - Residential Ratepayer Impact (if spread over 10 years): up to $1.39 per month on a typical bill; and
  - Industrial Ratepayer Impact (if spread over 10 years): up to $1.86 / MWh

**Considerations**

- Cost savings to ratepayers and associated fiscal impacts would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- The departure tax was effectively a true-up for lower PILs payments from Hydro One in previous years – it was not a one-time windfall for the Province. In other words, it ensures that Hydro One paid all its tax obligations under the PILs regime before moving into the normal corporate tax regime.
- The related ~$2.4 billion fiscal benefit to the Province (from the deferred tax benefit) has already been credited to the Trillium Trust to be used to build infrastructure under Moving Ontario Forward.
- Repurposing funds paid to OEFC may have an impact on the defeasance of electricity stranded debt.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).

# 6a. Empower Energy Agencies – IESO / Market Renewal

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 6b. LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
  - Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
    - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.

**Considerations**

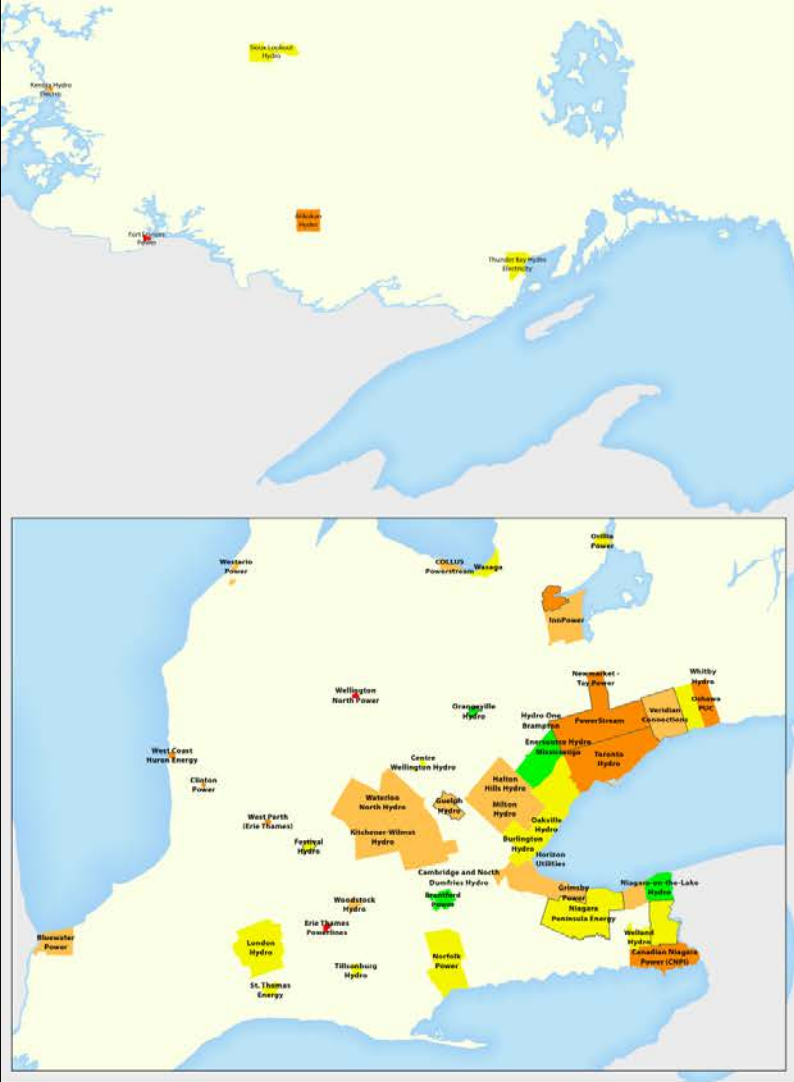
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.

- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
  - To further help address the costs associated with the Delivery line of the electricity bill, program such as the RRRP (previous slide) could be expanded to include other customers that may face higher costs.

- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.

- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation. Further changes to the tax incentives and/or revisiting legislated consolidation could be considered.

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

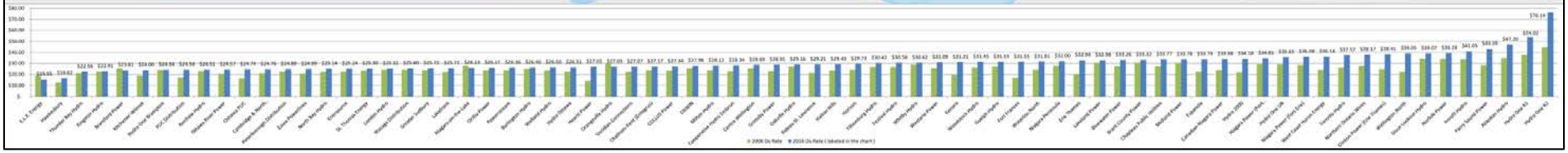
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# 6c. Empower Energy Agencies – OPG / Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

**Considerations**

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.
- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available, providing customers with pricing choice.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- Would provide consumers with electricity pricing choice.
- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro- November 2016 rates)

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7b. Give Consumers More Rate Choices and Greater Transparency – Detailed Global Adjustment

- Provide electricity consumers greater transparency with respect to electricity generation costs by providing more details regarding the Global Adjustment (e.g., adding a line on hydro bills, quarterly energy reports, etc).

**Considerations**

- As electricity bills have increased, many consumers have complained about a lack of transparency on the drivers of electricity costs. In particular, consumers and legislative officers have singled out the GA.

- Providing consumers with additional information on the cost components and amounts recovered through the GA would help consumers understand how the different forms of electricity generation in Ontario contribute to consumers costs.

- Providing additional information to consumers on electricity commodity cost drivers without sufficient context or background could simply lead to increased complaints about particular generating technologies that make up large shares of costs (e.g., nuclear).

- Adding a breakout of the amount of GA on residential electricity bills could lead to further confusion due to the existing breakout of multiple time-of-use buckets.

- Alternatively, the existing quarterly Ontario Energy Report, which provides various energy sector data, could be leveraged to show a breakout of quarterly GA costs by fuel type. A link on electricity bills could point to this information.

# 8. Help Small Business Manage Their Electricity Cost – End DRC Early for Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the proponents agreeing to a lower price in the near term.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period ; discussions/consultation may be required in advance of this potential option moving forward.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- Since the Minister of Energy is not a party, IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms would also reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.

- Projects over 500 kW would offer the most savings potential as they represent the majority of installed renewables capacity and are spread across fewer contracts.

- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.

- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh;
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
  - **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 million | $582 million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - For example, the New contract is $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 million | $632 million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# 10. Tax Relief for Solar and Wind Contracts

- In 2010 and 2011 Ontario procured large scale projects (>500 kW) through the FIT program at standard offer pricing.

- The FIT program was the centerpiece of the GEA which established the economic and social goals of growing the green economy, including establishing a local renewable energy manufacturing base, supporting the development of green energy jobs, and providing incentives for Indigenous participation.

- To help achieve these economic and social goals, the FIT program offered pricing at above competitive procurement rates, and provided Indigenous and Community participation adders, which resulted in economic benefits to all Ontarians, but resulted in additional costs borne by Ontario's electricity ratepayers.

- Ontario could fund the added cost of some or all of these economic and social incentives by shifting their costs from the rate-base to the tax-base.
    1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
    2. The tax base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT.

**Considerations**

- If applied to projects in commercial operation the benefit to the ratepayer would be immediate.
- Comparing FIT pricing to competitive procurement pricing could provide a reasonable representation of energy procurement without the added cost of economic and social incentives.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
   - For example, from 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
   - The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
   - If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
   - The $3.3 billion difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.
   - This represents estimated average ratepayer savings of $1.50/ month relative to OPO forecasts.
   - The same approach could be considered for solar projects however, prior to LRP I in 2016, Ontario had not procured solar capacity competitively and international cost comparisons are challenging given differences in regional development costs.
   - This example does not include the value of participation price adders available for community and indigenous participation.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

2. The tax-base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT 1 solar and wind projects.

   - For example, 17 large FIT 1 wind and solar projects have Indigenous and/or Community participation making them eligible for a price adder in addition to their base contract price.

   - The estimated value of these price adders is approximately $17.1 million (NPV 2017) over the expected remaining term of their contracts.

   - This represents estimated ratepayer savings of approximately $0.01/month relative to OPO forecasts.

# FIT 1 and GEIA Wind Projects in Commercial Operation
(source: IESO Active Contracts List, October 31, 2016)

| Count | Program | MW | COD |
|---|---|---|---|
| 1 | FIT 1 | 0.8 | Oct-10 |
| 2 | FIT 1 | 18 | Jul-15 |
| 3 | FIT 1 | 23 | Aug-15 |
| 4 | FIT 1 | 40 | Jan-15 |
| 5 | FIT 1 | 10 | Sep-14 |
| 6 | FIT 1 | 10 | Sep-14 |
| 7 | FIT 1 | 10 | Jun-14 |
| 8 | FIT 1 | 99 | May-13 |
| 9 | FIT 1 | 100 | Oct-15 |
| 10 | FIT 1 | 4 | Sep-12 |
| 11 | FIT 1 | 100 | Apr-16 |
| 12 | FIT 1 | 15 | Jun-15 |
| 13 | FIT 1 | 18 | Mar-12 |
| 14 | FIT 1 | 104.4 | Nov-13 |
| 15 | FIT 1 | 40 | Dec-15 |
| 16 | FIT 1 | 60 | May-14 |

| Count | Program | MW | COD |
|---|---|---|---|
| 17 | FIT 1 | 125 | Aug-13 |
| 18 | FIT 1 | 73.5 | Aug-14 |
| 19 | FIT 1 | 102 | Jan-15 |
| 20 | FIT 1 | 9 | Jan-12 |
| 21 | FIT 1 | 4.1 | Dec-15 |
| 22 | FIT 1 | 0.5 | Oct-13 |
| 23 | FIT 1 | 82.8 | Nov-11 |
| 24 | FIT 1 | 18.45 | Sep-16 |
| 25 | FIT 1 | 60 | Jul-14 |
| 26 | FIT 1 | 10 | Oct-16 |
| 27 | FIT 1 | 6.15 | Nov-14 |
| 28 | FIT 1 | 2.3 | Aug-15 |
| 29 | FIT 1 | 10 | Feb-16 |
| 30 | FIT 1 | 8.2 | Nov-14 |
| 31 | FIT 1 | 150 | Nov-14 |
| 32 | FIT 1 | 91.39 | Dec-14 |

| Count | Contract | MW | COD |
|---|---|---|---|
| 33 | FIT 1 | 25 | May-15 |
| 34 | FIT 1 | 82.8 | Nov-11 |
| 35 | FIT 1 | 30 | Mar-14 |
| 36 | FIT 1 | 17.6 | May-16 |
| 37 | FIT 1 | 23 | Dec-12 |
| 38 | FIT 1 | 99 | May-13 |
| 39 | FIT 1 | 48.6 | Dec-11 |
| 40 | FIT 1 | 19.44 | Aug-15 |
| 41 | FIT 1 | 10.8 | Mar-12 |
| 42 | FIT 1 | 38.88 | Sep-15 |
| 43 | FIT 1 | 60 | Aug-14 |
| 44 | GEIA | 270 | Mar-14 |
| 45 | GEIA | 180 | Dec-15 |
| 46 | GEIA | 148.6 | Dec-14 |
| 47 | GEIA | 270 | May-15 |

# Key Outcomes / Next Steps

- The proposed initiatives provide the following opportunities to:
  - Provide a greater focus on vulnerable consumers by funding electricity support programs through the tax-base.
    - Enhance existing and new support programs targeted at the most vulnerable consumers (i.e., OESP and RRRP); and
    - Better harmonize delivery rates across the province.
  - Re-set how energy infrastructure is funded by shifting costs to the tax-base from the rate-base.
  - Provide electricity consumers with greater choices and transparency (e.g., alternative rate plan based on a flat electricity rate, unpacking the Global Adjustment costs, etc);
  - Provide system benefits (e.g., market renewal);
  - Increase cost effectiveness and improve efficiency; and
  - Lower the cost of electricity for all consumers.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require legislative and/or regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

A. Rural or Remote Rate Protection (RRRP) – Overview and Enhancements
B. Fund Conservation Programs Through the Tax-Base
C. Eliminate the Industrial Conservation Initiative (ICI)
D. Cancel Large Renewable Procurement I (LRP I)

# A. RRRP Overview and Enhancements

- The Delivery line of the electricity bill is composed of Distribution and Transmission Costs. While transmission costs are uniform across the province, LDC costs vary by distributor and account for about 20% of the total bill for the electricity customers.
  - See slide X for a map of delivery rate increases between 2006 and 2016.
- The Rural or Remote Rate Protection (RRRP) framework was put in place in 2001 to help offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations.
- RRRP is available to: residential Hydro One R2 customers (~350,000 customers), Algoma Power customers (~11,600 customers); H1 remote customers (~3,500 customers).
  - To date, R2 customers receive a fixed amount of $125 million a year distributed amongst the customers. Algoma and Remote customers have RRRP calculated by the OEB each year that fluctuates based on average provincial distribution increases.
- Because the amount had been fixed for over a decade, the Province recently increased funding of the RRRP program for Hydro One R2 customers from $125 million to $240 million. This will be effective as of January 1, 2017, and will bring their delivery charges in line with the next highest charges from Hydro One's R1 customer class.

# B. Fund Conservation Programs Through the Tax-Base

- Propose to fund 2017-2020 electricity conservation and demand management program costs* using tax dollars instead of ratepayer dollars.
  - Funds received through the Hydro One Departure Tax could potentially be repurposed towards this.
- Total remaining 2017-2020 electricity conservation program costs are expected to be ~$2.1 billion.
- Post 2020, this option could evolve to funding conservation programs through the Greenhouse Gas Reduction Account.

**Considerations**

- Electricity conservation programs provide a number of benefits to society, however, Ontario's ratepayers have been covering these costs:
  - Avoiding/deferring future energy infrastructure investments, reducing disruption in communities (e.g., avoiding the need to build new natural gas generation);
  - Environmental benefits (e.g., reduced natural gas peaking generation and GHG emissions); and
  - Social and economic benefits (e.g., job creation and assistance managing electricity bills).
- There is precedence for using tax dollars to fund conservation programs.
  - Between 2007 and 2011, Ontario funded the Home Energy Savings retrofit program using tax dollars.
- Funding conservation programs though the tax-base is expected to result in a benefit of $3.40/month for residential electricity consumers in 2017. This could provide immediate short term relief to consumers while other rate mitigation initiatives are developed (e.g., market renewal, LDC efficiencies).

*** Note:** This includes costs towards the Conservation First Framework, Industrial Accelerator Program, Demand Response and the Conservation Fund)

# C. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

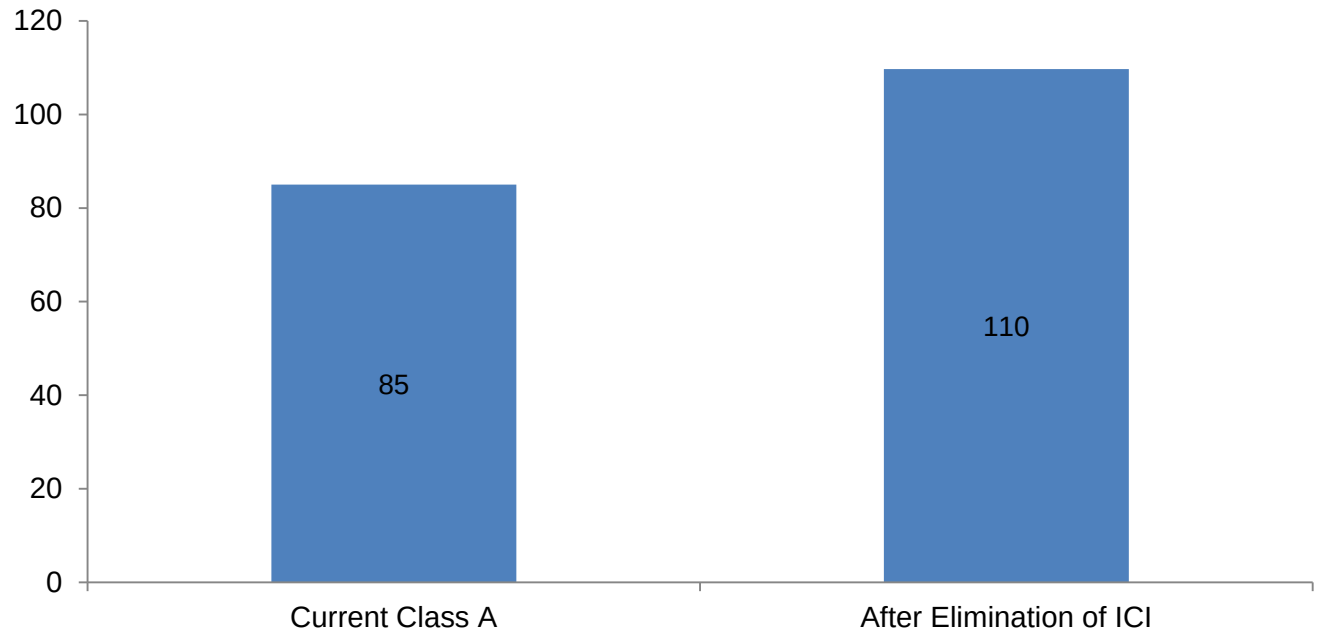
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# C. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# D. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period.
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g. rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

*Cancel/Adjust Announced Procurements:*

- Amendments to existing directions to IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

*Cancel Existing LRP I Contracts:*

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

**Legal Analysis**

- Any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements.
  - An amendment to an existing direction would not require Cabinet approval, however, further analysis is required to determine if direction to cancel LRP I contracts could be considered as amending existing direction.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights. This reasoning would likely apply equally to any direction to IESO to cancel LRP I contracts. Previous advice has also flagged a risk that the Province could be liable for damages in tort for inducing a breach of contract (or other claims).
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon; John Kim; Emily Kerr |
| **Cc:** | Gavin He |
| **Subject:** | Fwd: Rate Mitigation |
| **Date:** | Saturday, January 14, 2017 11:20:32 AM |
| **Attachments:** | Revised - Debt-Financing GA 170112 - ESPD ADM Approved w LSB CLEAN.PPTX<br>Proposed Initiatives to Transform Ontarios Electricity Sector 20170113.pptx |

---

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge
>
>
> Sent from my iPad

Ontario

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# Financing the Global Adjustment

January 13, 2017

*Working Draft for Discussion Purposes Only*

# Purpose

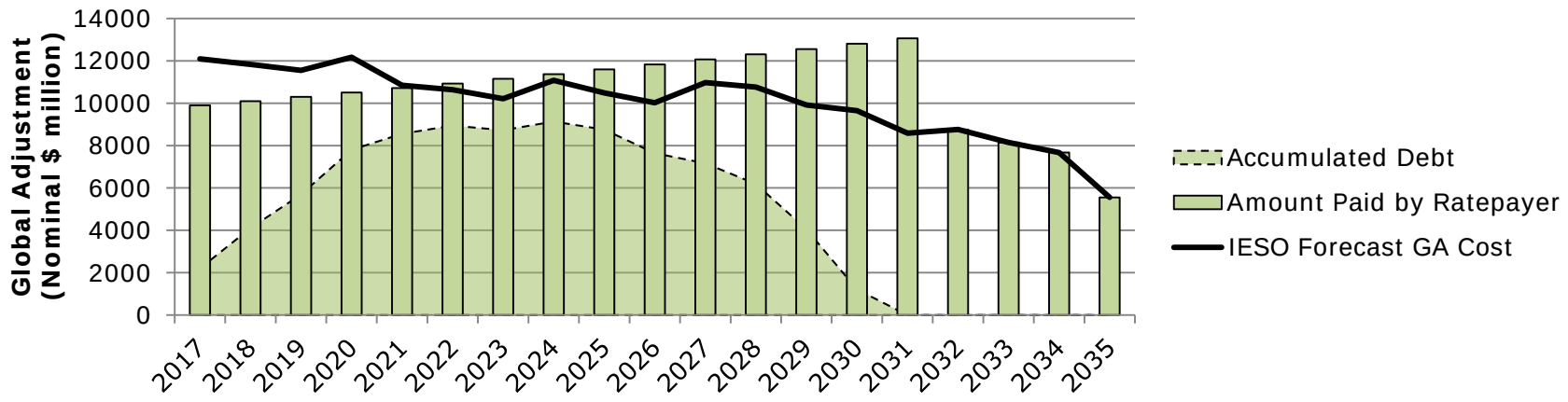
- To analyze the impact of partially financing the cost of the global adjustment (GA) to defer some of the cost to later years.
- The economic, legal and fiscal risks to ratepayers, stakeholders and government are qualitatively discussed.
- The remainder of the presentation quantitatively examines several different scenarios for financing the GA, showing:
  - The impact on residential bills; and
  - The amount of debt incurred.

# Rationale for Financing the GA

- The GA is comprised of costs for regulated and contracted generation, as well as conservation.
- Some contracted generation assets are expected to have a useful life that extends beyond the term of their current financial contracts (typically 20-years).
- Similarly, conservation costs are recovered through the GA on an annual basis while conservation initiatives provide benefits to the electricity system over the course of many years.
- Since the GA only includes costs related to the contractual life of these assets, there may be an opportunity to recognize the longer-term benefit of these assets to the electricity system and “bring forward” that benefit for ratepayers today, while deferring some of the current costs.
- An indicative GA financing proposal is presented that lowers ratepayers costs over the short term by borrowing money but increases costs over the long term when GA costs are forecast to be lower.
- Note that not all generating assets will continue operations at the end of their contract term. Regulatory constraints (i.e., nuclear licences) or low demand conditions (i.e., as experienced with current expiring NUGs) would mean that some generators will shutdown at the expiry of their contract. Future ratepayers would be paying for these assets that are no longer producing power.

# Indicative Proposal to Finance the Global Adjustment

- For the purpose of discussion, it is proposed that the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the total amount of money borrowed has been completely paid back.
- All scenarios are assumed to begin January 1, 2017, setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "smoothed" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- All analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook and assumes a 5% borrowing interest rate.




**Sample financing**: Ratepayers pay less than the cost of GA in early years, borrowing up to $9 billion that is fully paid off in 2031 by charging ratepayers more than the cost of GA in later years.

# Considerations and Risks – Ratepayer

Ratepayer:

- Borrowing money to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves borrowing large amounts of money over a long period of time (16-30 years, depending on the scenario) to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on electricity rates. A long-term interest rate of 5% is assumed for this analysis.

- GA and HOEP provide a natural hedge against each other – when one goes up, the other goes down – keeping total electricity costs relatively stable and predictable. Smoothing only the GA would lead to greater price volatility for consumers.

    - For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate described in the indicative proposal.

- Should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumption, further increasing future costs for individual ratepayers.

# Considerations and Risks – Fiscal and Stakeholder

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.
    - It is unclear whether legislation could determine the manner in which this initiative is accounted for. Further work is required.
- Historically electricity sector financing has been conducted by the Ontario Financing Authority, e.g., managing OEFC's stranded debt and borrowing on behalf of IESO. Further consultation with the OFA will be required to determine the appropriate vehicle for additional borrowing.
- The significant amount of additional Provincial borrowing needed to finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating and overall borrowing capacity. Further analysis is required and would suggest early engagement with the OFA through which money will be borrowed.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" in the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

# Considerations and Risks – Legal

Legal:

- Legislation would be required to authorize the financing proposal.
  - Amendments to the *Electricity Act, 1998* (EA) could authorize the financing of certain costs within or part of the GA. However, whether any other legislation requires amendment is not known at this time.
  - The GA regime currently provides that “true costs” represent the true costs of making payments to generators or counter parties to contracts, not the incurring of discretionary financing or interest costs.
  - Considerations such as the need to analyze legal risks or the need to address costs retroactively (if the proposal requires a January 1, 2017 start) could add to the legal and drafting complexity;

- Introduction of a bill in the week of February 20th is an aggressive timeline that could require diversion of resources from other initiatives.

# GA Debt Financing Scenarios

1. Status Quo

   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

2. Moderate short-term cost reductions with limits

   - The amount of GA paid by ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and increases at inflation (assumed to be 2%) in each subsequent year until the total amount of money borrowed is paid off.
   - Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

3. Maximized short-term cost reductions with limits

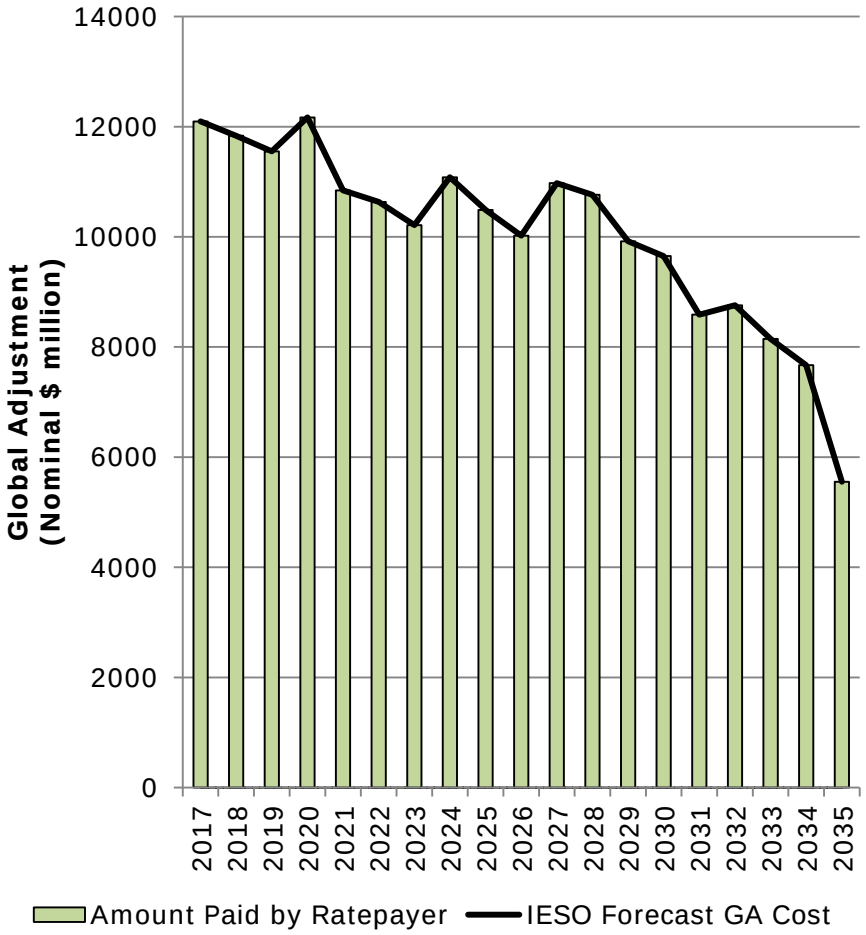
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the total amount of money borrowed is paid off over a 25-30 year financing period.
   - Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

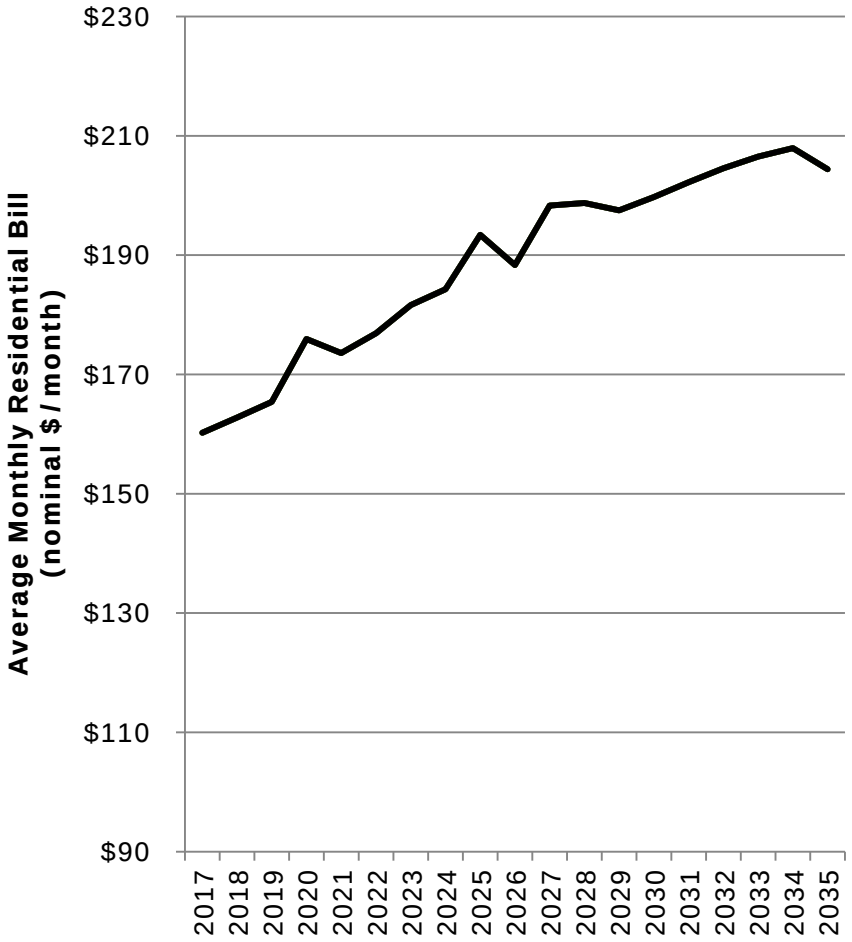
4. Maximized short-term cost reductions, no limits

   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the total amount of money borrowed is paid off over a 25-30 year financing period.
   - No limit is placed on the amount charged to ratepayers above the true cost of GA.

# 1. Status Quo – Global and Residential Impacts

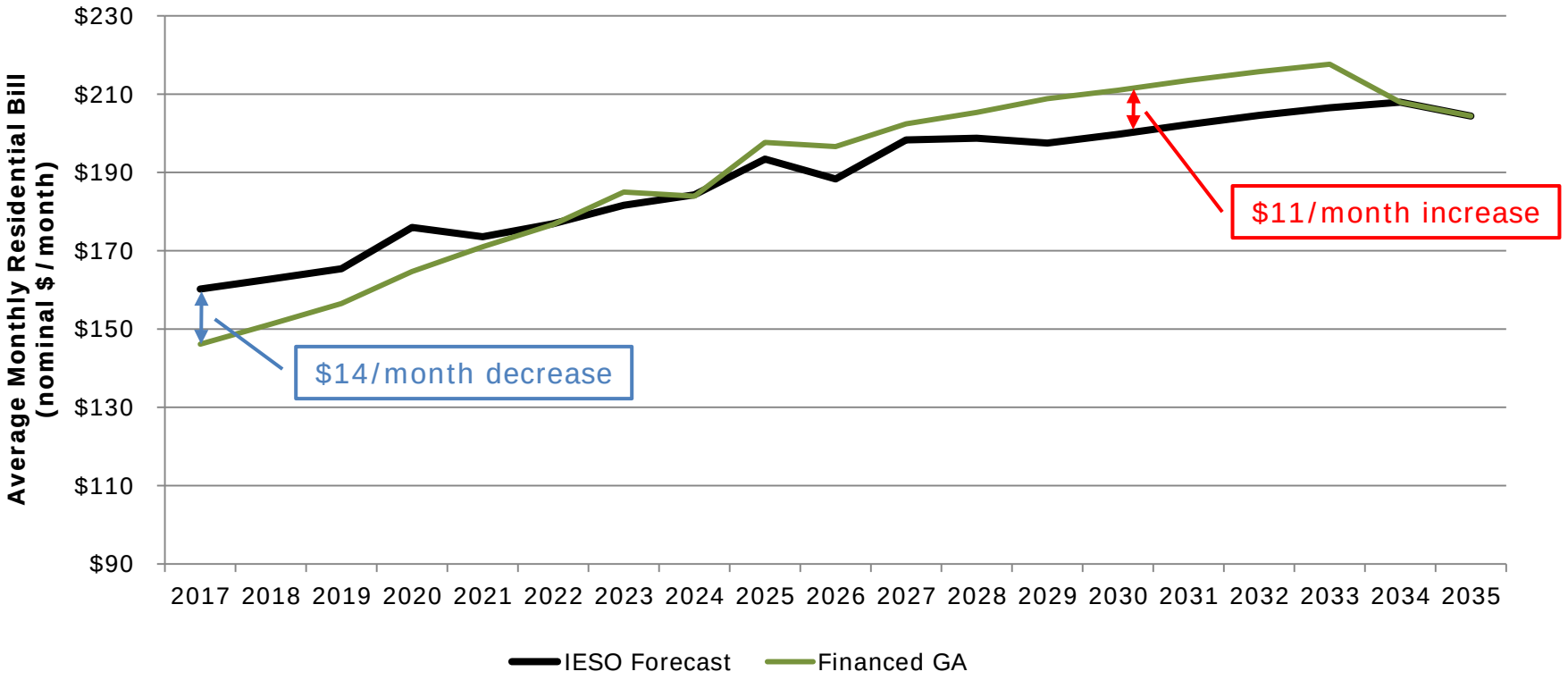
- Ratepayers continue paying the true cost of GA.



# 2. Moderate Short-term Cost Reduction with limits – Residential Impacts

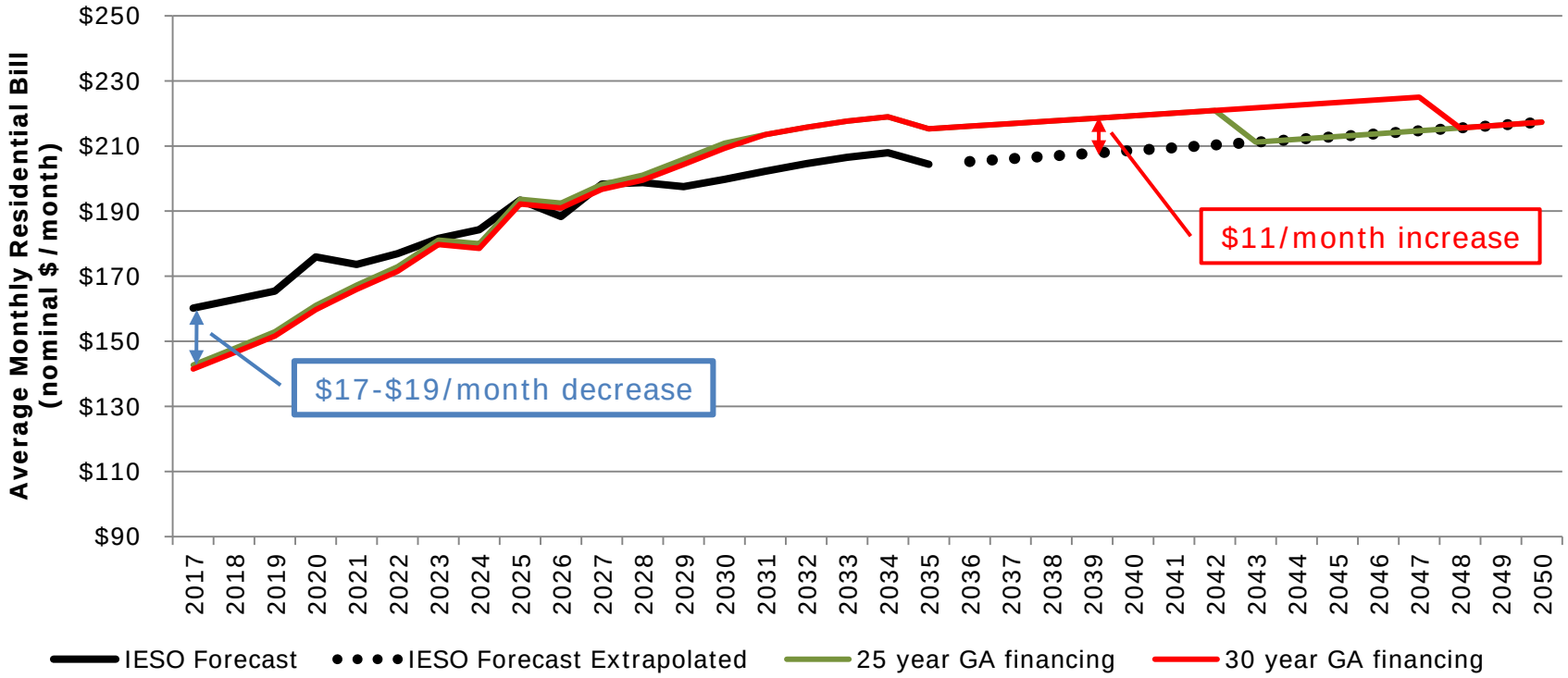
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and is increased at inflation in subsequent years – subject to a cap of no more than $2 billion above the true cost of GA in any given year – until the borrowed money is repaid.




- By **borrowing up to $10.7 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $14/month** at the cost of **a long-term increase over 12 years of up to $11/month** above the true cost of electricity production.

# 3. Maximized Short-term Cost Reduction with limits – Residential Impacts

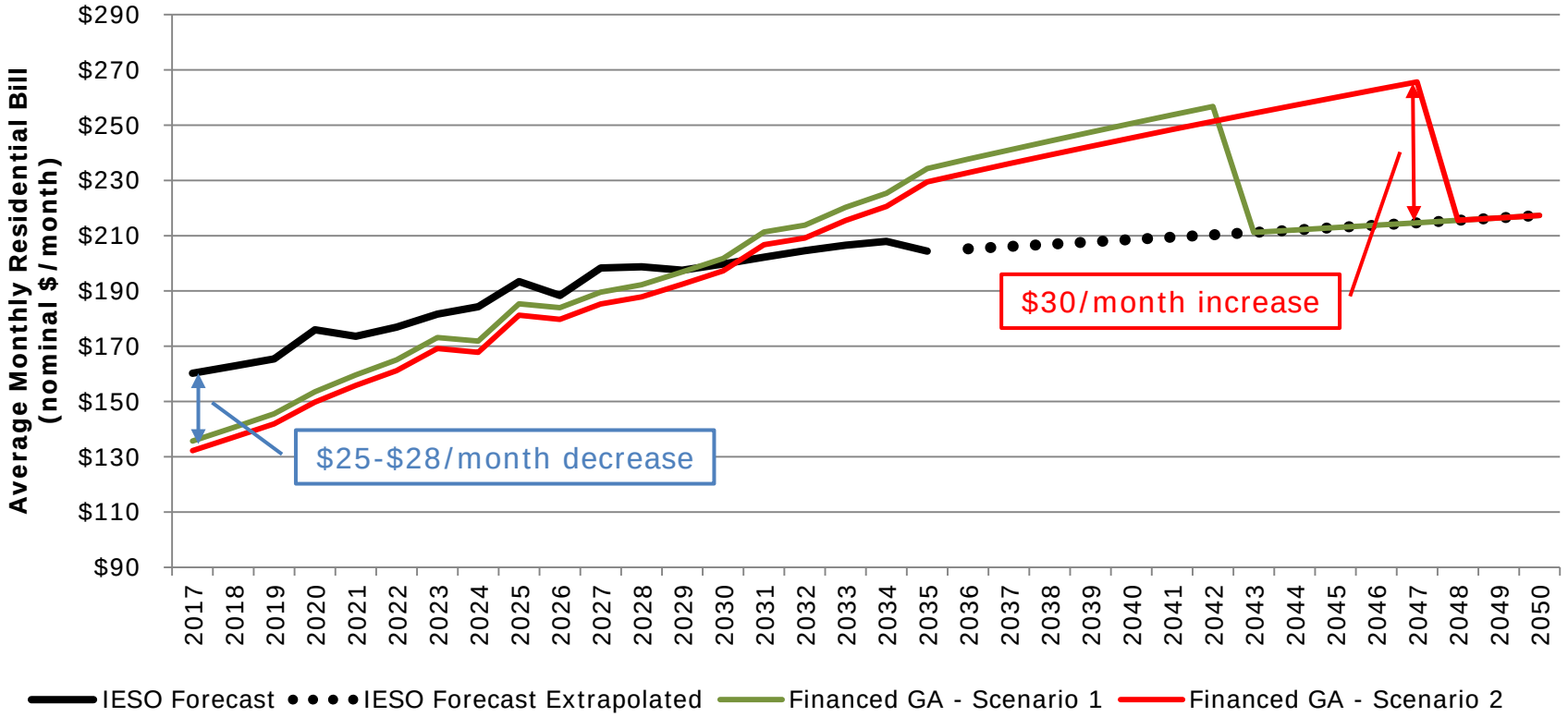
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered as much as possible and is increased at inflation in subsequent years – subject to a cap of no more than $2 billion above the true cost of GA in any given year – such that the borrowed money is paid back in 25 years (green line) and 30 years (red line) respectively.




- By **borrowing up to $23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $17-$19/month** at the cost of **a long-term increase over 17-22 years of up to $11/month** above the true cost of electricity production.

# 4. Maximized Short-term Cost Reduction, no limits – Residential Impacts

- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered as much as possible and is increased at inflation in subsequent years such that the borrowed money is paid back in 25 years (green line) and 30 years (red line) respectively. No limit is placed on the ratepayer GA over-payments in later years.




- By **borrowing up to $66 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $25-$28/month** at the cost of **a long-term increase over 12-17 years of up to $25-$30/month** above the true cost of electricity production.

Ontario

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# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

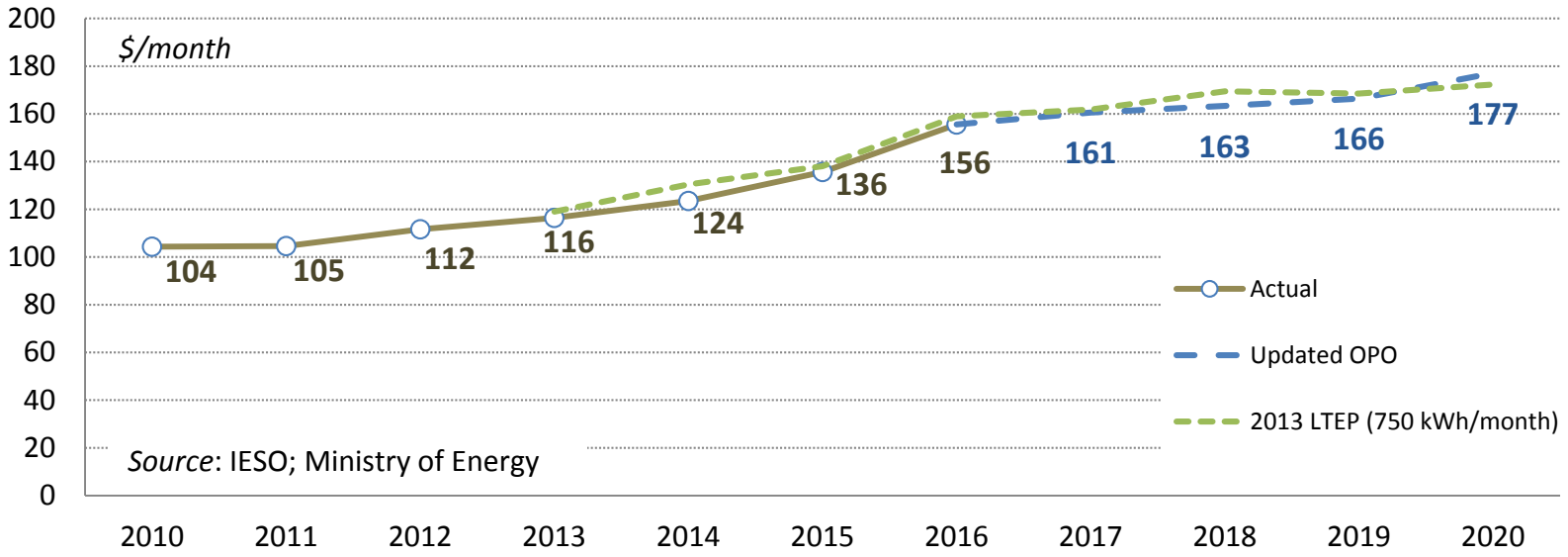
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast*




**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Broad Policy Themes / Rationale

- Support the continued reduction in the differential across distribution rates (as charged by Local Distribution Companies) across the Province through the potential enhancement of Rural or Remote Electricity Rate Protection, (RRRP). In order to not increase regulatory costs to customers as a result, this program can be moved to the tax-base.
- Provide a greater focus and support on lower income Ontarians by funding the Ontario Electricity Support Program (OESP) through the tax-base, as well as enhancing the support available through the program.
- Amortize electricity conservation and demand management (DM) programs over 15-years to provide lower costs for electricity consumers.
  - Alternatively, pay for conservation/DM programs through the tax-base and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties and expansion of natural gas to underserved areas (i.e., rural and remote communities), etc.
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" an alternative rate plan, based on a flat electricity rate, as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time. Also give consumer greater transparency with respect to electricity costs by providing more details regarding the Global Adjustment (GA).
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers, a benefit of $7/MWh.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 1.53 | 1.58 | 1.61 | 1.66 | 1.70 | 1.74 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.57 | 0.79 | 0.98 | 1.13 | 1.29 | 1.44 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC Efficiencies/Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.71 | 0.89 | 1.08 | 1.22 | 1.35 | 1.24 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. v Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 2.04 | 2.10 | 2.15 | 2.22 | 2.27 | 2.32 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.76 | 1.05 | 1.31 | 1.51 | 1.71 | 1.92 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC Efficiencies / Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.59 | 0.74 | 0.89 | 1.01 | 1.12 | 1.03 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Taxpayer Funded Electricity Price Mitigation

| *$M* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. Fund RRRP through the Tax-Base* | - | 666 | 684 | 700 | 719 |
| 2. Fund OESP through the Tax-Base | | | | | |
| a. Enhance OESP Benefit | | 162 | 226 | 279 | 322 |
| b. Expand OESP Eligibility | | TBD | TBD | TBD | TBD |
| 3. Conservation Funding Options | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | - | - | - | - | - |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | 100 | 390 | 390 | 390 | 390 |
| 5. Dedicate Departure Tax | 260 | 260 | 260 | 260 | 260 |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC Efficiencies / Rates | - | - | - | - | - |
| c. OPG – Operational Efficiencies | - | - | - | - | - |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers) | 110 | 450 | - | - | - |
| 9. Extend the Length of Existing Wind/Solar Contracts at Lower Prices | - | - | - | - | - |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| Fund Conservation Programs Through The Tax-Base | 154 | 632 | 649 | 567 | 568 |
| Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy
**Note:** *Assumes RRRP enhancement to reduce distribution rates to $30 for LDCs and **Assumes increase OESP credit by 50%.
Not included in chart is additional $18M/year to fund potential First Nations rate program through the Tax-Base.

# Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are aimed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

- Given that these programs focus on promoting equity between different areas of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.
  - These enhancements would also work in conjunction with the Ontario Energy Board's focus on reducing LDC costs outlined in option 6b.

# 1. Rural or Remote Rate Protection (RRRP) Expansion

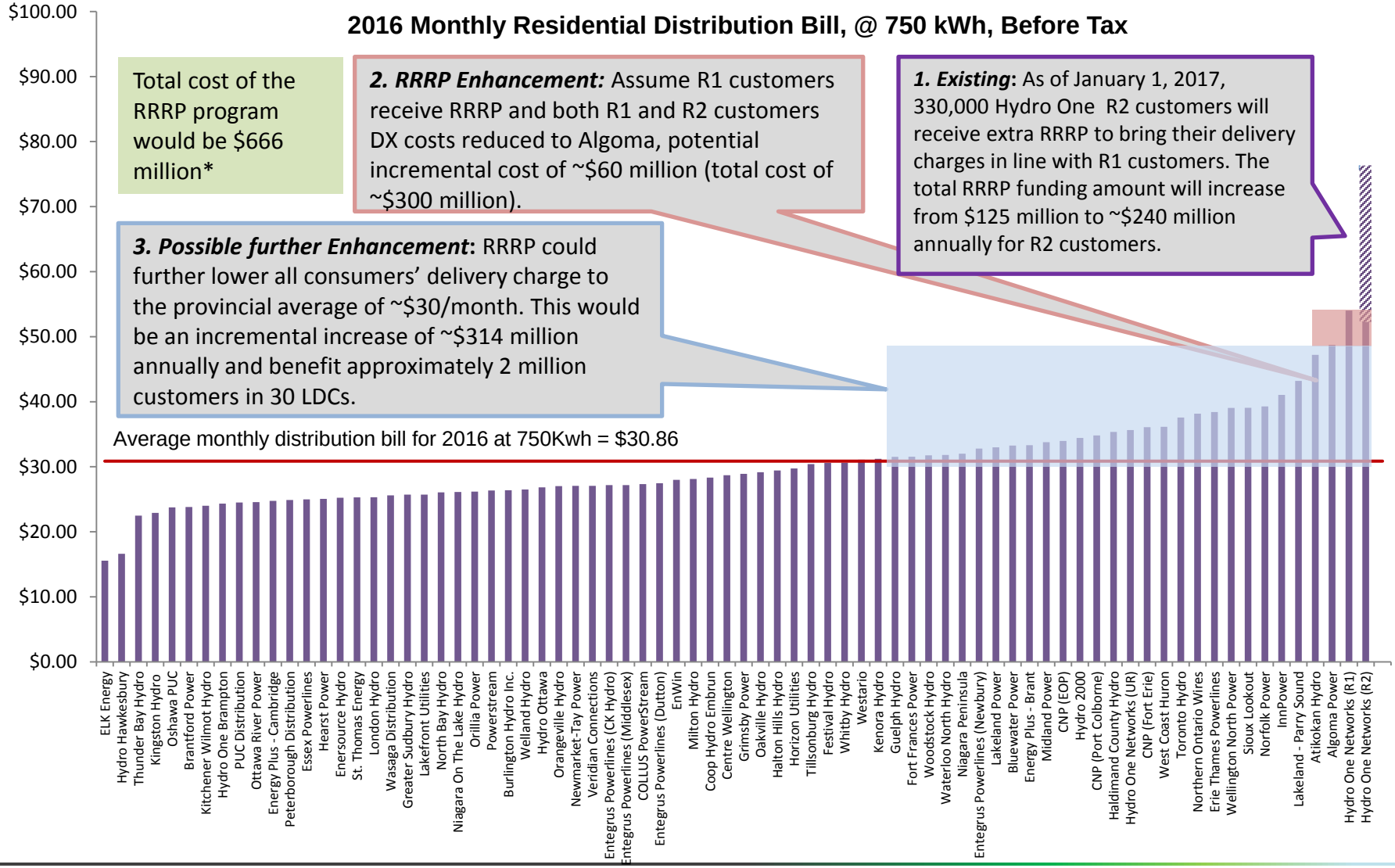
- The Rural or Remote Rate Protection (RRRP) program supports the most costly-to-serve distribution customers in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
  - Costs to these Hydro One customers are higher than average because of their relatively low density. The OEB mandates that they pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies.
  - To mitigate these costs, the RRRP was recently enhanced to help lower the bills of Hydro One's R2 customers to around those of its R1 (medium density) customers.
- Although other LDCs do not have medium- and high-density rates, there is a wide range of distribution costs between LDCs. The RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - Could be done on its own or as part of exploring an Ontario-wide uniform "postage stamp" delivery rate.

**Considerations**

- RRRP will be enhanced for R2 customers on January 1, 2017 to have their costs reduced to approximately R1 distribution costs levels. The RRRP could be further enhanced to include R1 customers, and have R2 and R1 customers reduce their costs down to Algoma (see next slide). This would cost $300 million in the first year (and would adjust year over year).
- If there was a desire to reduce costs for all LDCs, a simple average of distribution cost before tax, across all rate zones is $30.86 per month, for a residential customer consuming 750 kWh per month.** Bringing all delivery rates down to this average would cost approximately $500 million for the first year, with escalation in line with average distribution rate increases.
  - This assumes Hydro One R2 consume 1,200 kWh and H1 R1 customers consume 1,000 kWh per month.
- If all customers were brought down to the average costs (see the chart on the next slide for more detail):
  - It is assumed that residential customers with bills less than the provincial average see no change;
  - Majority of the enhanced benefit would go to Hydro One R1 and Toronto Hydro customers; and
  - Mechanism to ensure that LDCs continue to be motivated to achieve efficiencies would need to be designed (see section 4).
- Enhanced RRRP support may be best provided from the tax-base, because if funded from the rate-base, it would increase the costs for all customers who may argue that it is unfair that they are being asked to pay more to subsidize those in other LDCs.
- In conjunction with using the tax-base to reduce delivery charges to the provincial average, the OEB could be asked to explore moving to a province-wide "postage stamp" delivery rate that would be the same across the province to be implemented over time.
  - Could be "winners and losers" as delivery rates less than the average would go up in a postage stamp model;
  - A "postage stamp" model could help incent LDC consolidation.

**Note:** This is based on preliminary estimates and the amount will fluctuate on monthly consumption from customers and LDCs have different customer base with different consumption types.

# 1. Rural or Remote Rate Protection (RRRP) Expansion (cont'd)




*Note: this includes the ~$50M currently supporting Algoma Power and Hydro One Remotes.*

# 2a. Enhance Ontario Electricity Support Program (OESP) Benefit

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills. The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices and at launch, it was estimated ~560,000 families could be eligible and some 261,000 applications have been submitted.

- The OESP program benefits could be increased across the board by 50%, which would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).

- The OESP program could also be further enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).

**Considerations**

- If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible.
  - At the time of program design, advice was given that a 40-50% participation rate would be high for an application-based program delivered through electricity bills.
  - The province would need to work with LDCs if the rebate was to appear on electricity bills rather than be delivered via the income tax system (e.g., through the Trillium Benefit).

# 1 & 2a. Fiscal Impacts of RRRP, OESP and First Nation Rate

- Table below shows estimates of program costs up to 2022:

| Year | OESP ($M) | OESP + 50%($M) | RRRP($M) | RRRP Enhancement ($M) | First Nations Delivery Rate($M) | TOTAL RANGE ($M) (from status quo to OESP and RRRP enhancements) |
|---|---|---|---|---|---|---|
| 2017 | $108 | $162 | $292 | $374 | $18 | $418 to $846 |
| 2018 | $150 | $226 | $300 | $384 | $18 | $468 to $928 |
| 2019 | $186 | $279 | $306 | $394 | $18 | $510 to $997 |
| 2020 | $215 | $322 | $315 | $404 | $18 | $548 to $1,059 |
| 2021 | $243 | $365 | $322 | $415 | $18 | $583 to $1,120 |
| 2022 | $272 | $408 | $329 | $426 | $18 | $619 to $1,181 |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections above assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
   - The second column forecast also assumes the existing credit amounts increase by 50%.
     - Forecast assumes 10% administration costs
     - Forecast does not account for the approximately 142,000 low-income households that OEB estimated are not eligible because they do not directly receive an electricity bill.

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.
   - Expansion to cap distribution rates for other customers is based at $374M and assumes escalation of 2.6% (historical average dx rate increase). This is a conservative estimate, as Hydro One and Toronto Hydro increases could drive program costs beyond the average increase.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 2b. Expand OESP Eligibility

**Expanded Coverage**

- When OESP was being created, the OEB estimated that are 713,000 low-income households, of which 20% do not receive electricity bills. Thus, only 571,000 would potentially be eligible for OESP.
- If moved to the tax base, the OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity.

**Eligibility Categories**

- OESP has two credits amounts:
    1) Basic credit of $30-50 per month, based on the level of income and the number of residents.
    2) Enhanced credit of $45-75 per month for those with unique electricity needs:
        a) Electric heating,
        b) Indigenous customers, and
        c) Certain electrically intensive medical devices.
- The enhanced credit can be expanded to include additional eligibility categories of customers. For example, a new “Low Density Consumer” category could be introduced that provides Hydro One R2 customers (highest distribution rates) eligible for OESP the enhanced credit.

**Considerations**

- Potential costs for expanded coverage and new eligibility categories depend on updated estimates and changes to program design and delivery.
- There would be value in keeping the OESP as an income-tested program to distinguish it from other initiatives (e.g. RRRP, which is designed to address disparity between rural and urban distribution costs).

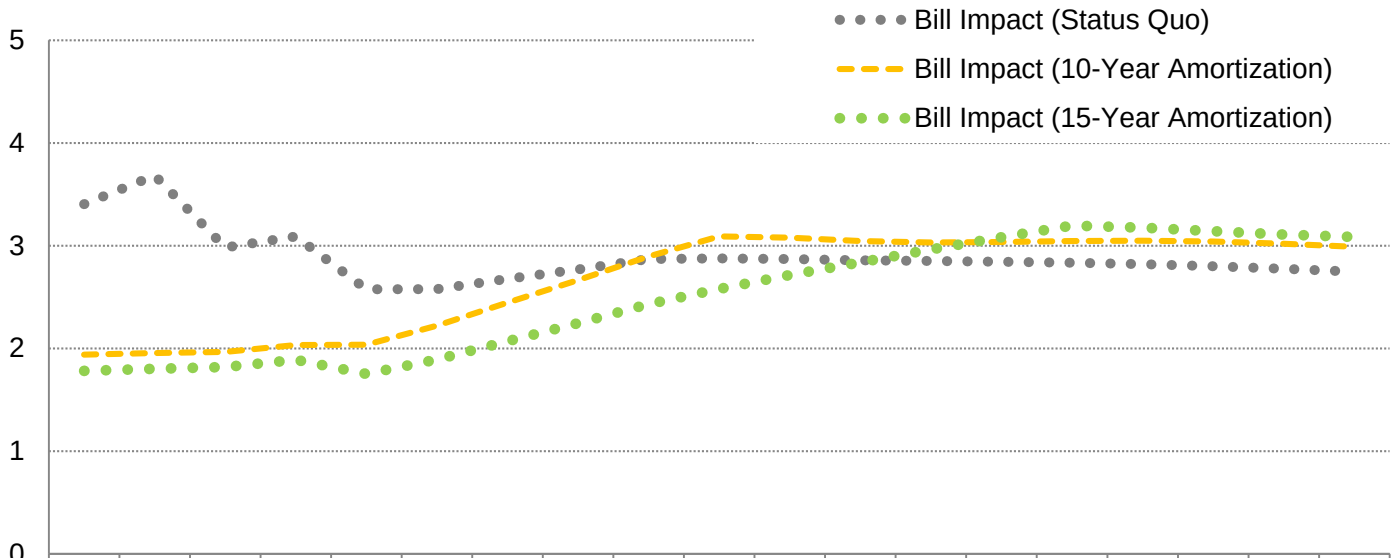
# 3a. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized. This would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs).
  - The time period over which costs could be amortized would be over the lifetime of funded CDM measures.
  - ENERGY is working with IESO to determine the appropriate lifetime period – the graph on the next slide, which illustrates residential bill impacts, presents two cases: **10-year and 15-year measure lifetimes**.
- In both cases, amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020. Over time the benefit would decrease and turn into a cost (higher electricity rates than would otherwise occur), as interest charges begin to grow. Estimated interest charges are as follows (a 3% interest rate is assumed; increases in interest rates could result in higher overall interest charges):
  - $712 million ($2016) – Amortizing eligible 2017-2035 CDM costs for 10-year period; and
  - $1.3 billion ($2016) – Amortizing eligible 2017-2035 CDM costs for 15-year period .
- Legislative changes would be needed to allow recovery of interest payments from ratepayers, or these costs could be recovered from the Consolidated Revenue Fund (CRF, or taxes).
- An alternative that could be explored would be to pay for CDM costs, or for a portion of these, from the tax-base (*see Appendix for more detail on tax funding option*).

# 3a. Amortize Conservation Program Costs (cont'd)

## Conservation Residential Bill Impact – Status Quo, 10-Year and 15-Year Amortization

***CDM Bill Impact ($/month)***




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bill Impact (Status Quo) | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | 2.68 | 2.77 | 2.87 | 2.88 | 2.87 | 2.86 | 2.85 | 2.84 | 2.83 | 2.82 | 2.80 | 2.78 | 2.75 |
| Bill Impact (10-Year Amortization) | 1.94 | 1.95 | 1.97 | 2.03 | 2.04 | 2.22 | 2.45 | 2.67 | 2.90 | 3.09 | 3.08 | 3.05 | 3.03 | 3.04 | 3.04 | 3.05 | 3.04 | 3.02 | 2.99 |
| Bill Impact (15-Year Amortization) | 1.78 | 1.80 | 1.82 | 1.89 | 1.75 | 1.89 | 2.07 | 2.25 | 2.43 | 2.58 | 2.71 | 2.84 | 2.96 | 3.08 | 3.20 | 3.18 | 3.14 | 3.11 | 3.09 |

Source: IESO; Ministry of Energy

**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10 of 15-year borrowing rate of 3.0%.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.
- Legislative amendments would be needed to allow recovery of loan interest charges from GA.
- ENERGY staff have developed a note to seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
- ENERGY is working with IESO to seek an opinion on the proposal from IESO's external auditor.
- ENERGY would then send the IESO external auditor's opinion along with ENERGY's explanatory note to the Ontario Provincial Controller (OPC) to seek a formal opinion on whether CDM costs could be amortized according to rate-regulated accounting standards.
- Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 3b. Rate Smoothing of Conservation Program Costs

- "Rate smoothing" could achieve the same rate reduction effect as amortization.
- Instead of taking out a loan to amortize conservation costs, a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Each year, IESO would defer recovery of a portion of annual conservation costs. Financing would also be required, such as from the OFA, to pay the interest on the deferral account. Interest would accrue on the deferred amounts, likely at the same rates as for the amortization option.
- Deferred costs could be recovered over any time period. If a 10 or 15 year-period was chosen, the rate impacts would be the same as in the amortization option.

**Considerations**

- Option would **not** require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open the Ministry to criticism by the Controller and/or Auditor General since the rate impact is the same.
- The Ministry would have more control under this option to change deferred amounts each year, as opposed to the terms set by a loan agreement under the amortization example.
- There is precedence to this approach for nuclear investments, which otherwise would result in volatile increases and decreases for Ontario ratepayers over the investment period. In 2015, the Ministry amended a regulation that requires the Ontario Energy Board (OEB) to set "smoothed" nuclear rates for OPG's Darlington and Pickering nuclear stations over a 20-year period.
  - The regulation allows OPG to defer recovery in rates of a portion of its nuclear revenue during the Darlington refurbishment (expected to be complete in 2026) and recover these deferred costs over the remaining ten years.
  - OPG will establish a "deferral account" to record the deferred amounts each year up to 2026 plus accumulated interest on the balance to reflect OPG's financing costs as a result of rate smoothing. The deferral account is then drawn down on a straight-line basis between 2026 and 2036.
- At minimum, new regulation would be required. However, further analysis is needed to determine the relevant regulation or legislation, to be amended for IESO (e.g., OEB regulation of IESO costs and fees, GA regulation for how IESO recovers its conservation costs from ratepayers).

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure

- Fund investments in specific energy infrastructure projects through the tax-base. **Note:** This could include the provincial portion of funding for the Remote First Nation Connection Project, a fund to support projects that improve adequacy and reliability in areas where new transmission would unlock economic growth and expansion of natural gas service to underserved communities.

**Considerations**

- Tax-base funding would allow for energy infrastructure to be built without impacting electricity and natural gas rates.

*Remote Connection Project:*

- Ontario ratepayers currently support costs of remote electricity service through RRRP on the order of $28 million/year
- Connecting 21 remote communities to the Ontario grid is supported by a positive business case due to diesel cost savings over time. If RRRP is funded through the tax base as proposed above, this project represents an opportunity to reduce impacts from RRRP.
- Direct investment in Ontario's portion of the capital costs of the project through a provincial fund (e.g., Trillium Trust) could also be considered along with mechanisms for cost recovery through transmission rates to refresh the fund as industry benefits from the transmission investment.
- The amount of investment and long-term savings depend on a federal contribution to the project and ENERGY is currently in discussions with Canada with the goal of concluding a cost-sharing agreement by spring 2017.
- A move to tax-based funding may have implications for cost oversight, since the OEB's mandate is to have oversight of ratepayer impacts. Alternative methods to review cost prudence of tax-based funding may be needed.

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (cont'd)

**Considerations (cont'd)**

*Transmission Projects to Enhance Economic Growth:*

- A tax-based fund could target investments in projects that have been identified in IESO regional plans and that would stimulate economic growth but are not proceeding due to cost barriers under the OEB's beneficiary pays principle. Investments could also target areas where the existing system poses challenges for delivering reliable service such as in parts of Northern Ontario with long single circuits.
- Potential opportunities for investment could include a transmission reinforcement in the **Greenstone area**, upgrades south of **Red Lake** and others TBD based on program design.
- This approach would allow a potion of project costs to be socialized to advance key projects without impacting rates or OEB's principles of cost allocation. Scope and scale of fund would be refined through program design.

*Natural Gas Expansion to Underserved Communities:*

- The Government has currently committed to expanding natural gas access to more communities in Ontario (i.e., $200 million Natural Gas Access Loan and $30 million Natural Gas Economic Development Grant).
  - Natural gas is an affordable heating source in Ontario. Its continues to be less expensive than alternative sources such as electric baseboards, heating oil and propane. For example, switching from oil to natural gas can save an average consumer an estimated $1,500 annually.
  - Increasing access to other energy sources such as natural gas, provides Ontarians with more options to meet their needs, reduce their energy costs and improve their quality of life.
  - Expansion of natural gas delivery infrastructure is widely supported in underserved communities (i.e., a recurring theme at ROMA) as a means to provide consumers and businesses in underserved communities with more affordable energy choices, attract new industry to Ontario and benefit agricultural producers.
- A grant program complements the Ontario Energy Board's recent decision enabling greater rate-based expansion to unserved areas, including rural and remote communities.
  - Applying Trillium Trust funding would make it possible to enhance the Grant Program and service more communities.

# 5. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.
- If the Province were to transfer $2.6 billion in economic benefits to the rate base over 10 years suggest the following impacts (assuming 140TWh per year):
  - Residential Ratepayer Impact (if spread over 10 years): up to $1.39 per month on a typical bill; and
  - Industrial Ratepayer Impact (if spread over 10 years): up to $1.86 / MWh

**Considerations**

- Cost savings to ratepayers and associated fiscal impacts would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- The departure tax was effectively a true-up for lower PILs payments from Hydro One in previous years – it was not a one-time windfall for the Province. In other words, it ensures that Hydro One paid all its tax obligations under the PILs regime before moving into the normal corporate tax regime.
- The related ~$2.4 billion fiscal benefit to the Province (from the deferred tax benefit) has already been credited to the Trillium Trust to be used to build infrastructure under Moving Ontario Forward.
- Repurposing funds paid to OEFC may have an impact on the defeasance of electricity stranded debt.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).

# 6a. Empower Energy Agencies – IESO / Market Renewal

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 6b. LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
  - Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
    - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.

**Considerations**

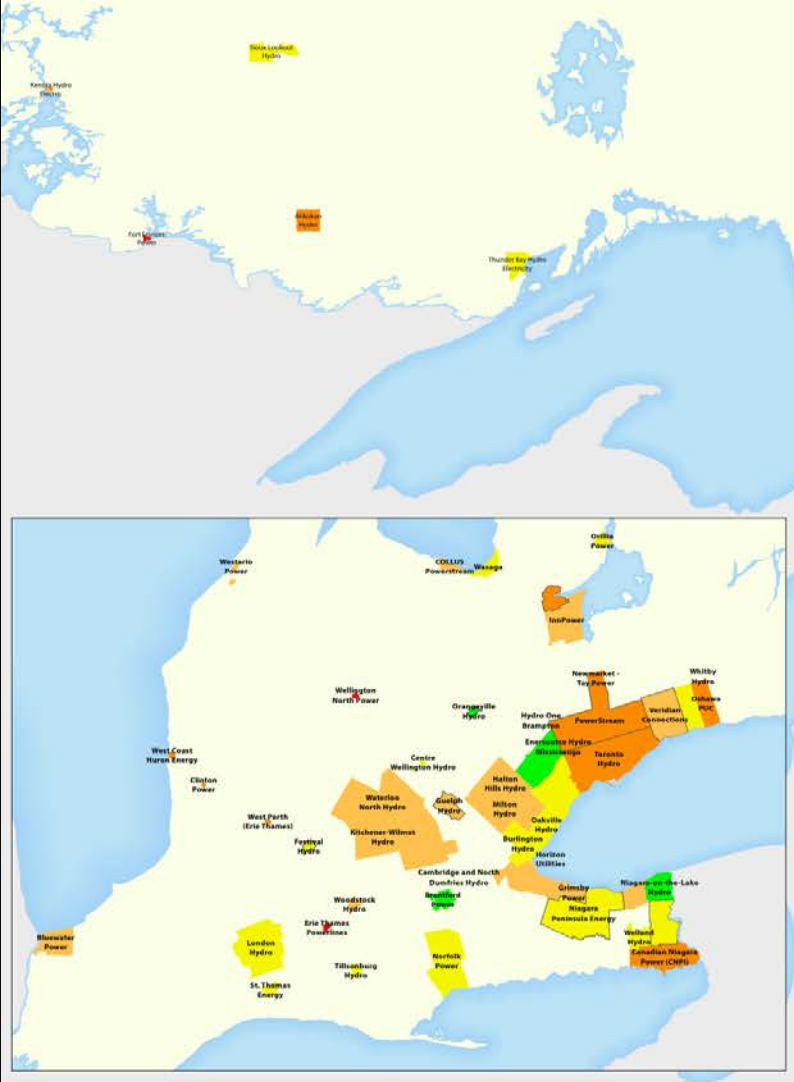
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.

- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
  - To further help address the costs associated with the Delivery line of the electricity bill, program such as the RRRP (previous slide) could be expanded to include other customers that may face higher costs.

- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.

- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation. Further changes to the tax incentives and/or revisiting legislated consolidation could be considered.

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

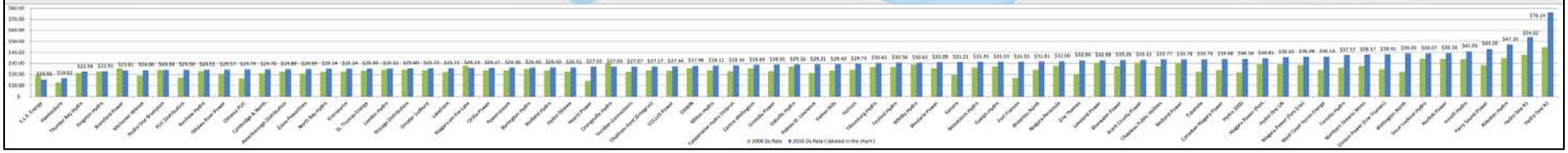
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# 6c. Empower Energy Agencies – OPG / Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

**Considerations**

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.
- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available, providing customers with pricing choice.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- Would provide consumers with electricity pricing choice.
- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro- November 2016 rates)

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7b. Give Consumers More Rate Choices and Greater Transparency – Detailed Global Adjustment

- Provide electricity consumers greater transparency with respect to electricity generation costs by providing more details regarding the Global Adjustment (e.g., adding a line on hydro bills, quarterly energy reports, etc).

**Considerations**

- As electricity bills have increased, many consumers have complained about a lack of transparency on the drivers of electricity costs. In particular, consumers and legislative officers have singled out the GA.

- Providing consumers with additional information on the cost components and amounts recovered through the GA would help consumers understand how the different forms of electricity generation in Ontario contribute to consumers costs.

- Providing additional information to consumers on electricity commodity cost drivers without sufficient context or background could simply lead to increased complaints about particular generating technologies that make up large shares of costs (e.g., nuclear).

- Adding a breakout of the amount of GA on residential electricity bills could lead to further confusion due to the existing breakout of multiple time-of-use buckets.

- Alternatively, the existing quarterly Ontario Energy Report, which provides various energy sector data, could be leveraged to show a breakout of quarterly GA costs by fuel type. A link on electricity bills could point to this information.

# 8. Help Small Business Manage Their Electricity Cost – End DRC Early for Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the proponents agreeing to a lower price in the near term.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period ; discussions/consultation may be required in advance of this potential option moving forward.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- Since the Minister of Energy is not a party, IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms would also reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.

- Projects over 500 kW would offer the most savings potential as they represent the majority of installed renewables capacity and are spread across fewer contracts.

- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.

- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh;
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
  - **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 million | $582 million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - For example, the New contract is $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 million | $632 million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# 10. Tax Relief for Solar and Wind Contracts

- In 2010 and 2011 Ontario procured large scale projects (>500 kW) through the FIT program at standard offer pricing.

- The FIT program was the centerpiece of the GEA which established the economic and social goals of growing the green economy, including establishing a local renewable energy manufacturing base, supporting the development of green energy jobs, and providing incentives for Indigenous participation.

- To help achieve these economic and social goals, the FIT program offered pricing at above competitive procurement rates, and provided Indigenous and Community participation adders, which resulted in economic benefits to all Ontarians, but resulted in additional costs borne by Ontario's electricity ratepayers.

- Ontario could fund the added cost of some or all of these economic and social incentives by shifting their costs from the rate-base to the tax-base.
    1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
    2. The tax base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT.

**Considerations**

- If applied to projects in commercial operation the benefit to the ratepayer would be immediate.
- Comparing FIT pricing to competitive procurement pricing could provide a reasonable representation of energy procurement without the added cost of economic and social incentives.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
   - For example, from 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
   - The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
   - If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
   - The $3.3 billion difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.
   - This represents estimated average ratepayer savings of $1.50/ month relative to OPO forecasts.
   - The same approach could be considered for solar projects however, prior to LRP I in 2016, Ontario had not procured solar capacity competitively and international cost comparisons are challenging given differences in regional development costs.
   - This example does not include the value of participation price adders available for community and indigenous participation.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

2. The tax-base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT 1 solar and wind projects.

   - For example, 17 large FIT 1 wind and solar projects have Indigenous and/or Community participation making them eligible for a price adder in addition to their base contract price.

   - The estimated value of these price adders is approximately $17.1 million (NPV 2017) over the expected remaining term of their contracts.

   - This represents estimated ratepayer savings of approximately $0.01/month relative to OPO forecasts.

# FIT 1 and GEIA Wind Projects in Commercial Operation
(source: IESO Active Contracts List, October 31, 2016)

| Count | Program | MW | COD |
|---|---|---|---|
| 1 | FIT 1 | 0.8 | Oct-10 |
| 2 | FIT 1 | 18 | Jul-15 |
| 3 | FIT 1 | 23 | Aug-15 |
| 4 | FIT 1 | 40 | Jan-15 |
| 5 | FIT 1 | 10 | Sep-14 |
| 6 | FIT 1 | 10 | Sep-14 |
| 7 | FIT 1 | 10 | Jun-14 |
| 8 | FIT 1 | 99 | May-13 |
| 9 | FIT 1 | 100 | Oct-15 |
| 10 | FIT 1 | 4 | Sep-12 |
| 11 | FIT 1 | 100 | Apr-16 |
| 12 | FIT 1 | 15 | Jun-15 |
| 13 | FIT 1 | 18 | Mar-12 |
| 14 | FIT 1 | 104.4 | Nov-13 |
| 15 | FIT 1 | 40 | Dec-15 |
| 16 | FIT 1 | 60 | May-14 |

| Count | Program | MW | COD |
|---|---|---|---|
| 17 | FIT 1 | 125 | Aug-13 |
| 18 | FIT 1 | 73.5 | Aug-14 |
| 19 | FIT 1 | 102 | Jan-15 |
| 20 | FIT 1 | 9 | Jan-12 |
| 21 | FIT 1 | 4.1 | Dec-15 |
| 22 | FIT 1 | 0.5 | Oct-13 |
| 23 | FIT 1 | 82.8 | Nov-11 |
| 24 | FIT 1 | 18.45 | Sep-16 |
| 25 | FIT 1 | 60 | Jul-14 |
| 26 | FIT 1 | 10 | Oct-16 |
| 27 | FIT 1 | 6.15 | Nov-14 |
| 28 | FIT 1 | 2.3 | Aug-15 |
| 29 | FIT 1 | 10 | Feb-16 |
| 30 | FIT 1 | 8.2 | Nov-14 |
| 31 | FIT 1 | 150 | Nov-14 |
| 32 | FIT 1 | 91.39 | Dec-14 |

| Count | Contract | MW | COD |
|---|---|---|---|
| 33 | FIT 1 | 25 | May-15 |
| 34 | FIT 1 | 82.8 | Nov-11 |
| 35 | FIT 1 | 30 | Mar-14 |
| 36 | FIT 1 | 17.6 | May-16 |
| 37 | FIT 1 | 23 | Dec-12 |
| 38 | FIT 1 | 99 | May-13 |
| 39 | FIT 1 | 48.6 | Dec-11 |
| 40 | FIT 1 | 19.44 | Aug-15 |
| 41 | FIT 1 | 10.8 | Mar-12 |
| 42 | FIT 1 | 38.88 | Sep-15 |
| 43 | FIT 1 | 60 | Aug-14 |
| 44 | GEIA | 270 | Mar-14 |
| 45 | GEIA | 180 | Dec-15 |
| 46 | GEIA | 148.6 | Dec-14 |
| 47 | GEIA | 270 | May-15 |

# Key Outcomes / Next Steps

- The proposed initiatives provide the following opportunities to:
  - Provide a greater focus on vulnerable consumers by funding electricity support programs through the tax-base.
    - Enhance existing and new support programs targeted at the most vulnerable consumers (i.e., OESP and RRRP); and
    - Better harmonize delivery rates across the province.
  - Re-set how energy infrastructure is funded by shifting costs to the tax-base from the rate-base.
  - Provide electricity consumers with greater choices and transparency (e.g., alternative rate plan based on a flat electricity rate, unpacking the Global Adjustment costs, etc);
  - Provide system benefits (e.g., market renewal);
  - Increase cost effectiveness and improve efficiency; and
  - Lower the cost of electricity for all consumers.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require legislative and/or regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

A. Rural or Remote Rate Protection (RRRP) – Overview and Enhancements
B. Fund Conservation Programs Through the Tax-Base
C. Eliminate the Industrial Conservation Initiative (ICI)
D. Cancel Large Renewable Procurement I (LRP I)

# A. RRRP Overview and Enhancements

- The Delivery line of the electricity bill is composed of Distribution and Transmission Costs. While transmission costs are uniform across the province, LDC costs vary by distributor and account for about 20% of the total bill for the electricity customers.
  - See slide X for a map of delivery rate increases between 2006 and 2016.
- The Rural or Remote Rate Protection (RRRP) framework was put in place in 2001 to help offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations.
- RRRP is available to: residential Hydro One R2 customers (~350,000 customers), Algoma Power customers (~11,600 customers); H1 remote customers (~3,500 customers).
  - To date, R2 customers receive a fixed amount of $125 million a year distributed amongst the customers. Algoma and Remote customers have RRRP calculated by the OEB each year that fluctuates based on average provincial distribution increases.
- Because the amount had been fixed for over a decade, the Province recently increased funding of the RRRP program for Hydro One R2 customers from $125 million to $240 million. This will be effective as of January 1, 2017, and will bring their delivery charges in line with the next highest charges from Hydro One's R1 customer class.

# B. Fund Conservation Programs Through the Tax-Base

- Propose to fund 2017-2020 electricity conservation and demand management program costs* using tax dollars instead of ratepayer dollars.
  - Funds received through the Hydro One Departure Tax could potentially be repurposed towards this.
- Total remaining 2017-2020 electricity conservation program costs are expected to be ~$2.1 billion.
- Post 2020, this option could evolve to funding conservation programs through the Greenhouse Gas Reduction Account.

**Considerations**

- Electricity conservation programs provide a number of benefits to society, however, Ontario's ratepayers have been covering these costs:
  - Avoiding/deferring future energy infrastructure investments, reducing disruption in communities (e.g., avoiding the need to build new natural gas generation);
  - Environmental benefits (e.g., reduced natural gas peaking generation and GHG emissions); and
  - Social and economic benefits (e.g., job creation and assistance managing electricity bills).
- There is precedence for using tax dollars to fund conservation programs.
  - Between 2007 and 2011, Ontario funded the Home Energy Savings retrofit program using tax dollars.
- Funding conservation programs though the tax-base is expected to result in a benefit of $3.40/month for residential electricity consumers in 2017. This could provide immediate short term relief to consumers while other rate mitigation initiatives are developed (e.g., market renewal, LDC efficiencies).

*** Note:** This includes costs towards the Conservation First Framework, Industrial Accelerator Program, Demand Response and the Conservation Fund)

# C. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

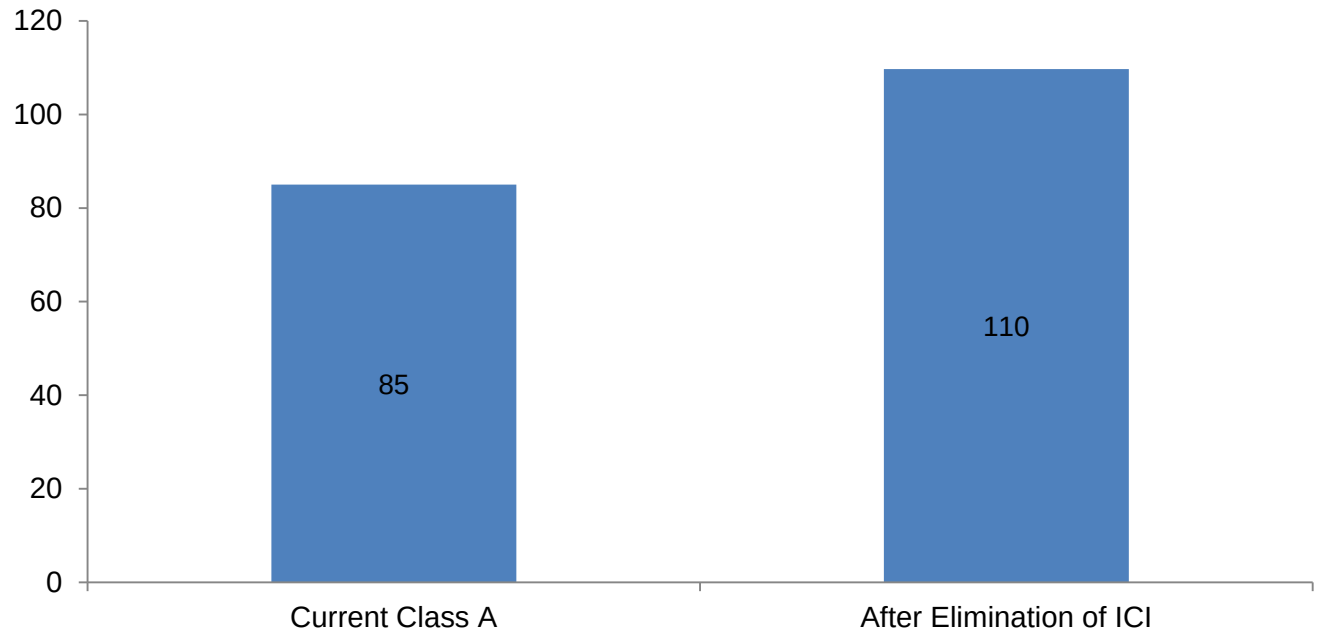
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# C. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# D. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period.
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g. rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

*Cancel/Adjust Announced Procurements:*

- Amendments to existing directions to IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

*Cancel Existing LRP I Contracts:*

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

**Legal Analysis**

- Any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements.
  - An amendment to an existing direction would not require Cabinet approval, however, further analysis is required to determine if direction to cancel LRP I contracts could be considered as amending existing direction.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights. This reasoning would likely apply equally to any direction to IESO to cancel LRP I contracts. Previous advice has also flagged a risk that the Province could be liable for damages in tort for inducing a breach of contract (or other claims).
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon; John Kim; Emily Kerr |
| **Cc:** | Gavin He |
| **Subject:** | Fwd: Rate Mitigation - Draft MP Deck |
| **Date:** | Wednesday, January 18, 2017 8:47:49 PM |
| **Attachments:** | Rate Mitigation Plan Options 20170118 v2_ MP.pptx<br>ATT00001.htm |

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Hi,

Please review.

Thanks,
Ron

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **To:** "Gadi Mayman" <Gadi.Mayman@ofina.on.ca>, "Ronald Kwan" <Ronald.Kwan@ofina.on.ca>, "Gavin He" <Gavin.He@ofina.on.ca>, "Lynsey Wynberg" <Lynsey.Wynberg@ofina.on.ca>, "Marianne Nguyen (MCYS)" <Marianne.Nguyen@ontario.ca>, "Elizabeth Mendes (MOF)" <Elizabeth.Mendes@ontario.ca>, "Ghiassi, Ali (MOF)" <Ali.Ghiassi@ontario.ca>
> **Subject: Fw: Rate Mitigation - Draft MP Deck**
>
> FYI. Attached are the rate mitigation materials for MPC tomorrow. PW to follow.
>
> Sent from my BlackBerry 10 smartphone on the Rogers network.
>
> _____
> From: Imbrogno, Serge (ENERGY)
> Sent: Wednesday, January 18, 2017 8:01:35 PM (UTC-05:00) Eastern Time (US & Canada)
> To: Orsini, Steve (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF); Angus, Helen (TBS)
> Cc: Bromm, William (CAB)
> Subject: Rate Mitigation - Draft MP Deck
>
> Hi,
>
> Attached is the rate mitigation deck for tomorrow's MP meeting. I'll send you the pw in a separate email.
>
> Serge

Ontario

MINISTRY OF
ENERGY

# Rate Mitigation Plan Options

## Working Draft

January 2017

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity costs for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants) and suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings).

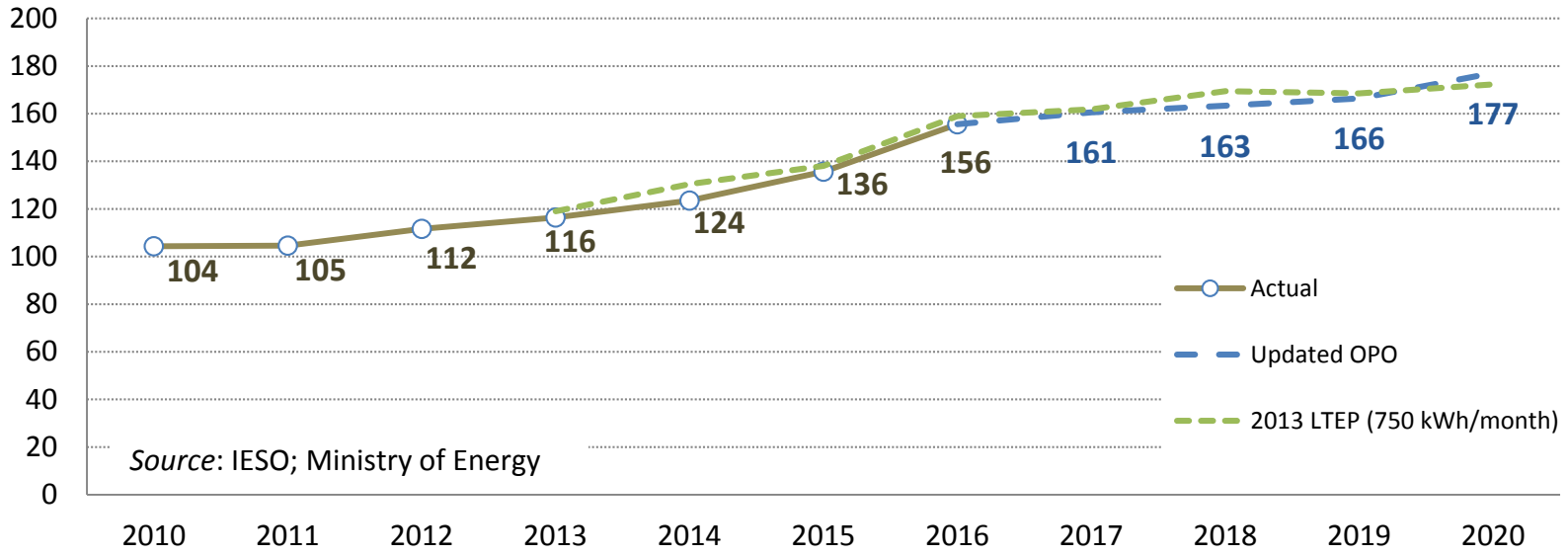
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Context – Residential Electricity Prices

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast in $/month*

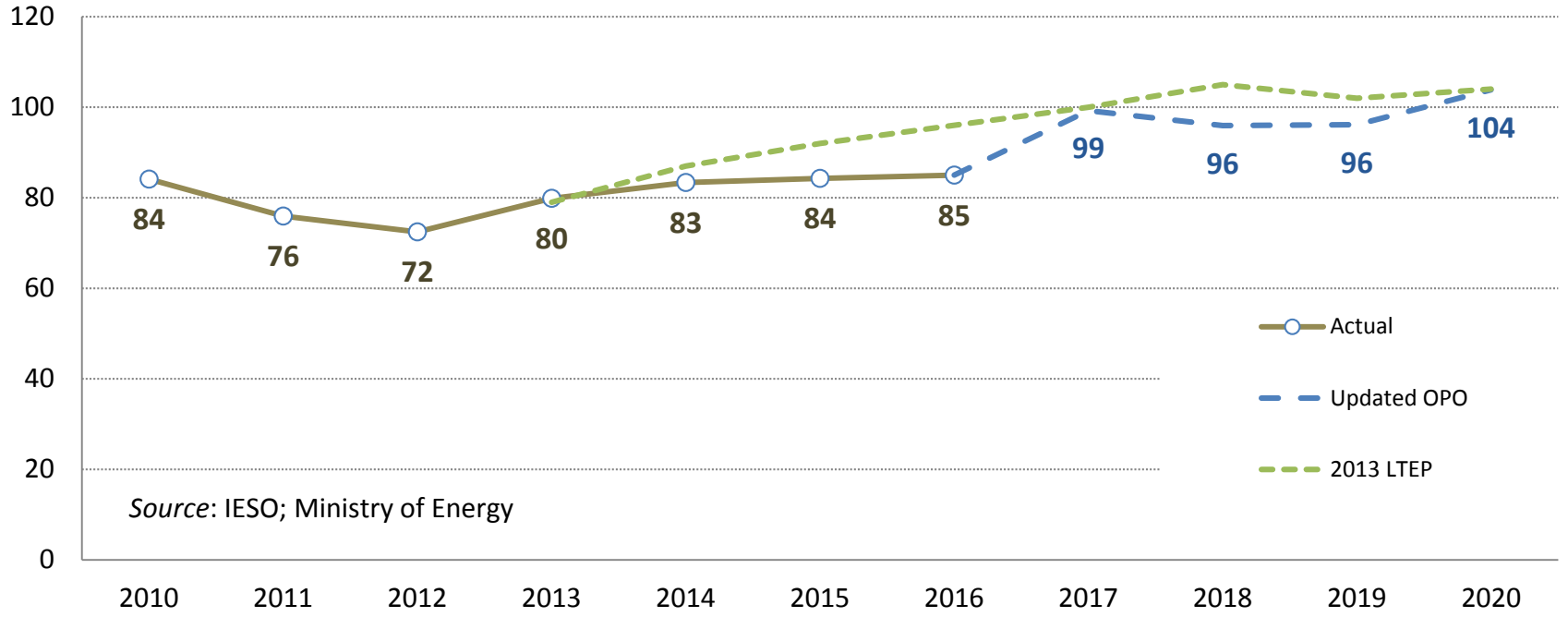



**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Context – Large Industrial Electricity Prices

- Industrial electricity prices continue to be a concern for many businesses.
  - **Note:** The typical industrial electricity price is currently below the 2013 LTEP forecast.

**Typical Class A Electricity Prices**
*Historical and Forecast in $/MWh*




**Note**: The 2013 LTEP forecast for industrial reflects a transmission connected Class A electricity consumer. The updated OPO forecast above includes ICI expansion and RRRP expansion.

# Broad Policy Themes / Rationale

- In recognition of the costs borne by ratepayers related to the to decarbonizing and modernizing the province's electricity sector:
  1. Provide significant and immediate rate relief through cost deferral of the global adjustment (GA).

  2. Provide a greater focus on vulnerable consumers by funding electricity support programs, such as the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Protection, (RRRP) through the tax-base. In addition, provide greater support for lower income Ontarians by enhancing the OESP, etc.

  3. Empower energy agencies to increase cost effectiveness and improve efficiency by having – Independent Electricity System Operator (IESO) modernize Ontario's electricity market through electricity market renewal initiatives, the Ontario Energy Board (OEB) identify opportunities for future LDC cost reductions/efficiencies and work with Ontario Power Generation (OPG) to find further efficiencies in operations and pass on savings to ratepayers.

  4. Enhance the existing 8% rebate that went into effect January 1, 2017.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|---|
| 1. Global Adjustment (GA) Financing (Moderate) | - | 17.49 | 15.01 | 12.49 | 14.91 | 6.32 | 4.03 | Immediate |
| 2. Fund Electricity Support Programs Through the Tax-Base | | | | | | | | |
| a. Rural or Remote Rate Protection (RRRP) | - | 1.58 | 1.62 | 1.66 | 1.70 | 1.75 | 1.79 | Immediate |
| b. Ontario Electricity Support Program (OESP)* | - | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | Immediate |
| c. Low-Income Conservation | - | - | - | - | - | - | - | |
| d. First Nations Rate | - | - | - | - | - | - | - | |
| 3. Empowering Energy Agencies To Increase Cost Effectiveness and Improve Efficiency | | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC Efficiencies/Rates* | - | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | - | 0.71 | 0.89 | 1.08 | 1.22 | 1.35 | 1.24 | Immediate |
| 4. Enhanced Tax-based RPP Rebate (5%) | - | 7.04 | 7.17 | 7.31 | 7.77 | 7.61 | 7.83 | Immediate |

***Note**: Savings based on currently approved OESP rate set by OEB.
**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|---|
| 1. Global Adjustment (GA) Financing (Moderate) | - | 14.49 | 12.43 | 10.33 | 12.35 | 5.23 | 3.33 | Immediate |
| 2. Fund Electricity Support Programs Through the Tax-Base | | | | | | | | |
| a. RRRP | - | 2.10 | 2.15 | 2.21 | 2.26 | 2.32 | 2.38 | Immediate |
| b. OESP* | - | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | Immediate |
| c. Low-Income Conservation | - | - | - | - | - | - | - | |
| d. First Nations Rate | - | - | - | - | - | - | - | |
| 3. Empowering Energy Agencies To Increase Cost Effectiveness and Improve Efficiency | | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC Efficiencies / Rates* | - | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | - | 0.59 | 0.74 | 0.89 | 1.01 | 1.12 | 1.03 | Immediate |
| 4. Enhanced Tax-based RPP Rebate (5%) | - | - | - | - | - | - | - | Immediate |

***Note:** Savings based on current OESP charge as set by OEB.

# Fiscal Impacts

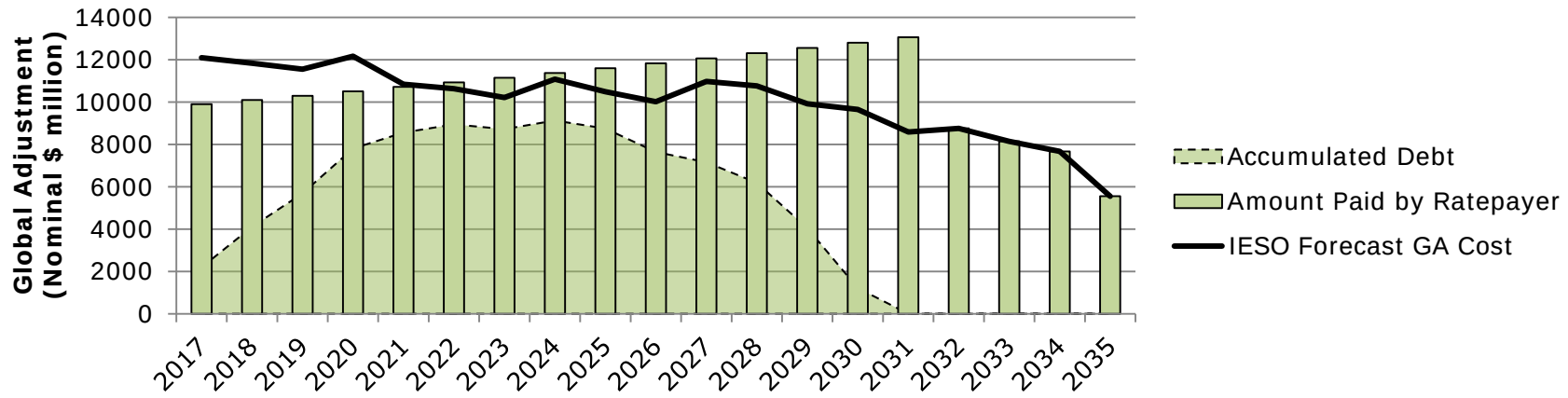
| *$M* | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| 1. Global Adjustment (GA) Financing (Moderate) | TBC | TBC | TBC | TBC | TBC |
| 2. Fund Electricity Support Programs Through the Tax-Base* | | | | | |
| a. RRRP | - | $457 | $469 | $479 | $493 |
| b. OESP | - | 162 | 225 | 279 | 323 |
| c. Low-Income Conservation | - | 60 | 60 | 60 | 60 |
| d. First Nations Rate | - | 18 | 18 | 18 | 18 |
| 3. Empowering Energy Agencies To Increase Cost Effectiveness and Improve Efficiency | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC Efficiencies / Rates | - | - | - | - | - |
| c. OPG – Operational Efficiencies** | - | - | - | - | - |
| 4. Enhanced Tax-based RPP Rebate (5%) | 169 | 699 | 679 | 732 | 724 |

***Note:** Includes costs of program expansion and various assumptions as detailed on relevant slides.
**** Note:** Risk to fiscal plan of up to $240 million annually (foregone net income) if OPG is unable to reach more aggressive operational efficiency targets.

**Source:** Ministry of Finance, Energy

# 1. Global Adjustment (GA) Financing

- It is proposed that the amount of global adjustment (GA) paid by ratepayers in each year over the forecast period is set at a fixed amount and money is borrowed to make up the remainder of the GA cost in each year.
- Starting on January 1, 2017, the amount of GA paid by ratepayers is set at a value lower than the true cost of GA in 2017 and is increased according to a pre-defined schedule until the debt has been paid off.
- GA costs will be "smoothed" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected actual cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- All analysis is based on forecasts from Independent Electricity System Operator (IESO), assumes a 5% annual borrowing interest rate and an inflation rate of 2% per year.




**Sample financing**: Ratepayers pay less than the cost of GA in early years, borrowing up to $9 billion that is fully paid off in 2031 by charging ratepayers more than the cost of GA in later years.

# 1. GA Financing – Options

1a. Moderate / GA Financing

- The amount of GA paid by ratepayers in 2017 is lowered by $3.2 and $3.4 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively.
- Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

1b. Moderate / GA Financing with Delayed Increase

- The starting GA payment from all ratepayers in 2017 is lowered by $1.1 billion, ratepayer payments *decrease* in the short term to keep residential bills relatively flat, then increases at 3% each year – up to a maximum of $2 billion above the true cost of GA – until the borrowed money is paid back over a 25 and 30 year financing period respectively.

Low / GA Financing (see in Appendix)

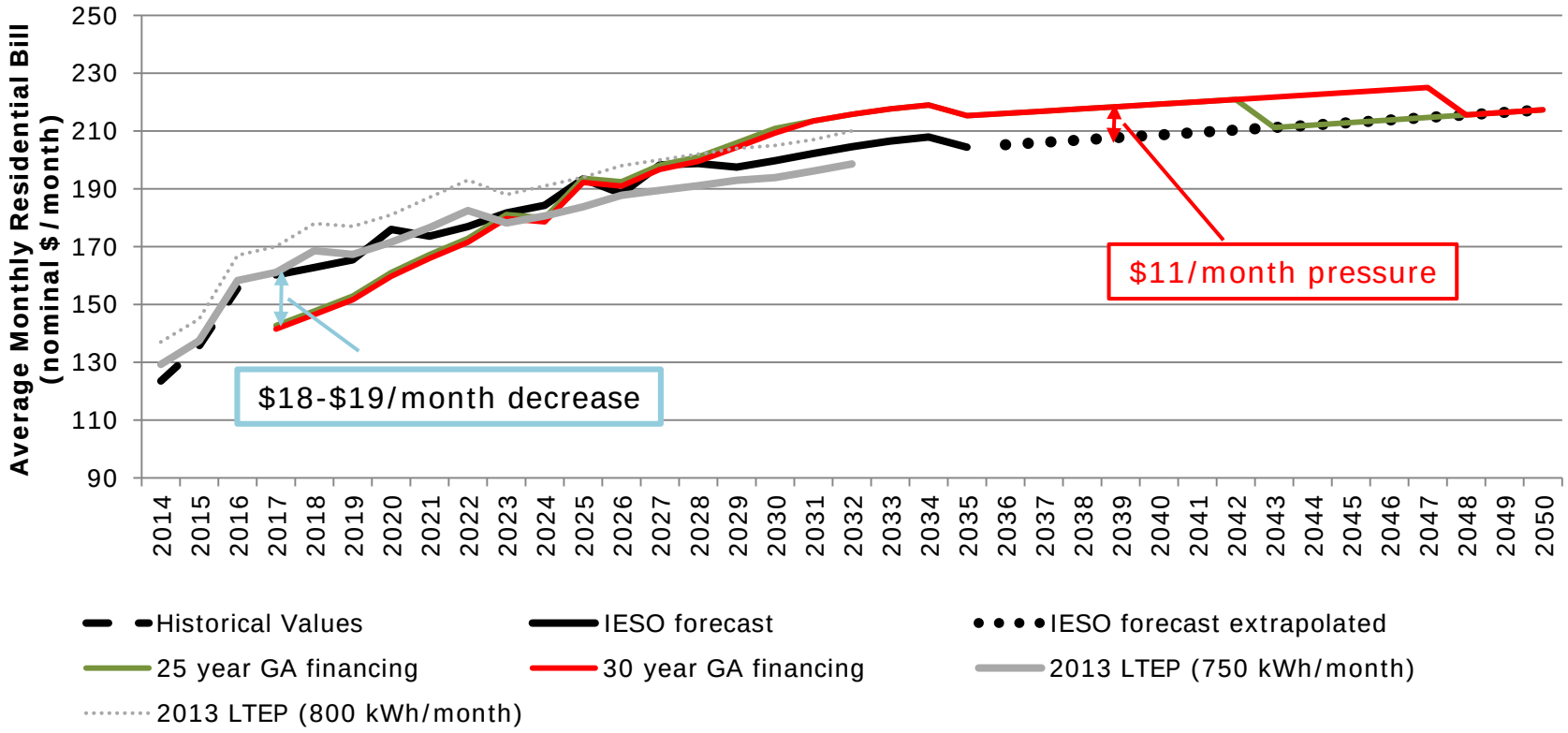
- The amount of GA paid by ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off.
- Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

High / GA Financing (see in Appendix)

- The amount of GA paid by ratepayers in 2017 is lowered by $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively.
- No limit is placed on the amount charged to ratepayers above the true cost of GA.

# 1a. Moderate / GA Financing – Impact on Residential Electricity Bills

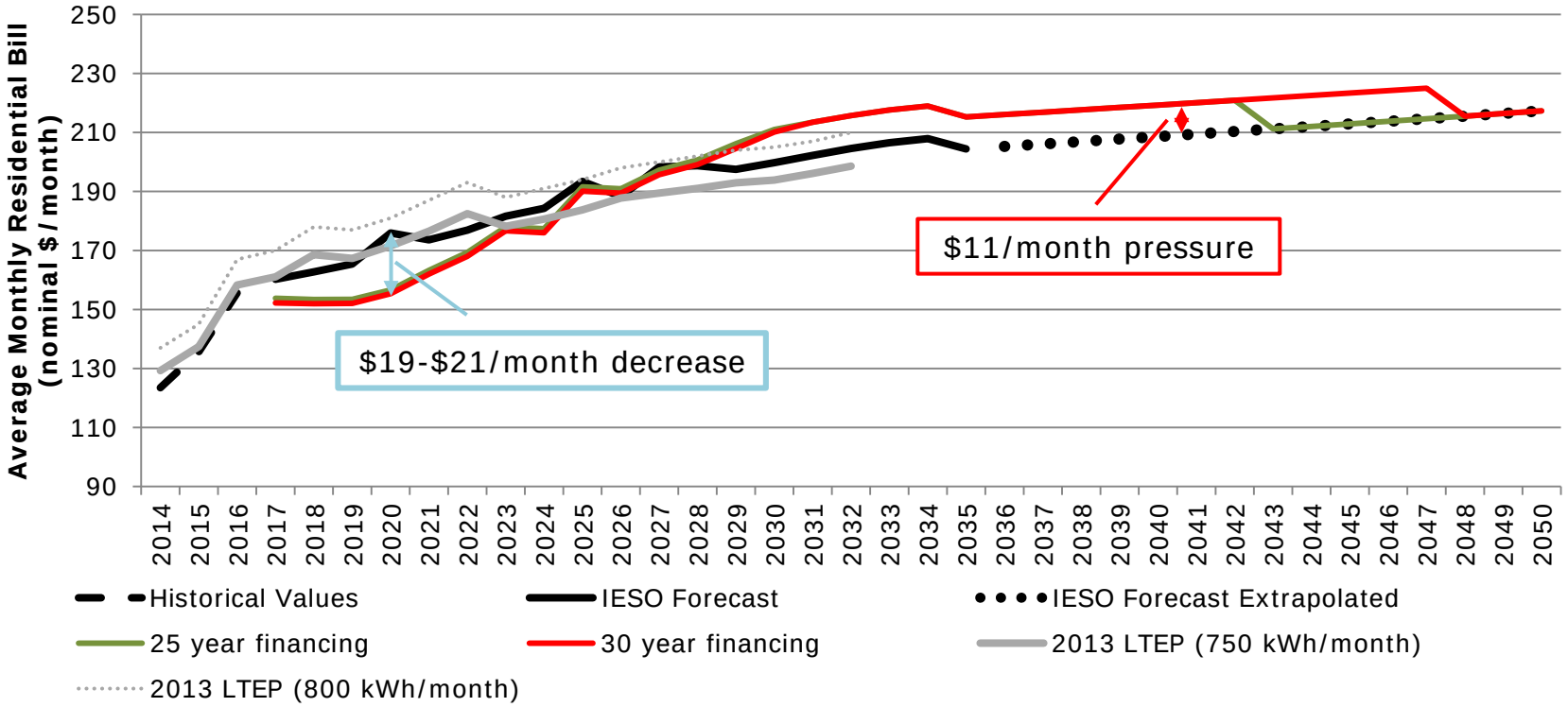
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered by $3.1 billion (green line) and $3.3 billion (red line) and increases at 2% each year – up to a cap of no more than $2 billion more than the true cost of GA in any year – until the borrowed money is paid back in 25 and 30 years respectively.




- By **borrowing up to $23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $17-$19/month** at the cost of **increased future electricity bills over 14-19 years of up to $11/month** above the true cost of electricity production.

# 1b. Moderate / GA Financing with Delayed Increase in Payments – Impact on Residential Electricity Bills

- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $1.1 billion, ratepayer payments *decrease* in the short term to keep residential bills relatively flat, then increases at 3% each year – up to a maximum of $2 billion above the true cost of GA – until the borrowed money is paid back over a 25 and 30 year financing period respectively.

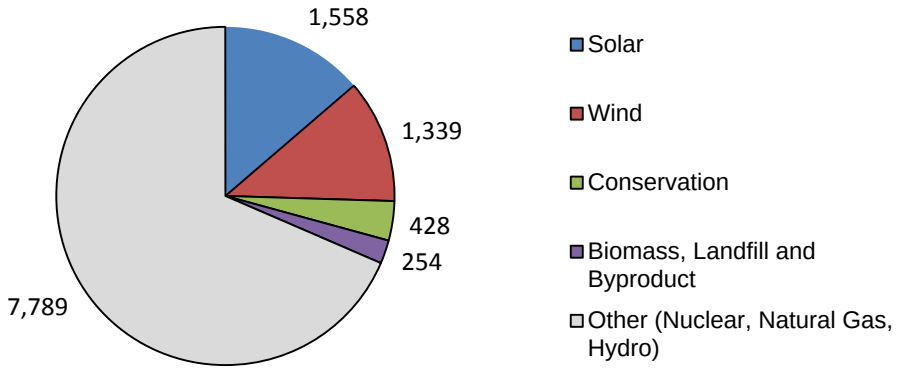



- By **borrowing up to $23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $19-$21/month** at the cost of **increased future electricity bills over 14-19 years of up to $11/month** above the true cost of electricity production.

# 1. GA Financing – Cost Breakout

- The allocation of GA costs for most of 2016 are as follows:

GA costs year-to-date November 2016 ($ million)




- This cost breakdown will evolve over time as 2,181 MW of contracted generation comes online in the coming years.
- The proportion of GA costs is compared with the proportion of generation in the table below:

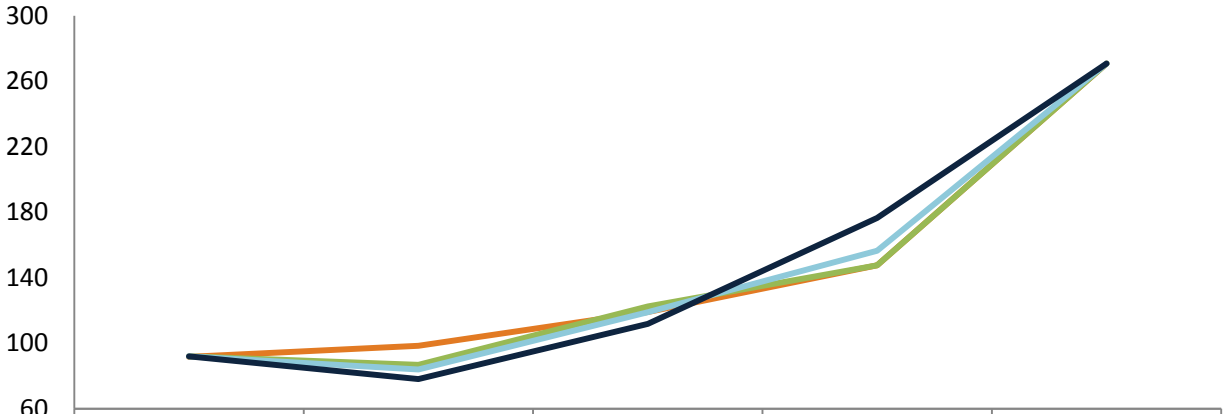
| | Fraction of GA Cost | Fraction of Generation* |
|---|---|---|
| **Solar** | 14% | 0.3% |
| **Wind** | 12% | 6.0% |
| **Biomass, Landfill and Byproduct** | 2% | 0.3% |
| **Conservation** | 4% | 0.0% |
| **Other (Nuclear, Natural Gas, Hydro)** | 69% | 93.4% |

***Note:** Only includes generation directly connected to the transmission system. Most solar generation, for example, is connected to the distribution system and is not represented in the generation column.

# 1. GA Financing – Impact of the Level of Financing on Large Industrial Electricity Consumers

- Below graph illustrates the estimated impact of the level of GA financing for an average Class A electricity consumer over a 25 year amortization period.

**Estimated All-In Electricity Price**
*for Average Class A in $/MWh*




| | 2016 | 2017 | 2027 | 2037 | 2047 |
|---|---|---|---|---|---|
| Status Quo | 92 | 98 | 119 | 148 | 271 |
| Low Financing | | 87 | 122 | 148 | 271 |
| Moderate Financing | - | 84 | 119 | 157 | 271 |
| High Financing | | 78 | 112 | 177 | 271 |

**Note:** Assumes that demand by industrial sector continues at average 2011-2015 levels. Please see the Appendix or more information on the estimated impact on large industrial electricity consumers.

# 1. GA Financing – Considerations

**Considerations**

*Ratepayer:*

- Borrowing money to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves borrowing large amounts of money over a long period of time (16-30 years, depending on the scenario) to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on electricity rates. A long-term interest rate of 5% is assumed for this analysis.

- GA and HOEP provide a natural hedge against each other – when one goes up, the other goes down – keeping total electricity costs relatively stable and predictable. Smoothing only the GA would lead to greater price volatility for consumers unless the schedule and amount of ratepayer payments was defined relative to the actual cost of GA.

- Some Class A consumers pay limited Global Adjustment and would receive little benefit under the financing proposal. These consumers also currently pay very low rates.

- Should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumption, further increasing future costs for individual ratepayers.

- In recognition that Class B electricity consumers pay the majority of GA costs, could limit GA cost reductions through financing to Class B consumers only.

# 1. GA Financing – Considerations (cont'd)

**Considerations**

*Fiscal / Accounting:*

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.
  - It is unclear whether legislation could determine the manner in which this initiative is accounted for. Further work is required.

- Historically electricity sector financing has been conducted by the Ontario Financing Authority (i.e., managing OEFC's stranded debt and borrowing on behalf of IESO). Further consultation with the OFA will be required to determine the appropriate vehicle for additional borrowing.

- The significant amount of additional Provincial borrowing needed to finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating and overall borrowing capacity. Further analysis is required and would suggest early engagement with the OFA through which money will be borrowed.

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" in the sector. **Note:** the Debt Retirement Charge (DRC) was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

# 1. GA Financing – Guiding Principles (cont'd)

- Based on preliminary discussions with KPMG, the following key steps have been identified:
  - Create an "asset" (and confirm that it meets accounting requirements);
  - Identify who will hold the asset(s), this could include:
    - Province (e.g., OEFC, etc);
    - IESO; or
    - LDCs.
  - Determine the source of the financing (e.g., OFA, IO, etc)

- ENERGY is working with LSB, IESO, MOF, TBS and external accountants to identify legislative, regulatory and accounting requirements associated with GA financing option.

# 1. GA Financing – Considerations (cont'd)

**Considerations**

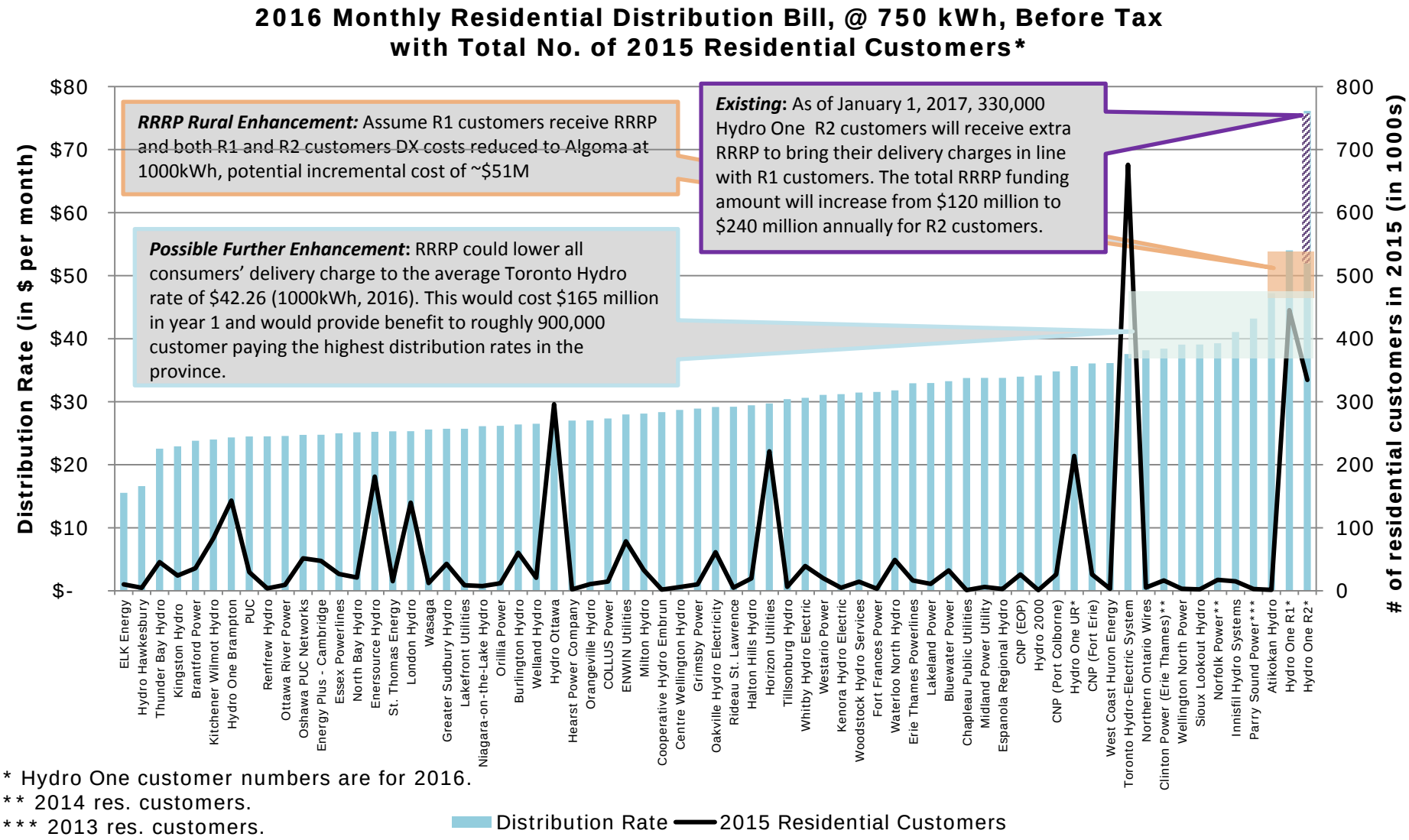
*Legal:*

- Legislation would be required to authorize the financing proposal.
  - Amendments to the *Electricity Act, 1998* (EA) could authorize the financing of certain costs within or part of the GA. However, whether any other legislation requires amendment is not known at this time.
  - The GA regime currently provides that "true costs" represent the true costs of making payments to generators or counter parties to contracts, not the incurring of discretionary financing or interest costs.
  - Considerations such as the need to analyze legal risks or the need to address costs retroactively (if the proposal requires a January 1, 2017 start) could add to the legal and drafting complexity. Further legal analysis is required.

# 2a. Fund Electricity Support Programs Through the Tax-Base – Rural or Remote Rate Protection (RRRP)

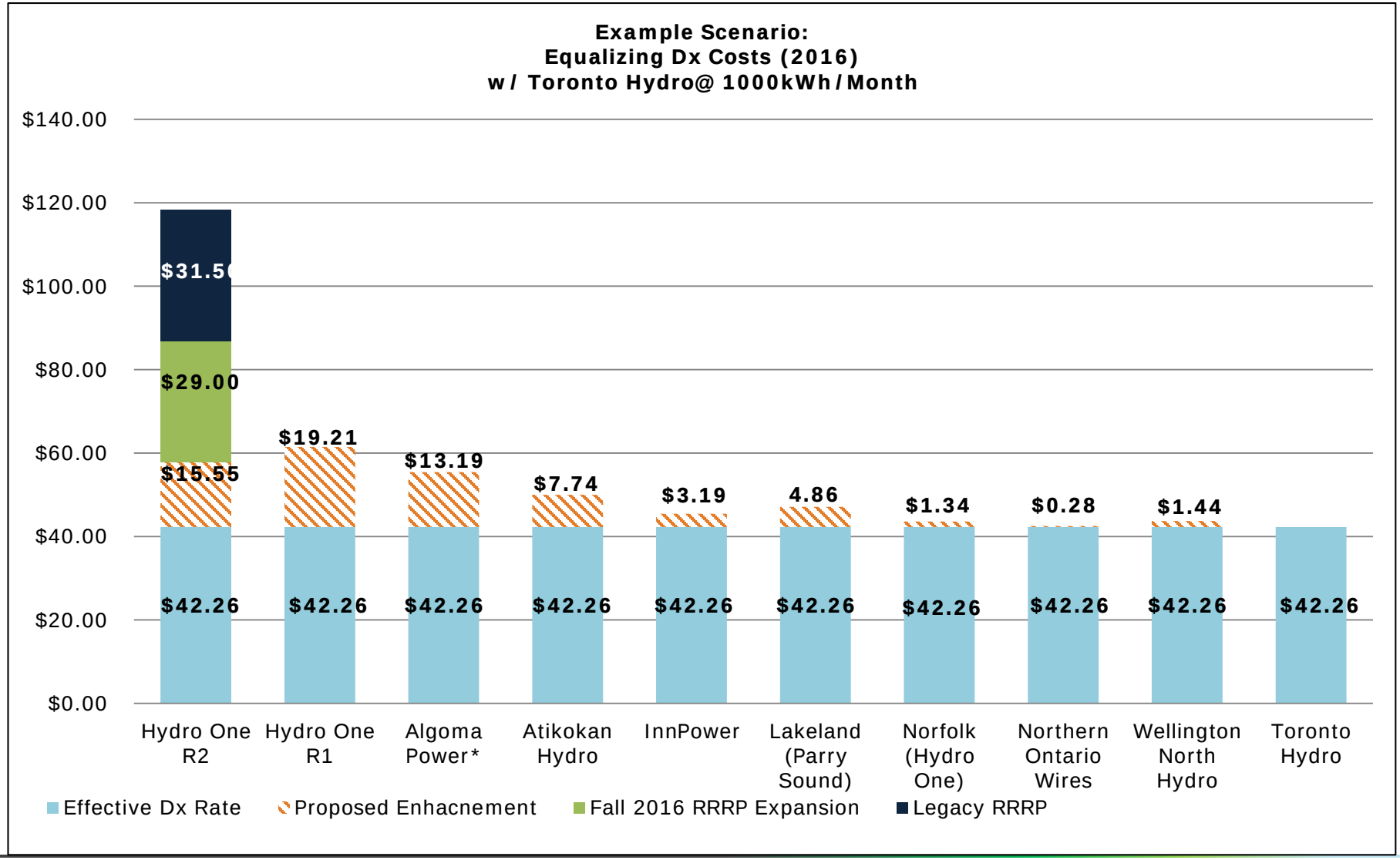
- RRRP supports the most costly-to-serve distributors in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
- The objective of the program is to reduce extreme distribution costs experienced in low density communities, and bring rates closer to those paid by other customers across the Province.
  - The OEB mandates that low density consumers pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies. RRRP is thus the mechanism by which these costs can be partly subsidized by all provincial ratepayers.
- Effective January 1, 2017, Ontario has enhanced program funding to further reduce Hydro One R2 distribution rates. As a result, a typical Hydro One R2 customer now pays roughly the same as a Hydro One R1 (medium density) customers, the next highest distribution rate.
- There is opportunity to continue the mitigation of delivery costs for the most costly-to-serve Ontario consumers by revising the program to either:
  - Bring other density based rural costs down by providing benefits to Hydro One R1 customers and ensuring that all RRRP recipients would pay roughly the same delivery costs; or
  - Expanding the program to other distributors that are costly to serve for reasons beyond density (e.g. to bring their distribution rates down to levels currently paid by customers of Toronto Hydro).
- An expansion of the program would result in a cost for all other ratepayers as the RRRP regulatory charge would need to be increased. In order to avoid this and not place an additional burden on consumers, the RRRP program could be transferred to the taxbase.
  - If left on the ratebase, program costs to consumers could rise from an average of $1.58/month to roughly $3.15/month.

# 2a. RRRP Expansion (cont'd)




* Hydro One customer numbers are for 2016.
** 2014 res. customers.
*** 2013 res. customers.

# 2a. RRRP Expansion – Ratepayer Impacts




***Note:** Algoma Power also receives $13.5 million (2017) to support operational costs.

# 2a. RRRP Expansion – Fiscal Impacts

- Table below shows estimate of program costs up to 2022

| Year | RRRP Status Quo($M) | RRRP Enhancement Phase 1 ($M) | RRRP Enhancement Phase 2 ($M) | TOTAL RANGE ($M) |
|---|---|---|---|---|
| 2017 | $292 | $51 | $114 | **$343 - $457** |
| 2018 | $300 | $52 | $117 | **$352 - $469** |
| 2019 | $306 | $54 | $119 | **$360 - $479** |
| 2020 | $315 | $55 | $123 | **$370 - $493** |
| 2021 | $322 | $56 | $127 | **$378 - $505** |
| 2022 | $329 | $58 | $129 | **$387 - $516** |

- Baseline cost of $292M includes all existing funding for Hydro One R2 (including recent $116 million expansion), Hydro One Remotes, and Algoma Power. Providing the enhanced support would cost an additional $165 million (Phase 1 – $51 million + Phase 2 – $114 million) in year 1.
- For forecast purposes, fiscal impacts are escalated at 2.6%/year. This reflects an estimate of the average yearly distribution rate increase.
  - The current RRRP program includes an adjustment mechanism to increase program funding by the same percentage as the average yearly distribution rate increase.
  - The continuation and appropriateness of this mechanism (and in fact all program design characteristics) would be considered in moving the program to the tax base.

# 2a. RRRP Expansion – Considerations

**Considerations**

- **Framework:** New legislation would be required to establish and define the parameters of a tax based RRRP. This may reveal additional considerations.
- **Policy Rationale:** Historically, RRRP has supported costs of LDCs that meet a density threshold. Expanding funding to additional LDCs that do not represent a density threshold (and selecting a specific LDC rate to serve as a cost cap) results in a fundamental change in the program. Program objectives must be considered if expansion is limited to specific LDCs.
- **Program Design:** Program specifics will affect eligible customers, credit amounts, and fiscal impact widely. Issues such as how eligibility is determined and if benefits are equal for all customers within an eligible LDC need to be examined. Financial flow-through mechanisms would need to be considered in consultation with IESO and LDCs. Likely to be modeled after processes used for the Ontario Rebate for Electricity Consumers (OREC).
- **Continuing Support:** There are multiple options and mechanisms available to adjust funding year-over-year depending on desired objective (continuously peg to Toronto, cover annual rate increases, provide inflationary support, amend as needed, etc…). Selection will impact fiscal projections.
- **Fiscal Risk:** As LDC rates change year-over-year, LDCs eligible for tax-based support will change and can cause significant fluctuation in fiscal projects and impacts. For example, if Toronto Hydro meets eligibility criteria in any given year, over 700,000 customers could become newly entitled to taxbase support.
- **Legal Risk:** The OEB is the energy sector's independent regulator and has sole authority to set rates. Ministry-OEB authority must be considered when prescribing cost levels.
- **Hydro One:** Providing tax-based support for Hydro One may be controversial following the broadening of ownership. Hydro One is also transitioning seasonal customers to its R2 and R1 classes; program eligibility will need to be considered.

# 2b. Ontario Electricity Support Program (OESP) Expansion

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills.
- The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices.
- OESP funding is collected from a charge levied on all electricity ratepayers. Based on current level of program up-take and funding collection, OESP program benefits could be increased across the board by 50%. This would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year);
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year); and
  - Indigenous and Métis consumers would also see benefit increases at the same level as those with electric heat and medical devices.
    - The Ministry is also considering options to support a “Delivery” line credit for Indigenous consumers. This would cost ~$18 million/year (Option 2d on slide 8) and would save Indigenous consumers between $75 and $100/month.
- Greater focus and support can be placed on lower income Ontarians by funding OESP through the tax base. This would also reduce costs for all consumers as a result of eliminating the OESP charge.
  - Average residential customer savings: $0.83/month; and
  - Average industrial customer savings: $1.10/MWh.

# 2b. OESP Expansion – Fiscal Impacts

- Table below shows estimate of program costs up to 2022:

| Year | OESP Status Quo($M) | +50%($M) | TOTAL ($M) |
|---|---|---|---|
| 2017 | $108 | $54 | **$162** |
| 2018 | $150 | $75 | **$225** |
| 2019 | $186 | $93 | **$279** |
| 2020 | $215 | $108 | **$323** |
| 2021 | $243 | $122 | **$365** |
| 2022 | $272 | $136 | **$408** |

- 2017 program costs are based at current program sign-up rate – 30% of eligible consumers. Cost projections assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
- At the time of program design, it was estimated that 40-50% participation would be high for an application-based program delivered through electricity bills. However OESP can be enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).
- OEB is currently exploring options for simplifying the OESP process, including exploring options with MCSS on auto-enrollment options, discussing options to eliminate wet signature consent forms with the federal government, and working with partners to do open houses to better reach vulnerable consumers.

# 2b. OESP Expansion – Considerations

- **Framework:** New legislation would be required to establish and define the parameters of a tax-based OESP. This may reveal additional considerations, including possible assessment as a tax credit.
- **Implementation:** Financial flow-through mechanisms would need to be considered in consultation with IESO and LDCs. Likely to be modeled after processes used for the Ontario Rebate for Electricity Consumers (OREC).
- **Alternative Delivery:** If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible, and could expand coverage to the ~142,000 low-income households that do not receive an electricity bill.
- **Transition to Social Assistance:** Moving OESP to the taxbase can be a transitional step in folding this program into a reform of social and disability assistance programs and enhancement of MCSS' Social Assistance Management System moving forward.
- **Additional Enhancements:** The enhanced credit could be expanded to include additional eligibility categories of customers. For example, a new "Low Density Consumer" category could be introduced that provides Hydro One R2 and/or R1 customers (highest distribution rates) who are already OESP eligible with the enhanced credit.
- **Variance Account:** The OEB has been collecting program funding in excess of program costs and has accrued a positive balance. This balance must be addressed when moving to the tax base.

# 2c. Low Income Conservation Benefit Program

- Existing low income programs delivered by LDCs and IESO help qualified homeowners and social and/or assisted housing providers improve the energy efficiency of their homes.
  - Programs include the Home Assistance Program and the Retrofit Program (Social Housing Stream).
- A new Low Income Conservation Benefit Program would build on existing programs.
  - Participants could receive incentives for conservation measures not currently covered (e.g. air conditioning, heat pumps (electric heated homes)).
  - Increased incentive amounts (e.g., under the existing Retrofit Program, incentives cover approx. 60% of the total cost of the energy efficiency upgrade).
  - Targeted education and awareness initiatives.
- The new program would be delivered through LDCs and/or IESO.
- The new program would coordinate with CCAP initiatives.
- The budget estimate below is illustrative and assumes annual program budgets three times the 2015 spending for the Home Assistance Program.

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| Proposed Budget ($ Million) | $60 | $60 | $60 | $60 | $60 | $60 |

- Further analysis is required on costing and implementation details, including alignment with the Conservation First Framework.

# 3a. IESO – Market Renewal

- Continue to move forward with Independent Electricity System Operator's (IESO) Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 3b. OEB – LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
- Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
  - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.
- Over the same time period, distribution sector productivity and cost efficiency have decreased. This trend raises concern that customers are not realizing a net benefit from sector cost increases, as customers receive less value from the distribution portion of their bill.
  - OM&A costs per customer have increased on average from $235 in 2006 to $319 in 2015.
  - For the period 2002-2012, sector productivity has decreased by an annual average of -0.93% when including Hydro One and Toronto Hydro, the worst performers.
- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentive for consolidation \further changes to the tax incentives and/or revisiting legislated consolidation could be considered.
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- ENERGY could help promote or accelerate these efforts by asking the OEB – through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and/or the 2017 Mandate Letter and other agency business planning processes – to consider opportunities to further drive these efficiency, productivity, and performance improvements.

# 3b. OEB – LDC Efficiencies and Rates – Potential LDC Cost Reduction Measures (cont'd)

| Option | Description | Potential Cost Impacts* | Timeline** | Notes |
|---|---|---|---|---|
| **Performance Standards with Rewards & Penalties** | Strengthen LDC scorecard by connecting to LDC financial performance through earnings sharing or penalties paid to consumers.<br>Ex: SAIDI/SAIFI; OM&A per customer | • 1-2% of revenue requirement could be recycled back to customers.<br>• Performance penalties would be real, periodic on-bill $ reductions.<br>• Cost reduction would only occur if standards are not met. | 1 year | UK Regulator Ofgem requires utilities to pay consumers up to £50 if reliability standards are not met. |
| **Enhanced Economic Regulation** | Revise rate-setting to reflect tightening productivity requirements and capital cost avoidance. | • <1% reduction in rates annually, with additional capital investment avoidance.<br>• Methods include stronger productivity factors, broader peer comparisons, and elimination of ICM. | 1-3 years | Incents innovation by requiring LDCs to provide equal or better service on less inflation-adjusted revenue annually. |
| **LDC Collaboration Incentives** | Create regulatory incentives for LDCs to pursue efficiencies and service sharing agreements. | • Potential to avoid individual LDC capital investments of up to six figures, plus additional OM&A tightening.<br>• Actual level of rate reduction dependent on specific LDC proposals. | 1 year for new guidelines, savings to be realized through LDC planning process. | LDCs have already indicated an interest in pursuing such arrangements but have expressed concern on regulatory barriers and costs. |
| **Line Loss Accountability** | Create appropriate benefit-sharing mechanism so LDCs are incented to pursue line loss reductions. | • Potential for 1-3% reduction in commodity charges associated with losses.<br>• Requirements dependent on business cases so costs don't outweigh benefits. | 1-2 years | Potential linkages with related proposal for in-front of the meter conservation. |



***Note:** Dependent on implementation specifics as determined by OEB



****Note:** Timelines begin from Ministry approval of OEB LTEP Implementation Plan

# 3b. OEB – LDC Efficiencies and Rates – Considerations

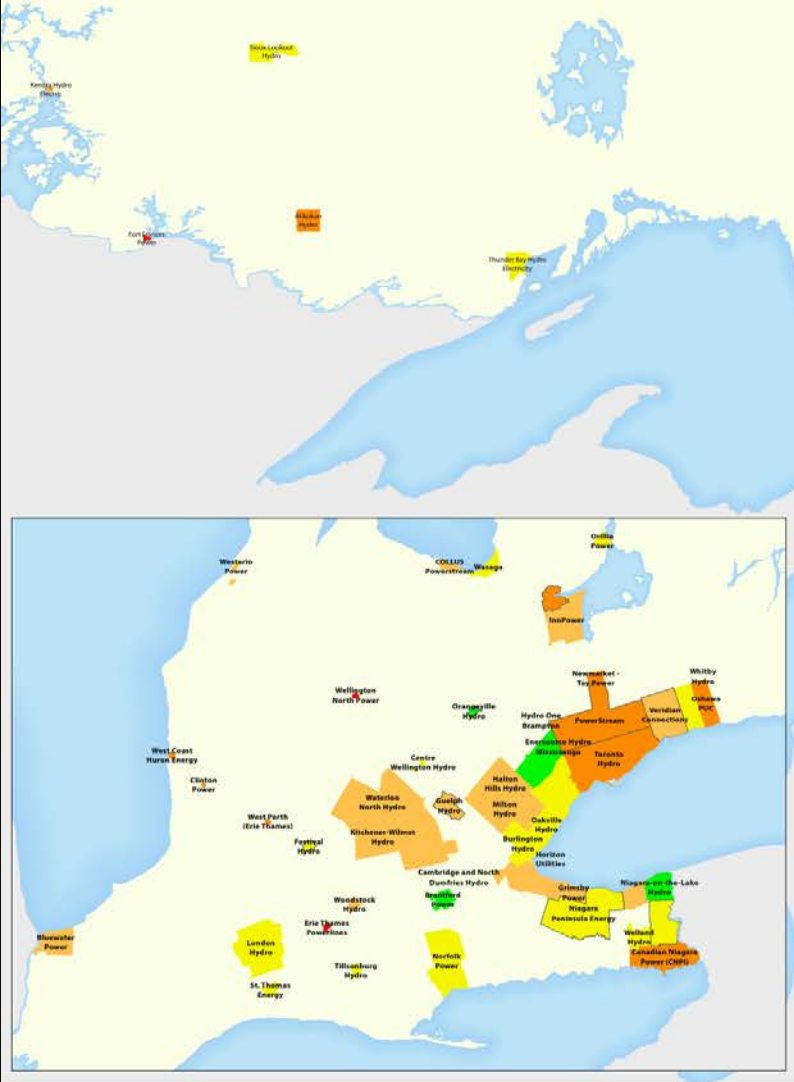
***Sector:***

- Exact bill reduction levels are unknown, but real OM&A and some capital cost avoidance can reasonably be expected.
- Could indirectly incent consolidation if LDCs feel they are unable to adequately manage their assets in light of tightening requirements.
- Any initiatives that have a direct impact on LDC profitability could affect the value of Hydro One.
- There is a tension between requiring productivity enhancements and creating firm performance standards. LDCs have to invest to maintain system levels, but also finding cost efficiencies, which is an incentive for innovation. The Ministry and the OEB may have to also explore reducing regulatory burden/barriers on LDCs so they have the tools available to satisfy new performance expectations.

***Regulatory:***

- The OEB is the electricity distribution sector's independent regulator and as such is responsible for establishing rate-setting mechanisms in line with its statutory objectives.
  - The Ministry would engage with OEB to align on approach, and provide only high-level direction so as to respect OEB's role in determining implementation specifics.
  - The OEB would likely need to conduct policy hearings and stakeholder consultations on these initiatives, though Ministry could request new rules be in place for next major LDC rate cycle.
- LDCs are resistant to peer comparison for a variety of historical and service territory issues. OEB econometric analysis has generally supported limiting peer comparisons. As comparisons would be an important component of benchmarking performance standards, the Ministry may experience sector pushback.
- Updating rate-setting mechanisms and regulatory processes could create regulatory uncertainty and limit LDC activity. The OEB has revised its processes multiple times over the past 15 years.

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

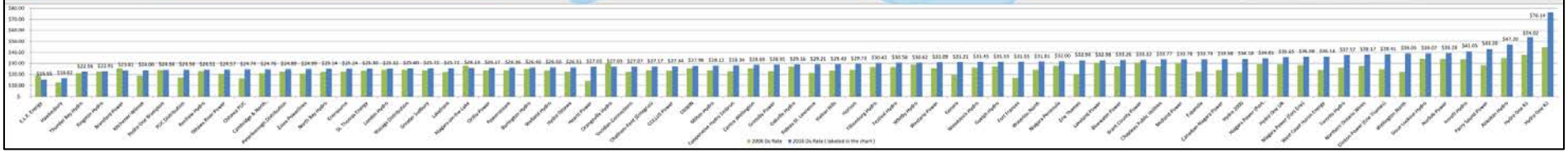
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# 3c. OPG – Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

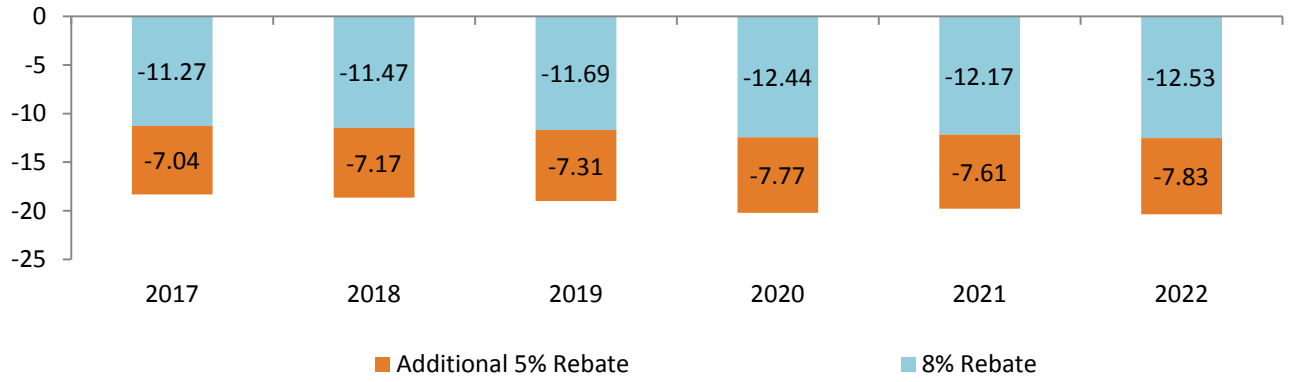
**Considerations**

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

# 4. Enhanced Tax-Base RPP Rebate (5%)

- Enhancing the rebate by a further 5% on the amount before tax provides an average savings of about $7 each month or $84 annually for a typical residential electricity consumer.
- As of January 1, 2017, electricity consumers eligible for the Regulated Price Plan (RPP) receive an 8% rebate equivalent to the provincial portion of HST on their pre-tax bill.
- The eligibility criteria for the 8% rebate is as follows:
  - Consumers with a demand of 50 kW or less;
  - Consumers with a demand of 250,000 kWh/year or less;
  - Farms;
  - Multi-unit residential buildings and other facilities used as residential rental units;
  - Dwellings;
  - Condominiums; and
  - Co-operatives with housing units.

**Benefit for a Typical Residential RPP Consumer**
*in $/750-kWh month*



# 4. Enhanced Tax-Base RPP Rebate (5%) (cont'd)

**Considerations**

- Amendments would be required related to the *Ontario Rebate for Electricity Consumers Act, 2016.*
- The Act authorizes the making of regulations to reimburse electricity vendors for amounts credited to consumers' accounts under the Act. The Act authorizes the making of other regulations to put in place mechanisms needed to implement the financial assistance.
- The rebate could be made retroactive to January 1, 2017. Similar to the current 8% rebate, electricity consumers would receive a retroactive payment once the local distributor begins issuing the rebates if the distributor needs more time to adjust its billing systems.

**Fiscal Cost of an Enhanced Rebate**
*in $millions*

| Cost ($M) | 2016-2017 | 2017-2018 | 2018-2019 | 2019-2020 | 2020-2021 | 2021-2022 |
|---|---|---|---|---|---|---|
| **Cost of 8% rebate** | 271 | 1,119 | 1,086 | 1,171 | 1,159 | 1,208 |
| **Cost of 13% rebate** | 440 | 1,818 | 1,764 | 1,903 | 1,884 | 1,963 |
| **Cost of incremental 5% rebate** | 169 | 699 | 679 | 732 | 724 | 755 |

# Appendix

# Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are ailed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

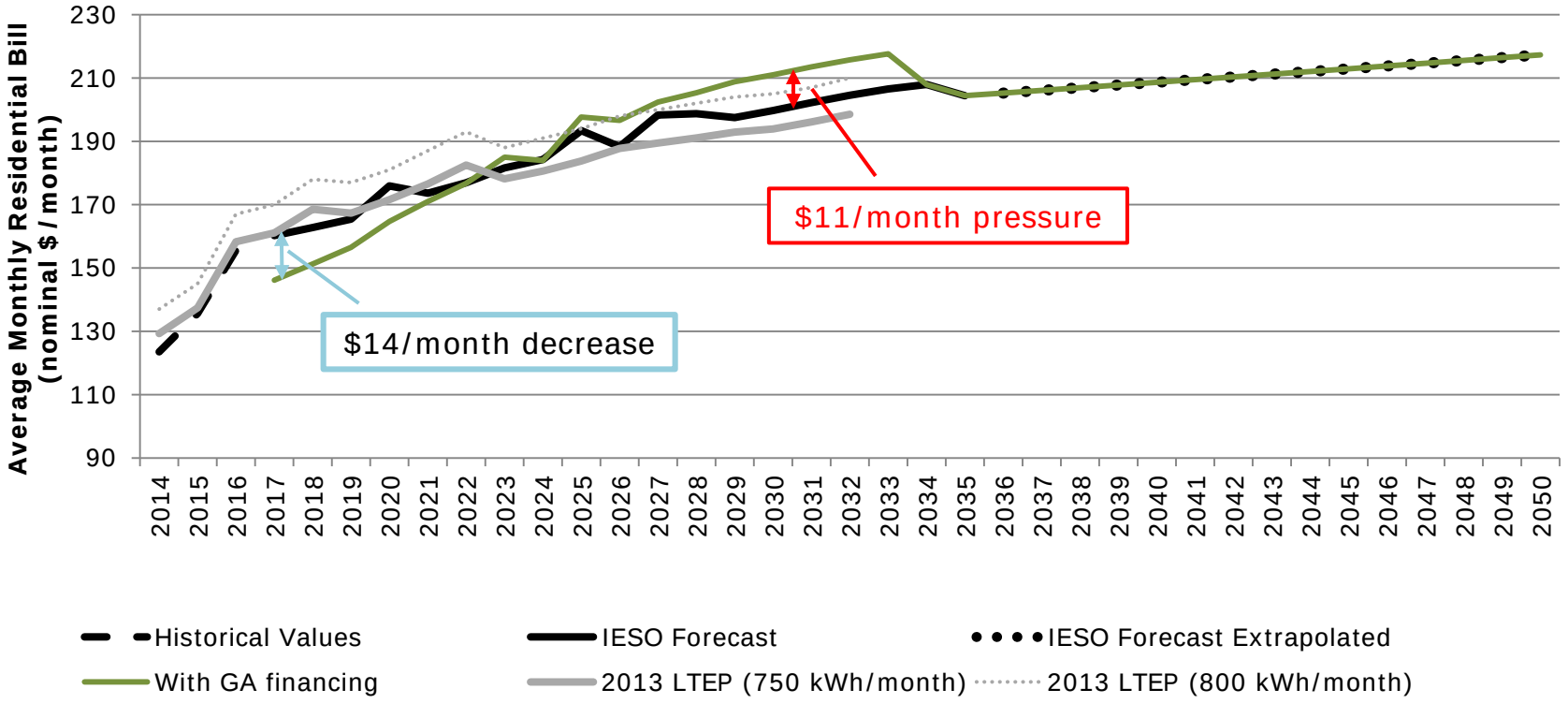
- Given that these programs focus on promoting equity between different area of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.

# Global Adjustment (GA) Financing

- The global adjustment (GA) is comprised of costs for regulated and contracted generation, as well as conservation.
- Some contracted generation assets are expected to have a useful life that extends beyond the term of their current financial contracts (typically 20-years).
- Similarly, conservation costs are recovered through the GA on an annual basis while conservation initiatives provide benefits to the electricity system over the course of many years.
- Since the GA only includes costs related to the contractual life of these assets, there may be an opportunity to recognize the longer-term benefit of these assets to the electricity system and “bring forward” that benefit for ratepayers today, while deferring some of the current costs.
- An indicative GA financing proposal is presented that lowers ratepayers costs over the short term by borrowing money but increases costs over the long term when GA costs are forecast to be lower.
- **Note:** Not all generating assets will continue operations at the end of their contract term. Regulatory constraints (i.e., nuclear licences) or low demand conditions (i.e., as experienced with current expiring NUGs) would mean that some generators will shutdown at the expiry of their contract. Future ratepayers would be paying for these assets that are no longer producing power.

# Low / GA Financing – Impact on Residential Electricity Bills

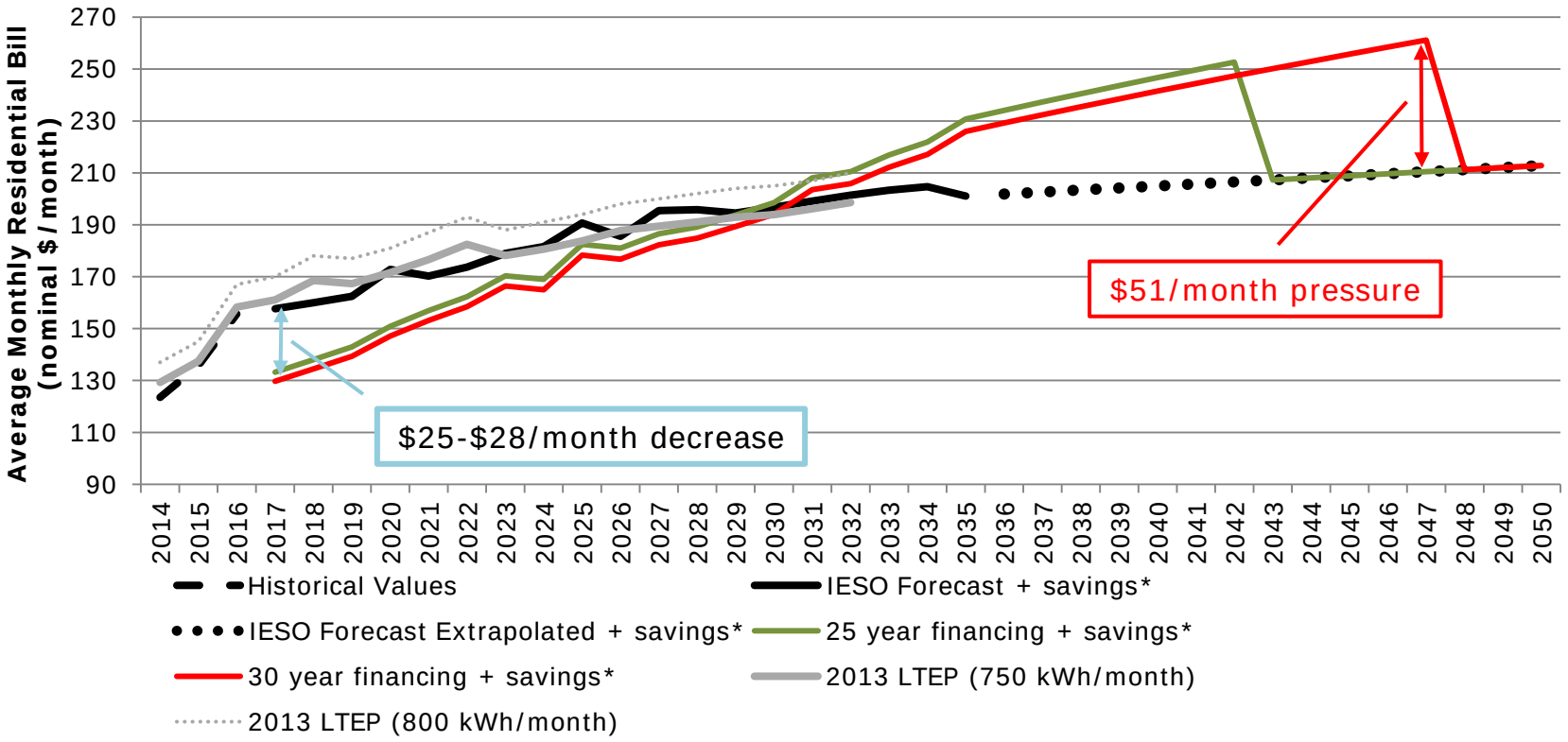
- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $2.5 billion and increases at 2% each year – up to a cap of no more than $2 billion more than the true cost of GA in any year – until the borrowed money is paid back in 2032.




- By **borrowing up to $9.3 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $14/month** at the cost of **increased future electricity bills over 10 years of up to $11/month** above the true cost of electricity production.

# High / GA Financing – Impact on Residential Electricity Bills

- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $4.4 and $5 billion and increases at 2% each year until the borrowed money is paid back over a 25 and 30 year financing period respectively.

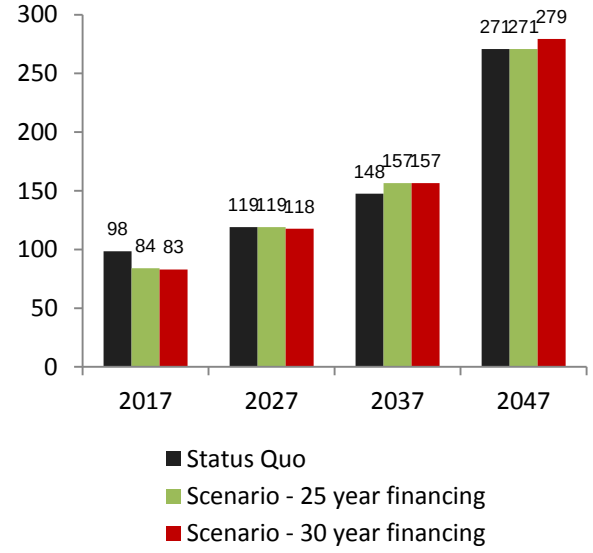



- By **borrowing up to $65 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $25-$28/month** at the cost of **increased future electricity bills over 12-17 years of up to $46-$51/month** above the true cost of electricity production.

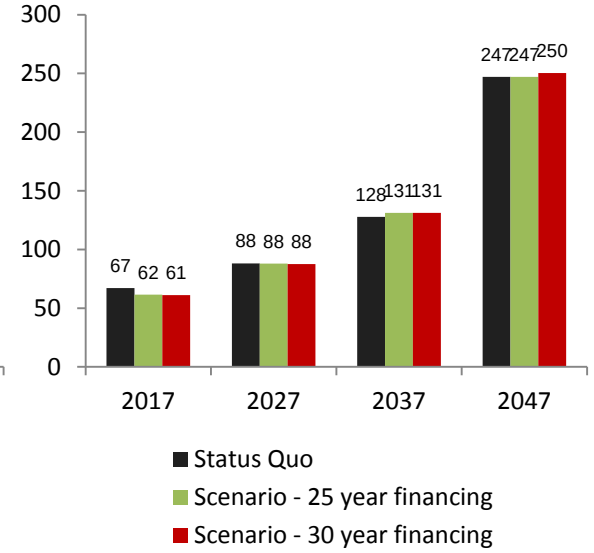
# GA Financing – Illustrative Impact for Large Industrial Electricity Consumers

- Below graphs illustrate the estimated impact under the moderate GA financing scenario for an average Class A electricity consumer, a consumer that pays low GA (i.e., pulp and paper) and high GA (i.e., refining and chemical manufacturing).

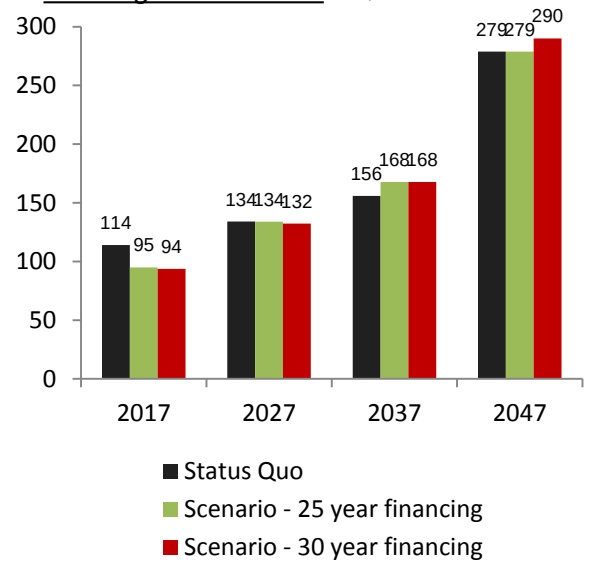
**Estimated All-In Electricity Price**
*for Average Class A in $/MWh*




**Estimated All-In Electricity Price**
*for Pulp & Paper in $/MWh*

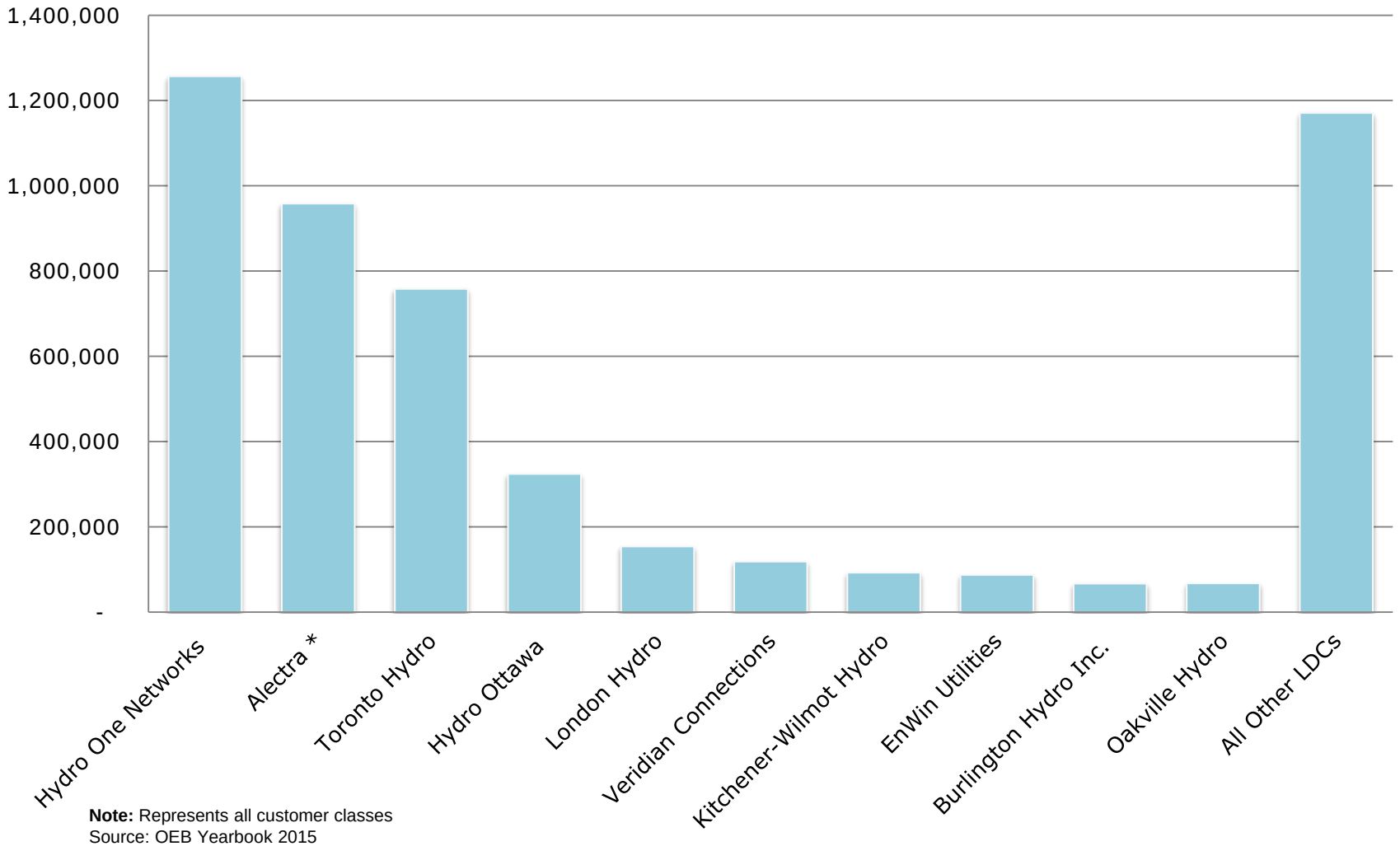



**Estimated All-In Electricity Price**
*for Refining & Chemicals in $/MWh*




**Note:** Assumes that demand by industrial sector continues at average 2011-2015 levels.

# Largest LDCs by Customer Base




**Note:** Represents all customer classes
Source: OEB Yearbook 2015
*Recently approved merger of Powerstream, Enersource, Horizon, and Hydro One Brampton

# Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the contract holders agreeing to a lower price in the near term.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period; discussions/consultation may be required in advance of this potential option moving forward.

# Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- The Province is not a party to the contracts and has never been involved in the negotiation of the contracts themselves. IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is also required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

- Extending contract terms would reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

# Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.
- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.
- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
- **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 Million | $582 Million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - **Illustrative Example:** New contract for 27 years at $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 Million | $632 Million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# Extend Length of Existing Wind / Solar Contracts (cont'd)

- Below are illustrative estimates of potential GA savings if all contracts for large FIT and GEIA wind and solar projects in commercial operation are renegotiated according to the approaches illustrated above.
- Estimates are for large (10 MW or greater) FIT 1 and GEIA wind and solar projects in commercial operation, totalling about 2,700 MW of wind and about 900 MW of solar capacity. A 10 year contract extension is assumed at a price of:
  - **For Wind:** LRP I low weighted wind price of $64.5/MWh
  - **For Solar:** LRP I low weighted solar price of $141.5/MWh

**Potential Approach 1:**

| | **Current Contracts*** | **New Extended Contracts** |
|---|---|---|
| Total Value (NPV 2017) | $22.9 Billion | $22.8 Billion |
| Average Annual Contract Value (First 5 Years) | $1.5 Billion | $1.3 Billion |
| *Figures assume projects remain operational after contract expiry at the LRP I low weighted price inflated to the year of contract expiry, as per OPO assumptions . | | |

**Potential Approach 2"**

| | **Current Contracts** | **New Extended Contracts** |
|---|---|---|
| Total Value (NPV 2017) | $ 22.9 Billion | $ 25.3 Billion |
| Average Annual Contract Value (First 5 Years) | 1.5 Billion | $1.0 Billion |

# Extend Length of Existing Wind / Solar Contracts (cont'd)

- Contract re-negotiations could be piloted with large wind and solar contract holders.
- For example, the top 5 contract holders by portfolio value (online projects 10 MW and larger) include:

| Contract Holder | Technology | # of Contracts | Capacity (MW) | Estimated Value (NPV 2017) |
|---|---|---|---|---|
| Samsung | Wind & Solar | 5 | 799 | $4.6 Billion |
| NextERA | Wind | 6 | 534 | $2.7 Billion |
| Pattern / Capital Power | Wind | 1 | 270 | $1.5 Billion |
| ENGIE | Wind | 4 | 265 | $1.2 Billion |
| Northland Power | Wind & Solar | 15 | 290 | $1.2 Billion |

# Other Options Considered – Typical Residential Electricity Consumer

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| b. Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |
| Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Options Considered – Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| b. Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |
| Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

| | |
|---|---|
| **From:** | John Kim |
| **To:** | John Kim |
| **Subject:** | Fwd: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 3:35:04 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx<br>ATT00001.htm<br>Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy_SIFBEFBmarkup.pptx<br>ATT00002.htm |

---

Begin forwarded message:

**From:** Gavin He <Gavin.He@ofina.on.ca>
**Date:** January 14, 2017 at 12:27:47 PM EST
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>, John Kim <John.Kim@ofina.on.ca>, Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject: RE: Rate Mitigation**

Hi Directors,

FYI - In case you don't have it, please attached the note that was shared with DMO back in December. In addition, I have attached the "Proposed Initiatives to Transform Ontario's Electricity Sector" deck with edits from your Branch last month.

Regards,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,

Ron

Begin forwarded message:

> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation
>
> Good morning,
>
> Attached are materials for Monday's rate mitigation meeting.
>
> Keley
>
> Original Message
>
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
>
> Sent: Saturday, January 14, 2017 7:49 AM
>
> To: Orsini, Steve (CAB)
>
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
>
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

Sent from my iPad

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its deck.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

Energy's proposals generally involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value, including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |
| **E**nd the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

<u>OESP & RRRP (Total of about $0.4 to 0.45 Billion/year</u>):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

<u>Fund Conservation Programs through the Tax-Base</u>:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**December 12, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8%  per cent rebate ($11/month savings), updating RRRP ($45/month savings, combined with the 8% rebate), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured,  the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP),  which provides an opportunity to consider a range of policy changes to  how the Ontario energy sector operates.

# Broad Policy Themes / Rationale

- No longer use rate-base to pay for social programs [despite the system benefit rationale] by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.
- Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.
- Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" beyond the Moving Ontario Forward initiative to make certain investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties ~~and expansion of natural gas to rural areas~~, etc. (note that expanding access to natural gas is already included under Moving Ontario Forward.)
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" a single rate plan as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time.
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.16 | 2.31 | 2.41 | 2.49 | 2.54 | 2.58 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.13 | 0.13 | 0.14 | 0.14 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.88 | 3.08 | 3.21 | 3.33 | 3.39 | 3.44 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 2.82 | 3.05 | 2.47 | 2.56 | 2.13 | 2.14 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.10 | 0.10 | 0.11 | 0.11 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Taxpayer Funded Electricity Price Mitigation

| *($M)* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | | 398 | 419 | 433 | 447 |
| 2. Expand the OESP (i.e., 50% increase) | TBD | TBD | TBD | TBD | TBD |
| 3. Fund Conservation Programs Through The Tax-Base | 110 | 450 | 450 | 450 | 450 |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC efficiencies | - | - | - | - | - |
| c. OPG – Borrowing | - | - | - | - | - |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | 110 | 450 | - | - | - |
| 8. Cancel / Adjust FIT | - | - | - | - | - |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| 2. Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy

# Considerations / Outcomes

- The proposed initiatives provide the following opportunities to:
  - Lower the cost of electricity for all consumers;
  - Re-set how electricity programs and energy infrastructure is funded (i.e., shifting costs to the tax-base from rate-base);
  - Provide electricity consumers with greater choices (i.e., signal rate plan);
  - Provide system benefits (e.g., market renewal); and
  - Increase cost effectiveness and improve efficiency.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | John Kim |
| **Subject:** | Fwd: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 4:03:21 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v7 (CEFD).docx<br>ATT00001.htm<br>Proposed Initiatives to Transform Ontarios Electricity Sector 20170113_CEFD.pptx<br>ATT00002.htm |

---

Begin forwarded message:

> **From:** "Francisco Chinchon" <Francisco.Chinchon@ofina.on.ca>
> **To:** "John Kim" <John.Kim@ofina.on.ca>, "Emily Kerr" <Emily.Kerr@ofina.on.ca>
> **Subject: RE: Rate Mitigation**
>
> Hi John, Emily,
>
> I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.
>
> I also made some edits to Energy's slides but not sure those are needed.
>
> Thanks,
>
> Francisco
>
> > -----Original Message-----
> > From: John Kim
> > Sent: Saturday, January 14, 2017 11:45 PM
> > To: Emily Kerr <Emily.Kerr@ofina.on.ca>
> > Subject: RE: Rate Mitigation
> >
> > Hi Emily,
> >
> > Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.
> >
> > Thanks,
> >
> > John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation

Good morning,

Attached are materials for Monday's rate mitigation meeting.

Keley

Original Message

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>

Sent: Saturday, January 14, 2017 7:49 AM

To: Orsini, Steve (CAB)

Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

Hi Steve,

Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility** | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| **Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time** | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value (share price) and impact fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |

| | |
|---|---|
| | • In the case of projects located in First Nation territories it could have an upfront fiscal impact if Province is not able to amortize those projects (TBC with OPCD).<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a windfall. It was fiscally neutral, it represented revenue to OEFC and an expense to Hydro One.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates<br>• OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding th Global Adjustment (GA) |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |

**Detail on Proposals**

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.

  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income (revenue) to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income (expense) of Hydro One.
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- Having OEFC help implement this measure may require introducing changes to OEFC's objects as is legal mandate is to help reduce and pay down stranded debt.
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.

**Commented [JK1]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

**Commented [JK2]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.

- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of options to delay recovery of part of the Global Adjustment (GA) by debt financing and recovering over a 25 to 30 year period.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1:
  - Option 2:
  - Option 3:
  - Option4:
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

[Check and Update]

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**~~December 12~~January 15, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

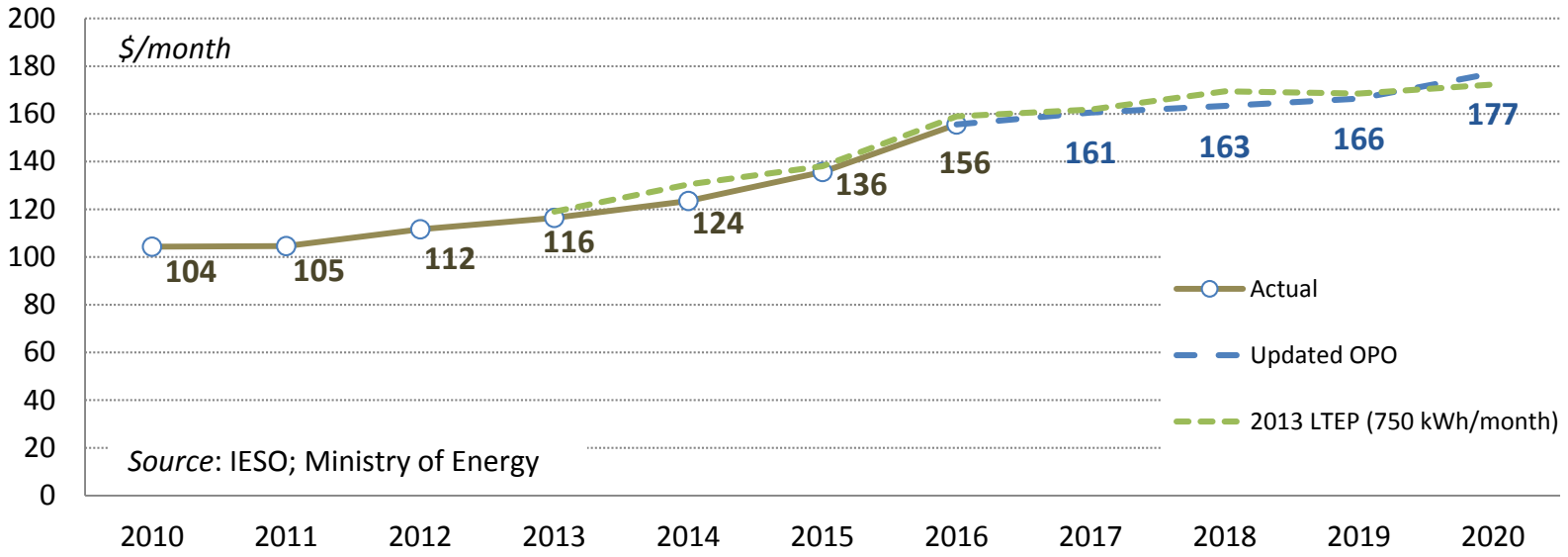
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast*




**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Broad Policy Themes / Rationale

- Support the continued reduction in the differential across distribution rates (as charged by Local Distribution Companies) across the Province through the potential enhancement of Rural or Remote Electricity Rate Protection, (RRRP). In order to not increase regulatory costs to customers as a result, this program can be moved to the tax-base.
- Provide a greater focus and support on lower income Ontarians by funding the Ontario Electricity Support Program (OESP) through the tax-base, as well as enhancing the support available through the program.
- Amortize electricity conservation and demand management (DM) programs over 15-years to provide lower costs for electricity consumers.
  - Alternatively, pay for conservation/DM programs through the tax-base and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties and expansion of natural gas to underserved areas (i.e., rural and remote communities), etc.
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" an alternative rate plan, based on a flat electricity rate, as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time. Also give consumer greater transparency with respect to electricity costs by providing more details regarding the Global Adjustment (GA).
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers, a benefit of $7/MWh.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 1.53 | 1.58 | 1.61 | 1.66 | 1.70 | 1.74 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.57 | 0.79 | 0.98 | 1.13 | 1.29 | 1.44 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC Efficiencies/Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.71 | 0.89 | 1.08 | 1.22 | 1.35 | 1.24 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. v Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 2.04 | 2.10 | 2.15 | 2.22 | 2.27 | 2.32 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.76 | 1.05 | 1.31 | 1.51 | 1.71 | 1.92 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC Efficiencies / Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.59 | 0.74 | 0.89 | 1.01 | 1.12 | 1.03 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Taxpayer Funded Electricity Price Mitigation

| *$M* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. Fund RRRP through the Tax-Base* | - | 666 | 684 | 700 | 719 |
| 2. Fund OESP through the Tax-Base | | | | | |
| a. Enhance OESP Benefit | | 162 | 226 | 279 | 322 |
| b. Expand OESP Eligibility | | TBD | TBD | TBD | TBD |
| 3. Conservation Funding Options | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | - | - | - | - | - |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | 100 | 390 | 390 | 390 | 390 |
| 5. Dedicate Departure Tax | 260 | 260 | 260 | 260 | 260 |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC Efficiencies / Rates | - | - | - | - | - |
| c. OPG – Operational Efficiencies | - | - | - | - | - |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers) | 110 | 450 | - | - | - |
| 9. Extend the Length of Existing Wind/Solar Contracts at Lower Prices | - | - | - | - | - |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| Fund Conservation Programs Through The Tax-Base | 154 | 632 | 649 | 567 | 568 |
| Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy
**Note:** *Assumes RRRP enhancement to reduce distribution rates to $30 for LDCs and **Assumes increase OESP credit by 50%.
Not included in chart is additional $18M/year to fund potential First Nations rate program through the Tax-Base.

# Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are aimed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

- Given that these programs focus on promoting equity between different areas of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.
  - These enhancements would also work in conjunction with the Ontario Energy Board's focus on reducing LDC costs outlined in option 6b.

# 1. Rural or Remote Rate Protection (RRRP) Expansion

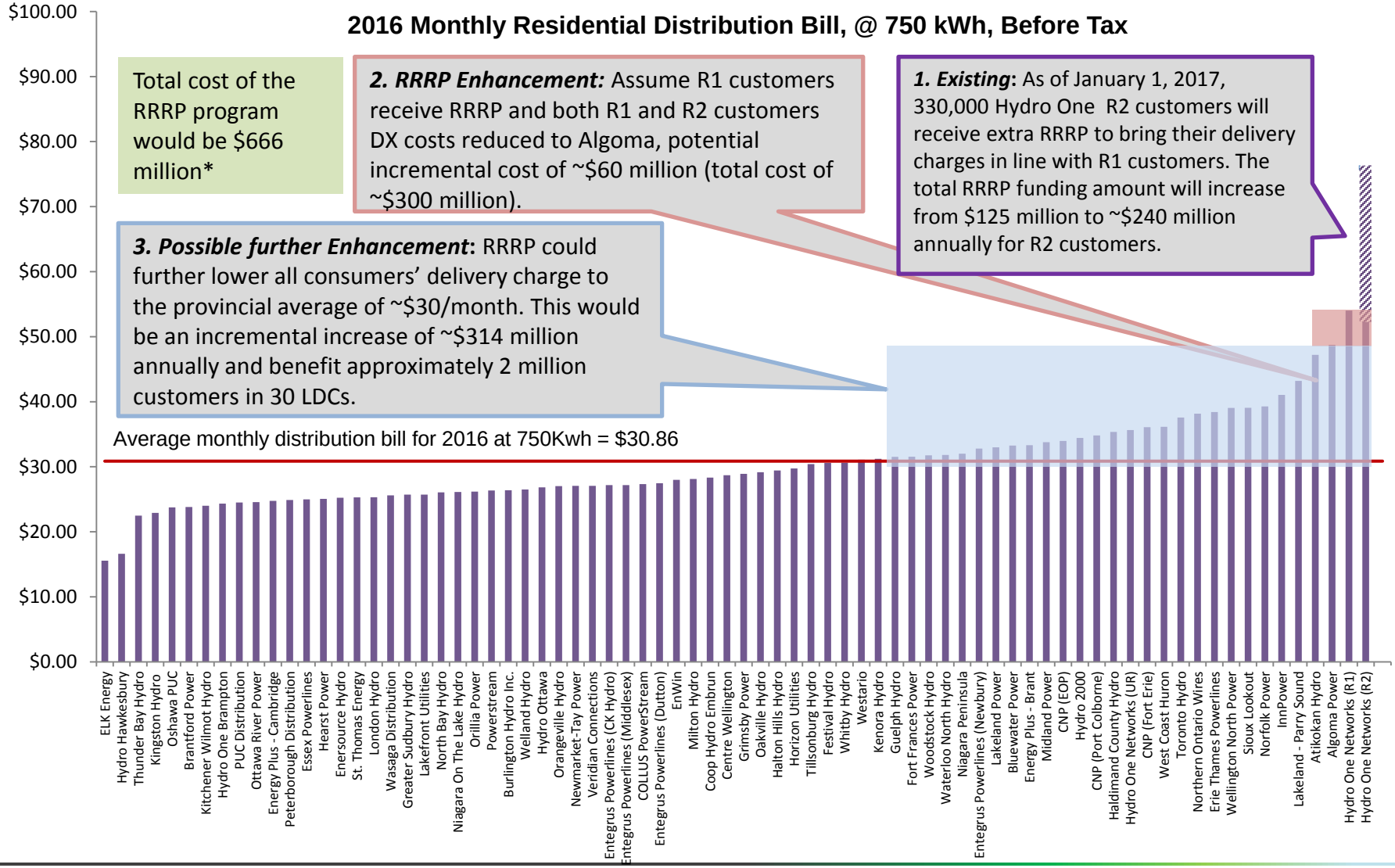
- The Rural or Remote Rate Protection (RRRP) program supports the most costly-to-serve distribution customers in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
  - Costs to these Hydro One customers are higher than average because of their relatively low density. The OEB mandates that they pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies.
  - To mitigate these costs, the RRRP was recently enhanced to help lower the bills of Hydro One's R2 customers to around those of its R1 (medium density) customers.
- Although other LDCs do not have medium- and high-density rates, there is a wide range of distribution costs between LDCs. The RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - Could be done on its own or as part of exploring an Ontario-wide uniform "postage stamp" delivery rate.

**Considerations**

- RRRP will be enhanced for R2 customers on January 1, 2017 to have their costs reduced to approximately R1 distribution costs levels. The RRRP could be further enhanced to include R1 customers, and have R2 and R1 customers reduce their costs down to Algoma (see next slide). This would cost $300 million in the first year (and would adjust year over year).
- If there was a desire to reduce costs for all LDCs, a simple average of distribution cost before tax, across all rate zones is $30.86 per month, for a residential customer consuming 750 kWh per month.** Bringing all delivery rates down to this average would cost approximately $500 million for the first year, with escalation in line with average distribution rate increases.
  - This assumes Hydro One R2 consume 1,200 kWh and H1 R1 customers consume 1,000 kWh per month.
- If all customers were brought down to the average costs (see the chart on the next slide for more detail):
  - It is assumed that residential customers with bills less than the provincial average see no change;
  - Majority of the enhanced benefit would go to Hydro One R1 and Toronto Hydro customers; and
  - Mechanism to ensure that LDCs continue to be motivated to achieve efficiencies would need to be designed (see section 4).
- Enhanced RRRP support may be best provided from the tax-base, because if funded from the rate-base, it would increase the costs for all customers who may argue that it is unfair that they are being asked to pay more to subsidize those in other LDCs.
- In conjunction with using the tax-base to reduce delivery charges to the provincial average, the OEB could be asked to explore moving to a province-wide "postage stamp" delivery rate that would be the same across the province to be implemented over time.
  - Could be "winners and losers" as delivery rates less than the average would go up in a postage stamp model;
  - A "postage stamp" model could help incent LDC consolidation.

**Note:** This is based on preliminary estimates and the amount will fluctuate on monthly consumption from customers and LDCs have different customer base with different consumption types.

# 1. Rural or Remote Rate Protection (RRRP) Expansion (cont'd)




*Note: this includes the ~$50M currently supporting Algoma Power and Hydro One Remotes.*

# 2a. Enhance Ontario Electricity Support Program (OESP) Benefit

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills. The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices and at launch, it was estimated ~560,000 families could be eligible and some 261,000 applications have been submitted.

- The OESP program benefits could be increased across the board by 50%, which would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).

- The OESP program could also be further enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).

**Considerations**

- If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible.
  - At the time of program design, advice was given that a 40-50% participation rate would be high for an application-based program delivered through electricity bills.
  - The province would need to work with LDCs if the rebate was to appear on electricity bills rather than be delivered via the income tax system (e.g., through the Trillium Benefit).

# 1 & 2a. Fiscal Impacts of RRRP, OESP and First Nation Rate

- Table below shows estimates of program costs up to 2022:

| Year | OESP ($M) | OESP + 50%($M) | RRRP($M) | RRRP Enhancement ($M) | First Nations Delivery Rate($M) | TOTAL RANGE ($M) (from status quo to OESP and RRRP enhancements) |
|---|---|---|---|---|---|---|
| 2017 | $108 | $162 | $292 | $374 | $18 | $418 to $846 |
| 2018 | $150 | $226 | $300 | $384 | $18 | $468 to $928 |
| 2019 | $186 | $279 | $306 | $394 | $18 | $510 to $997 |
| 2020 | $215 | $322 | $315 | $404 | $18 | $548 to $1,059 |
| 2021 | $243 | $365 | $322 | $415 | $18 | $583 to $1,120 |
| 2022 | $272 | $408 | $329 | $426 | $18 | $619 to $1,181 |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections above assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
   - The second column forecast also assumes the existing credit amounts increase by 50%.
     - Forecast assumes 10% administration costs
     - Forecast does not account for the approximately 142,000 low-income households that OEB estimated are not eligible because they do not directly receive an electricity bill.

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.
   - Expansion to cap distribution rates for other customers is based at $374M and assumes escalation of 2.6% (historical average dx rate increase). This is a conservative estimate, as Hydro One and Toronto Hydro increases could drive program costs beyond the average increase.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 2b. Expand OESP Eligibility

**Expanded Coverage**

- When OESP was being created, the OEB estimated that are 713,000 low-income households, of which 20% do not receive electricity bills. Thus, only 571,000 would potentially be eligible for OESP.
- If moved to the tax base, the OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity.

**Eligibility Categories**

- OESP has two credits amounts:
    1) Basic credit of $30-50 per month, based on the level of income and the number of residents.
    2) Enhanced credit of $45-75 per month for those with unique electricity needs:
        a) Electric heating,
        b) Indigenous customers, and
        c) Certain electrically intensive medical devices.
- The enhanced credit can be expanded to include additional eligibility categories of customers. For example, a new “Low Density Consumer” category could be introduced that provides Hydro One R2 customers (highest distribution rates) eligible for OESP the enhanced credit.

**Considerations**

- Potential costs for expanded coverage and new eligibility categories depend on updated estimates and changes to program design and delivery.
- There would be value in keeping the OESP as an income-tested program to distinguish it from other initiatives (e.g. RRRP, which is designed to address disparity between rural and urban distribution costs).

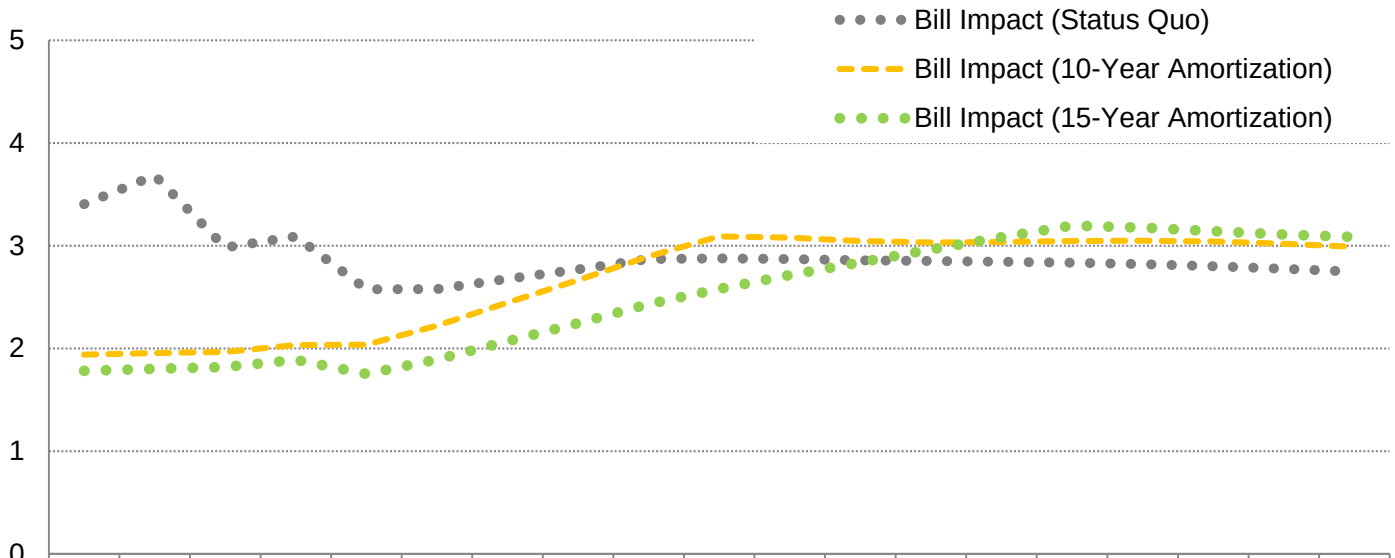
# 3a. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized. This would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs).
  - The time period over which costs could be amortized would be over the lifetime of funded CDM measures.
  - ENERGY is working with IESO to determine the appropriate lifetime period – the graph on the next slide, which illustrates residential bill impacts, presents two cases: **10-year and 15-year measure lifetimes**.
- In both cases, amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020. Over time the benefit would decrease and turn into a cost (higher electricity rates than would otherwise occur), as interest charges begin to grow. Estimated interest charges are as follows (a 3% interest rate is assumed; increases in interest rates could result in higher overall interest charges):
  - $712 million ($2016) – Amortizing eligible 2017-2035 CDM costs for 10-year period; and
  - $1.3 billion ($2016) – Amortizing eligible 2017-2035 CDM costs for 15-year period .
- Legislative changes would be needed to allow recovery of interest payments from ratepayers, or these costs could be recovered from the Consolidated Revenue Fund (CRF, or taxes).
- An alternative that could be explored would be to pay for CDM costs, or for a portion of these, from the tax-base (*see Appendix for more detail on tax funding option*).

# 3a. Amortize Conservation Program Costs (cont'd)

## Conservation Residential Bill Impact – Status Quo, 10-Year and 15-Year Amortization

***CDM Bill Impact ($/month)***




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bill Impact (Status Quo) | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | 2.68 | 2.77 | 2.87 | 2.88 | 2.87 | 2.86 | 2.85 | 2.84 | 2.83 | 2.82 | 2.80 | 2.78 | 2.75 |
| Bill Impact (10-Year Amortization) | 1.94 | 1.95 | 1.97 | 2.03 | 2.04 | 2.22 | 2.45 | 2.67 | 2.90 | 3.09 | 3.08 | 3.05 | 3.03 | 3.04 | 3.04 | 3.05 | 3.04 | 3.02 | 2.99 |
| Bill Impact (15-Year Amortization) | 1.78 | 1.80 | 1.82 | 1.89 | 1.75 | 1.89 | 2.07 | 2.25 | 2.43 | 2.58 | 2.71 | 2.84 | 2.96 | 3.08 | 3.20 | 3.18 | 3.14 | 3.11 | 3.09 |

Source: IESO; Ministry of Energy

**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10 of 15-year borrowing rate of 3.0%.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.
- Legislative amendments would be needed to allow recovery of loan interest charges from GA.
- ENERGY staff have developed a note to seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
- ENERGY is working with IESO to seek an opinion on the proposal from IESO's external auditor.
- ENERGY would then send the IESO external auditor's opinion along with ENERGY's explanatory note to the Ontario Provincial Controller (OPC) to seek a formal opinion on whether CDM costs could be amortized according to rate-regulated accounting standards.
- Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 3b. Rate Smoothing of Conservation Program Costs

- "Rate smoothing" could achieve the same rate reduction effect as amortization.
- Instead of taking out a loan to amortize conservation costs, a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Each year, IESO would defer recovery of a portion of annual conservation costs. Financing would also be required, such as from the OFA, to pay the interest on the deferral account. Interest would accrue on the deferred amounts, likely at the same rates as for the amortization option.
- Deferred costs could be recovered over any time period. If a 10 or 15 year-period was chosen, the rate impacts would be the same as in the amortization option.

**Considerations**

- Option would **not** require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open the Ministry to criticism by the Controller and/or Auditor General since the rate impact is the same.
- The Ministry would have more control under this option to change deferred amounts each year, as opposed to the terms set by a loan agreement under the amortization example.
- There is precedence to this approach for nuclear investments, which otherwise would result in volatile increases and decreases for Ontario ratepayers over the investment period. In 2015, the Ministry amended a regulation that requires the Ontario Energy Board (OEB) to set "smoothed" nuclear rates for OPG's Darlington and Pickering nuclear stations over a 20-year period.
  - The regulation allows OPG to defer recovery in rates of a portion of its nuclear revenue during the Darlington refurbishment (expected to be complete in 2026) and recover these deferred costs over the remaining ten years.
  - OPG will establish a "deferral account" to record the deferred amounts each year up to 2026 plus accumulated interest on the balance to reflect OPG's financing costs as a result of rate smoothing. The deferral account is then drawn down on a straight-line basis between 2026 and 2036.
- At minimum, new regulation would be required. However, further analysis is needed to determine the relevant regulation or legislation, to be amended for IESO (e.g., OEB regulation of IESO costs and fees, GA regulation for how IESO recovers its conservation costs from ratepayers).

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure

- Fund investments in specific energy infrastructure projects through the tax-base. **Note:** This could include the provincial portion of funding for the Remote First Nation Connection Project, a fund to support projects that improve adequacy and reliability in areas where new transmission would unlock economic growth and expansion of natural gas service to underserved communities.

**Considerations**

- Tax-base funding would allow for energy infrastructure to be built without impacting electricity and natural gas rates.
- Would require increasing the amount of funding committed to the Trillium Trust. All fiscal impacts from broadening Hydro One have been committed to the Trillium Trust $5.7 billion target and allocated to Moving Ontario Forward projects.
- There would be an ongoing fiscal impact from the amortization and funding of the investments. Where amortization is not possible there would be an upfront fiscal impact.

*Remote Connection Project:*

- Ontario ratepayers currently support costs of remote electricity service through RRRP on the order of $28 million/year
- Connecting 21 remote communities to the Ontario grid is supported by a positive business case due to diesel cost savings over time. If RRRP is funded through the tax base as proposed above, this project represents an opportunity to reduce impacts from RRRP.
- Direct investment in Ontario's portion of the capital costs of the project through a provincial fund (e.g., Trillium Trust) could also be considered along with mechanisms for cost recovery through transmission rates to refresh the fund as industry benefits from the transmission investment.
- The amount of investment and long-term savings depend on a federal contribution to the project and ENERGY is currently in discussions with Canada with the goal of concluding a cost-sharing agreement by spring 2017.
- A move to tax-based funding may have implications for cost oversight, since the OEB's mandate is to have oversight of ratepayer impacts. Alternative methods to review cost prudence of tax-based funding may be needed.

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (cont'd)

**Considerations (cont'd)**

*Transmission Projects to Enhance Economic Growth:*

- A tax-based fund could target investments in projects that have been identified in IESO regional plans and that would stimulate economic growth but are not proceeding due to cost barriers under the OEB's beneficiary pays principle. Investments could also target areas where the existing system poses challenges for delivering reliable service such as in parts of Northern Ontario with long single circuits.
- Potential opportunities for investment could include a transmission reinforcement in the **Greenstone area**, upgrades south of **Red Lake** and others TBD based on program design.
- This approach would allow a potion of project costs to be socialized to advance key projects without impacting rates or OEB's principles of cost allocation. Scope and scale of fund would be refined through program design.

*Natural Gas Expansion to Underserved Communities:*

- The Government has currently committed to expanding natural gas access to more communities in Ontario (i.e., $200 million Natural Gas Access Loan and $30 million Natural Gas Economic Development Grant).
  - Natural gas is an affordable heating source in Ontario. Its continues to be less expensive than alternative sources such as electric baseboards, heating oil and propane. For example, switching from oil to natural gas can save an average consumer an estimated $1,500 annually.
  - Increasing access to other energy sources such as natural gas, provides Ontarians with more options to meet their needs, reduce their energy costs and improve their quality of life.
  - Expansion of natural gas delivery infrastructure is widely supported in underserved communities (i.e., a recurring theme at ROMA) as a means to provide consumers and businesses in underserved communities with more affordable energy choices, attract new industry to Ontario and benefit agricultural producers.
- A grant program complements the Ontario Energy Board's recent decision enabling greater rate-based expansion to unserved areas, including rural and remote communities.
  - Applying Trillium Trust funding would make it possible to enhance the Grant Program and service more communities.

# 5. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.
- If the Province were to transfer $2.6 billion in economic benefits to the rate base over 10 years suggest the following fiscal impacts (assuming 140TWh per year):
  - Residential Ratepayer Impact (if spread over 10 years): up to $1.39 per month on a typical bill; and
  - Industrial Ratepayer Impact (if spread over 10 years): up to $1.86 / MWh
- There would be no certainty that the OEB could still decide to allocate some or all of Hydro One's deferred tax benefit to ratepayers which would have fiscal impact (lower share price and lower net income over time).

**Considerations**

- Cost savings to ratepayers and associated fiscal impacts would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- The departure tax was effectively a true-up for lower PILs payments from Hydro One in previous years – it was not a one-time windfall for the Province. In other words, it ensures that Hydro One paid all its tax obligations under the PILs regime before moving into the normal corporate tax regime.
- The related ~$2.4 billion fiscal benefit to the Province (from the deferred tax benefit) has already been credited to the Trillium Trust to be used to build infrastructure under Moving Ontario Forward.
- Repurposing funds paid to OEFC would ~~may~~ have an impact on the defeasance of electricity stranded debt and would cause the first increase in stranded debt since 2004.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to ~~infrastructure investments already made in the sector, or to specific initiatives such as conservation~~).

# 6a. Empower Energy Agencies – IESO / Market Renewal

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 6b. LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
  - Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
    - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.

**Considerations**

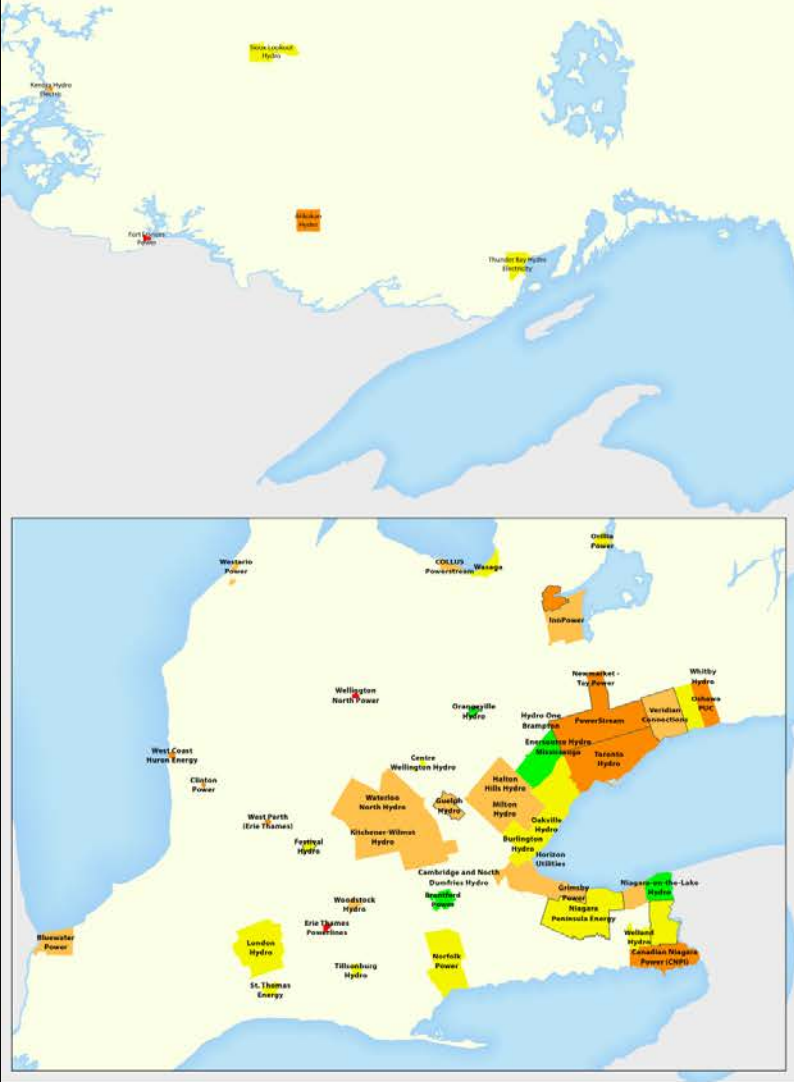
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.

- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
  - To further help address the costs associated with the Delivery line of the electricity bill, program such as the RRRP (previous slide) could be expanded to include other customers that may face higher costs.

- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.

- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation. Further changes to the tax incentives and/or revisiting legislated consolidation could be considered.

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

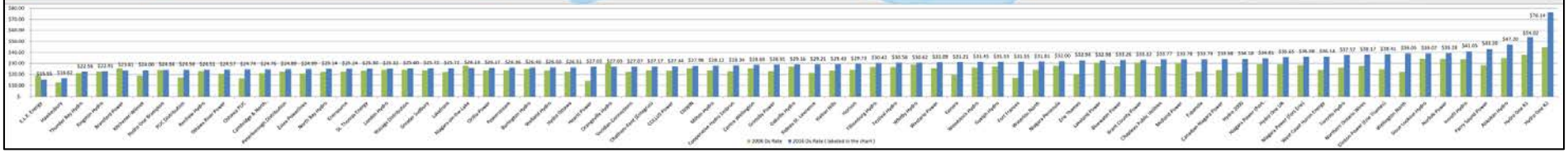
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# 6c. Empower Energy Agencies – OPG / Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

**Considerations**

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.
- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available, providing customers with pricing choice.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- Would provide consumers with electricity pricing choice.
- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro- November 2016 rates)

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7b. Give Consumers More Rate Choices and Greater Transparency – Detailed Global Adjustment

- Provide electricity consumers greater transparency with respect to electricity generation costs by providing more details regarding the Global Adjustment (e.g., adding a line on hydro bills, quarterly energy reports, etc).

**Considerations**

- As electricity bills have increased, many consumers have complained about a lack of transparency on the drivers of electricity costs. In particular, consumers and legislative officers have singled out the GA.

- Providing consumers with additional information on the cost components and amounts recovered through the GA would help consumers understand how the different forms of electricity generation in Ontario contribute to consumers costs.

- Providing additional information to consumers on electricity commodity cost drivers without sufficient context or background could simply lead to increased complaints about particular generating technologies that make up large shares of costs (e.g., nuclear).

- Adding a breakout of the amount of GA on residential electricity bills could lead to further confusion due to the existing breakout of multiple time-of-use buckets.

- Alternatively, the existing quarterly Ontario Energy Report, which provides various energy sector data, could be leveraged to show a breakout of quarterly GA costs by fuel type. A link on electricity bills could point to this information.

# 8. Help Small Business Manage Their Electricity Cost – End DRC Early for Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the proponents agreeing to a lower price in the near term.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period ; discussions/consultation may be required in advance of this potential option moving forward.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- Since the Minister of Energy is not a party, IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms would also reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.

- Projects over 500 kW would offer the most savings potential as they represent the majority of installed renewables capacity and are spread across fewer contracts.

- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.

- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh;
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
  - **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 million | $582 million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - For example, the New contract is $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 million | $632 million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# 10. Tax Relief for Solar and Wind Contracts

- In 2010 and 2011 Ontario procured large scale projects (>500 kW) through the FIT program at standard offer pricing.

- The FIT program was the centerpiece of the GEA which established the economic and social goals of growing the green economy, including establishing a local renewable energy manufacturing base, supporting the development of green energy jobs, and providing incentives for Indigenous participation.

- To help achieve these economic and social goals, the FIT program offered pricing at above competitive procurement rates, and provided Indigenous and Community participation adders, which resulted in economic benefits to all Ontarians, but resulted in additional costs borne by Ontario's electricity ratepayers.

- Ontario could fund the added cost of some or all of these economic and social incentives by shifting their costs from the rate-base to the tax-base.
    1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
    2. The tax base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT.

**Considerations**

- If applied to projects in commercial operation the benefit to the ratepayer would be immediate.
- Comparing FIT pricing to competitive procurement pricing could provide a reasonable representation of energy procurement without the added cost of economic and social incentives.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
   - For example, from 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
   - The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
   - If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
   - The $3.3 billion difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.
   - This represents estimated average ratepayer savings of $1.50/ month relative to OPO forecasts.
   - The same approach could be considered for solar projects however, prior to LRP I in 2016, Ontario had not procured solar capacity competitively and international cost comparisons are challenging given differences in regional development costs.
   - This example does not include the value of participation price adders available for community and indigenous participation.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

2. The tax-base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT 1 solar and wind projects.

   - For example, 17 large FIT 1 wind and solar projects have Indigenous and/or Community participation making them eligible for a price adder in addition to their base contract price.

   - The estimated value of these price adders is approximately $17.1 million (NPV 2017) over the expected remaining term of their contracts.

   - This represents estimated ratepayer savings of approximately $0.01/month relative to OPO forecasts.

# FIT 1 and GEIA Wind Projects in Commercial Operation
(source: IESO Active Contracts List, October 31, 2016)

| Count | Program | MW | COD |
|---|---|---|---|
| 1 | FIT 1 | 0.8 | Oct-10 |
| 2 | FIT 1 | 18 | Jul-15 |
| 3 | FIT 1 | 23 | Aug-15 |
| 4 | FIT 1 | 40 | Jan-15 |
| 5 | FIT 1 | 10 | Sep-14 |
| 6 | FIT 1 | 10 | Sep-14 |
| 7 | FIT 1 | 10 | Jun-14 |
| 8 | FIT 1 | 99 | May-13 |
| 9 | FIT 1 | 100 | Oct-15 |
| 10 | FIT 1 | 4 | Sep-12 |
| 11 | FIT 1 | 100 | Apr-16 |
| 12 | FIT 1 | 15 | Jun-15 |
| 13 | FIT 1 | 18 | Mar-12 |
| 14 | FIT 1 | 104.4 | Nov-13 |
| 15 | FIT 1 | 40 | Dec-15 |
| 16 | FIT 1 | 60 | May-14 |

| Count | Program | MW | COD |
|---|---|---|---|
| 17 | FIT 1 | 125 | Aug-13 |
| 18 | FIT 1 | 73.5 | Aug-14 |
| 19 | FIT 1 | 102 | Jan-15 |
| 20 | FIT 1 | 9 | Jan-12 |
| 21 | FIT 1 | 4.1 | Dec-15 |
| 22 | FIT 1 | 0.5 | Oct-13 |
| 23 | FIT 1 | 82.8 | Nov-11 |
| 24 | FIT 1 | 18.45 | Sep-16 |
| 25 | FIT 1 | 60 | Jul-14 |
| 26 | FIT 1 | 10 | Oct-16 |
| 27 | FIT 1 | 6.15 | Nov-14 |
| 28 | FIT 1 | 2.3 | Aug-15 |
| 29 | FIT 1 | 10 | Feb-16 |
| 30 | FIT 1 | 8.2 | Nov-14 |
| 31 | FIT 1 | 150 | Nov-14 |
| 32 | FIT 1 | 91.39 | Dec-14 |

| Count | Contract | MW | COD |
|---|---|---|---|
| 33 | FIT 1 | 25 | May-15 |
| 34 | FIT 1 | 82.8 | Nov-11 |
| 35 | FIT 1 | 30 | Mar-14 |
| 36 | FIT 1 | 17.6 | May-16 |
| 37 | FIT 1 | 23 | Dec-12 |
| 38 | FIT 1 | 99 | May-13 |
| 39 | FIT 1 | 48.6 | Dec-11 |
| 40 | FIT 1 | 19.44 | Aug-15 |
| 41 | FIT 1 | 10.8 | Mar-12 |
| 42 | FIT 1 | 38.88 | Sep-15 |
| 43 | FIT 1 | 60 | Aug-14 |
| 44 | GEIA | 270 | Mar-14 |
| 45 | GEIA | 180 | Dec-15 |
| 46 | GEIA | 148.6 | Dec-14 |
| 47 | GEIA | 270 | May-15 |

# Key Outcomes / Next Steps

- The proposed initiatives provide the following opportunities to:
  - Provide a greater focus on vulnerable consumers by funding electricity support programs through the tax-base.
    - Enhance existing and new support programs targeted at the most vulnerable consumers (i.e., OESP and RRRP); and
    - Better harmonize delivery rates across the province.
  - Re-set how energy infrastructure is funded by shifting costs to the tax-base from the rate-base.
  - Provide electricity consumers with greater choices and transparency (e.g., alternative rate plan based on a flat electricity rate, unpacking the Global Adjustment costs, etc);
  - Provide system benefits (e.g., market renewal);
  - Increase cost effectiveness and improve efficiency; and
  - Lower the cost of electricity for all consumers.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require legislative and/or regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

A. Rural or Remote Rate Protection (RRRP) – Overview and Enhancements
B. Fund Conservation Programs Through the Tax-Base
C. Eliminate the Industrial Conservation Initiative (ICI)
D. Cancel Large Renewable Procurement I (LRP I)

# A. RRRP Overview and Enhancements

- The Delivery line of the electricity bill is composed of Distribution and Transmission Costs. While transmission costs are uniform across the province, LDC costs vary by distributor and account for about 20% of the total bill for the electricity customers.
  - See slide X for a map of delivery rate increases between 2006 and 2016.
- The Rural or Remote Rate Protection (RRRP) framework was put in place in 2001 to help offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations.
- RRRP is available to: residential Hydro One R2 customers (~350,000 customers), Algoma Power customers (~11,600 customers); H1 remote customers (~3,500 customers).
  - To date, R2 customers receive a fixed amount of $125 million a year distributed amongst the customers. Algoma and Remote customers have RRRP calculated by the OEB each year that fluctuates based on average provincial distribution increases.
- Because the amount had been fixed for over a decade, the Province recently increased funding of the RRRP program for Hydro One R2 customers from $125 million to $240 million. This will be effective as of January 1, 2017, and will bring their delivery charges in line with the next highest charges from Hydro One's R1 customer class.

# B. Fund Conservation Programs Through the Tax-Base

- Propose to fund 2017-2020 electricity conservation and demand management program costs* using tax dollars instead of ratepayer dollars.
  - Funds received through the Hydro One Departure Tax could potentially be repurposed towards this.
- Total remaining 2017-2020 electricity conservation program costs are expected to be ~$2.1 billion.
- Post 2020, this option could evolve to funding conservation programs through the Greenhouse Gas Reduction Account.

**Considerations**

- Electricity conservation programs provide a number of benefits to society, however, Ontario's ratepayers have been covering these costs:
  - Avoiding/deferring future energy infrastructure investments, reducing disruption in communities (e.g., avoiding the need to build new natural gas generation);
  - Environmental benefits (e.g., reduced natural gas peaking generation and GHG emissions); and
  - Social and economic benefits (e.g., job creation and assistance managing electricity bills).
- There is precedence for using tax dollars to fund conservation programs.
  - Between 2007 and 2011, Ontario funded the Home Energy Savings retrofit program using tax dollars.
- Funding conservation programs though the tax-base is expected to result in a benefit of $3.40/month for residential electricity consumers in 2017. This could provide immediate short term relief to consumers while other rate mitigation initiatives are developed (e.g., market renewal, LDC efficiencies).

*** Note:** This includes costs towards the Conservation First Framework, Industrial Accelerator Program, Demand Response and the Conservation Fund)

# C. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

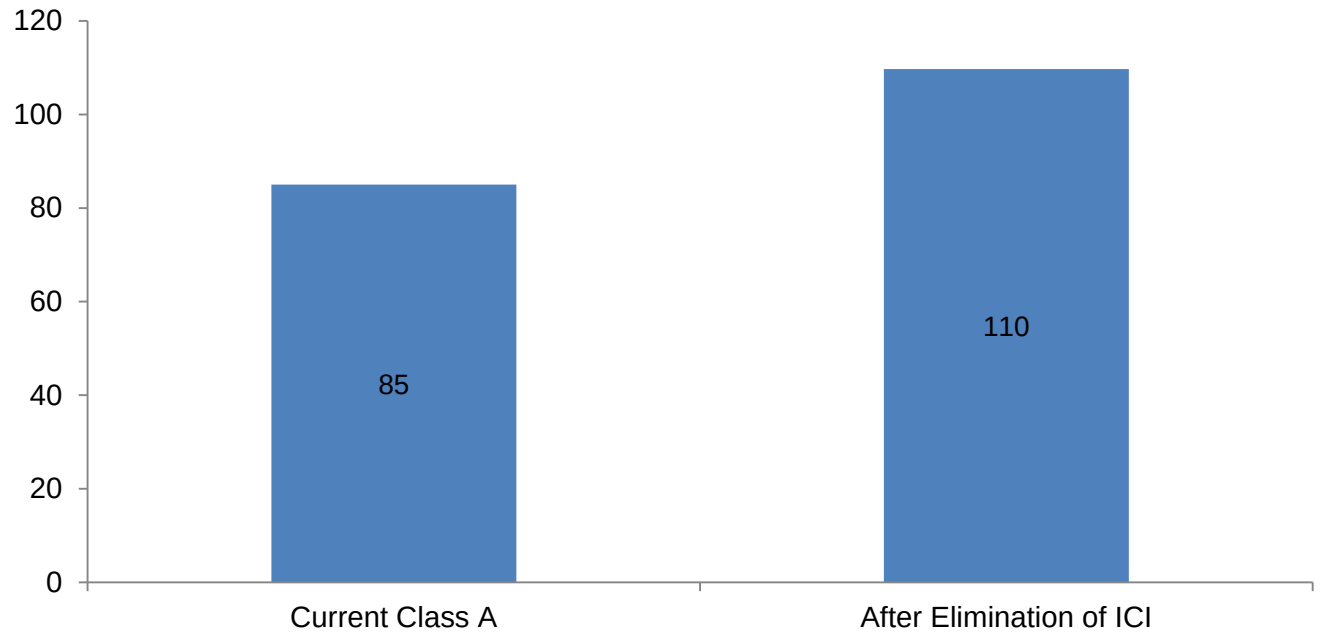
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# C. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# D. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period.
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g. rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

*Cancel/Adjust Announced Procurements:*

- Amendments to existing directions to IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

*Cancel Existing LRP I Contracts:*

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

**Legal Analysis**

- Any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements.
  - An amendment to an existing direction would not require Cabinet approval, however, further analysis is required to determine if direction to cancel LRP I contracts could be considered as amending existing direction.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights. This reasoning would likely apply equally to any direction to IESO to cancel LRP I contracts. Previous advice has also flagged a risk that the Province could be liable for damages in tort for inducing a breach of contract (or other claims).
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | John Kim |
| **Subject:** | Fwd: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 4:03:22 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v7 (CEFD).docx<br>ATT00001.htm<br>Proposed Initiatives to Transform Ontarios Electricity Sector 20170113_CEFD.pptx<br>ATT00002.htm |

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Begin forwarded message:

> **From:** "Francisco Chinchon" <Francisco.Chinchon@ofina.on.ca>
> **To:** "John Kim" <John.Kim@ofina.on.ca>, "Emily Kerr" <Emily.Kerr@ofina.on.ca>
> **Subject: RE: Rate Mitigation**
>
> Hi John, Emily,
>
> I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.
>
> I also made some edits to Energy's slides but not sure those are needed.
>
> Thanks,
>
> Francisco
>
> > -----Original Message-----
> > From: John Kim
> > Sent: Saturday, January 14, 2017 11:45 PM
> > To: Emily Kerr <Emily.Kerr@ofina.on.ca>
> > Subject: RE: Rate Mitigation
> >
> > Hi Emily,
> >
> > Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.
> >
> > Thanks,
> >
> > John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation

Good morning,

Attached are materials for Monday's rate mitigation meeting.

Keley

Original Message

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>

Sent: Saturday, January 14, 2017 7:49 AM

To: Orsini, Steve (CAB)

Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

Hi Steve,

Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility** | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| **Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time** | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value (share price) and impact fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |

| | |
|---|---|
| | • In the case of projects located in First Nation territories it could have an upfront fiscal impact if Province is not able to amortize those projects (TBC with OPCD).<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a windfall. It was fiscally neutral, it represented revenue to OEFC and an expense to Hydro One.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates<br>• OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding th Global Adjustment (GA) |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |

**Detail on Proposals**

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.

  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income (revenue) to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income (expense) of Hydro One.
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- Having OEFC help implement this measure may require introducing changes to OEFC's objects as is legal mandate is to help reduce and pay down stranded debt.
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.

**Commented [JK1]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

**Commented [JK2]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.

- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of options to delay recovery of part of the Global Adjustment (GA) by debt financing and recovering over a 25 to 30 year period.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1:
  - Option 2:
  - Option 3:
  - Option4:
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

[Check and Update]

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**~~December 12~~January 15, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

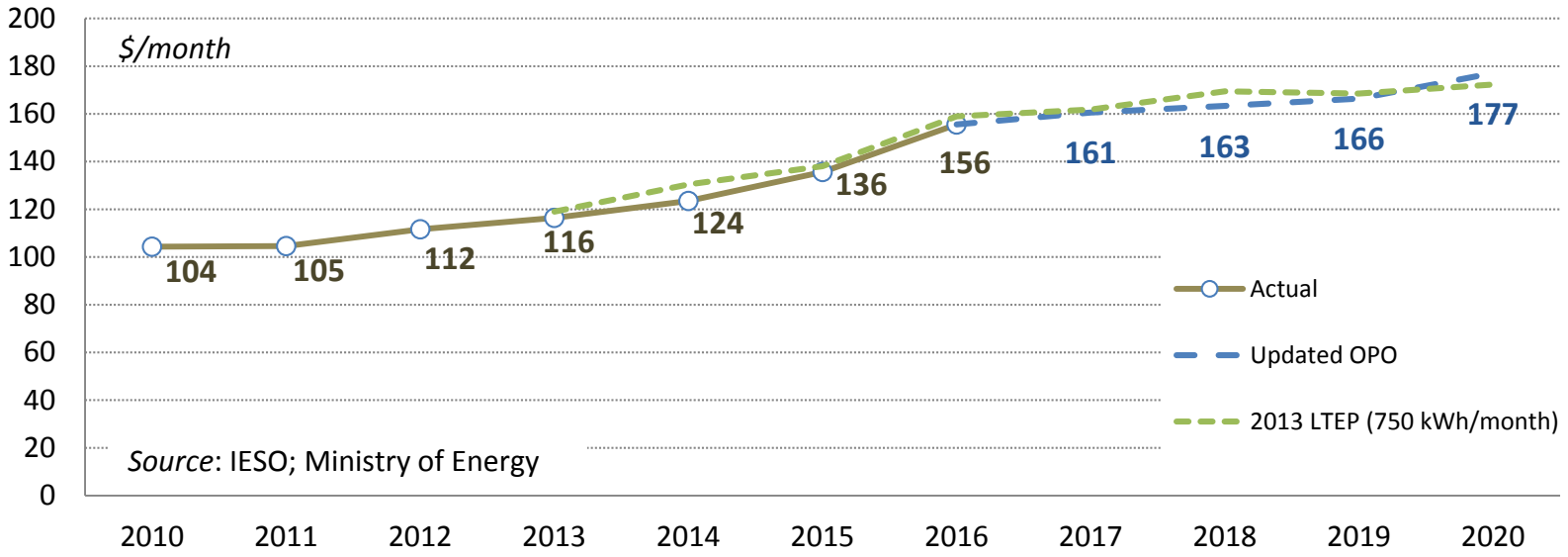
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast*




**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Broad Policy Themes / Rationale

- Support the continued reduction in the differential across distribution rates (as charged by Local Distribution Companies) across the Province through the potential enhancement of Rural or Remote Electricity Rate Protection, (RRRP). In order to not increase regulatory costs to customers as a result, this program can be moved to the tax-base.
- Provide a greater focus and support on lower income Ontarians by funding the Ontario Electricity Support Program (OESP) through the tax-base, as well as enhancing the support available through the program.
- Amortize electricity conservation and demand management (DM) programs over 15-years to provide lower costs for electricity consumers.
  - Alternatively, pay for conservation/DM programs through the tax-base and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties and expansion of natural gas to underserved areas (i.e., rural and remote communities), etc.
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" an alternative rate plan, based on a flat electricity rate, as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time. Also give consumer greater transparency with respect to electricity costs by providing more details regarding the Global Adjustment (GA).
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers, a benefit of $7/MWh.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 1.53 | 1.58 | 1.61 | 1.66 | 1.70 | 1.74 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.57 | 0.79 | 0.98 | 1.13 | 1.29 | 1.44 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC Efficiencies/Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.71 | 0.89 | 1.08 | 1.22 | 1.35 | 1.24 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. v Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 2.04 | 2.10 | 2.15 | 2.22 | 2.27 | 2.32 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.76 | 1.05 | 1.31 | 1.51 | 1.71 | 1.92 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC Efficiencies / Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.59 | 0.74 | 0.89 | 1.01 | 1.12 | 1.03 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Taxpayer Funded Electricity Price Mitigation

| *$M* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. Fund RRRP through the Tax-Base* | - | 666 | 684 | 700 | 719 |
| 2. Fund OESP through the Tax-Base | | | | | |
| a. Enhance OESP Benefit | | 162 | 226 | 279 | 322 |
| b. Expand OESP Eligibility | | TBD | TBD | TBD | TBD |
| 3. Conservation Funding Options | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | - | - | - | - | - |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | 100 | 390 | 390 | 390 | 390 |
| 5. Dedicate Departure Tax | 260 | 260 | 260 | 260 | 260 |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC Efficiencies / Rates | - | - | - | - | - |
| c. OPG – Operational Efficiencies | - | - | - | - | - |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers) | 110 | 450 | - | - | - |
| 9. Extend the Length of Existing Wind/Solar Contracts at Lower Prices | - | - | - | - | - |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| Fund Conservation Programs Through The Tax-Base | 154 | 632 | 649 | 567 | 568 |
| Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy
**Note:** *Assumes RRRP enhancement to reduce distribution rates to $30 for LDCs and **Assumes increase OESP credit by 50%.
Not included in chart is additional $18M/year to fund potential First Nations rate program through the Tax-Base.

# Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are aimed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

- Given that these programs focus on promoting equity between different areas of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.
  - These enhancements would also work in conjunction with the Ontario Energy Board's focus on reducing LDC costs outlined in option 6b.

# 1. Rural or Remote Rate Protection (RRRP) Expansion

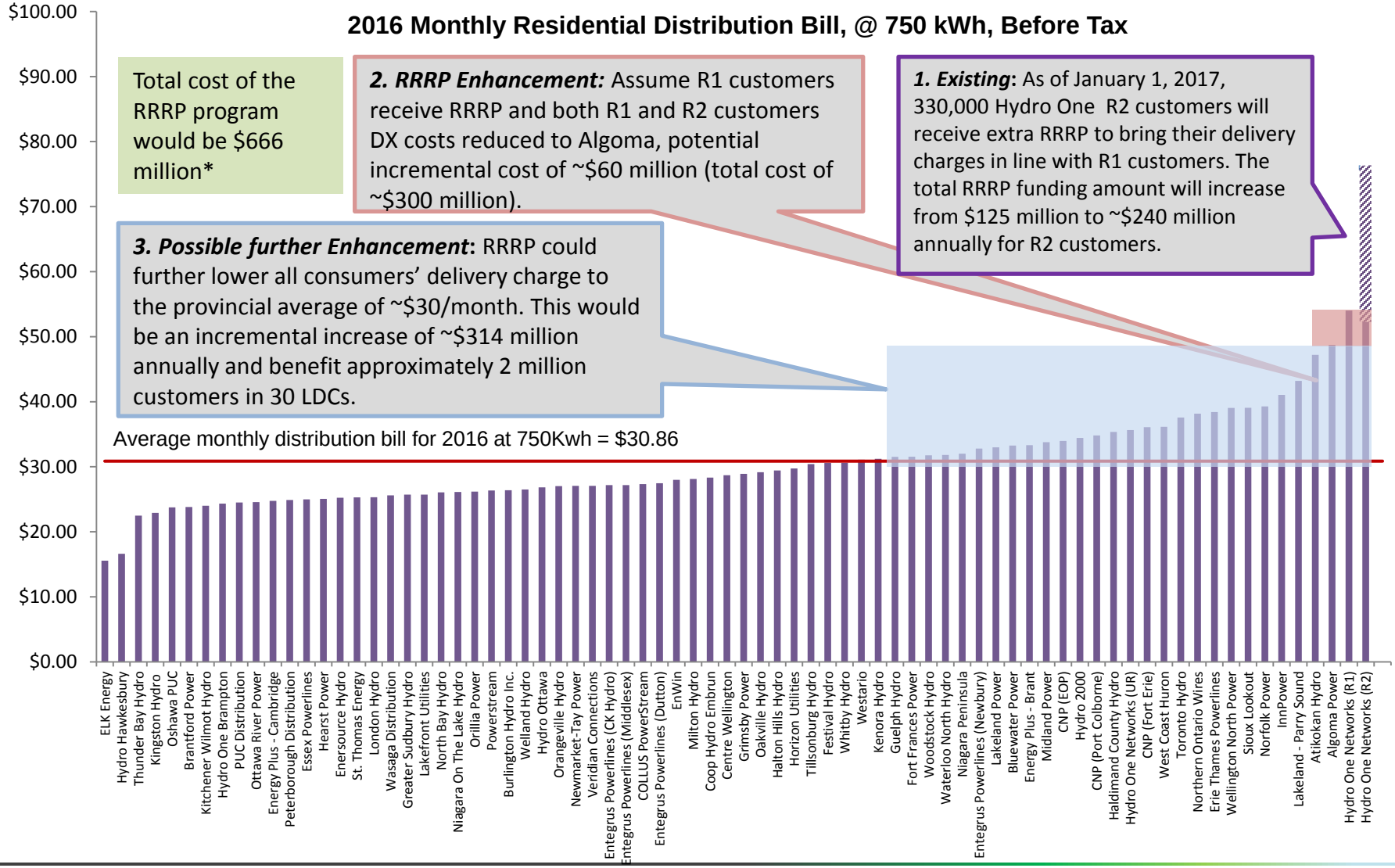
- The Rural or Remote Rate Protection (RRRP) program supports the most costly-to-serve distribution customers in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
  - Costs to these Hydro One customers are higher than average because of their relatively low density. The OEB mandates that they pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies.
  - To mitigate these costs, the RRRP was recently enhanced to help lower the bills of Hydro One's R2 customers to around those of its R1 (medium density) customers.
- Although other LDCs do not have medium- and high-density rates, there is a wide range of distribution costs between LDCs. The RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - Could be done on its own or as part of exploring an Ontario-wide uniform "postage stamp" delivery rate.

**Considerations**

- RRRP will be enhanced for R2 customers on January 1, 2017 to have their costs reduced to approximately R1 distribution costs levels. The RRRP could be further enhanced to include R1 customers, and have R2 and R1 customers reduce their costs down to Algoma (see next slide). This would cost $300 million in the first year (and would adjust year over year).
- If there was a desire to reduce costs for all LDCs, a simple average of distribution cost before tax, across all rate zones is $30.86 per month, for a residential customer consuming 750 kWh per month.** Bringing all delivery rates down to this average would cost approximately $500 million for the first year, with escalation in line with average distribution rate increases.
  - This assumes Hydro One R2 consume 1,200 kWh and H1 R1 customers consume 1,000 kWh per month.
- If all customers were brought down to the average costs (see the chart on the next slide for more detail):
  - It is assumed that residential customers with bills less than the provincial average see no change;
  - Majority of the enhanced benefit would go to Hydro One R1 and Toronto Hydro customers; and
  - Mechanism to ensure that LDCs continue to be motivated to achieve efficiencies would need to be designed (see section 4).
- Enhanced RRRP support may be best provided from the tax-base, because if funded from the rate-base, it would increase the costs for all customers who may argue that it is unfair that they are being asked to pay more to subsidize those in other LDCs.
- In conjunction with using the tax-base to reduce delivery charges to the provincial average, the OEB could be asked to explore moving to a province-wide "postage stamp" delivery rate that would be the same across the province to be implemented over time.
  - Could be "winners and losers" as delivery rates less than the average would go up in a postage stamp model;
  - A "postage stamp" model could help incent LDC consolidation.

**Note:** This is based on preliminary estimates and the amount will fluctuate on monthly consumption from customers and LDCs have different customer base with different consumption types.

# 1. Rural or Remote Rate Protection (RRRP) Expansion (cont'd)




*Note: this includes the ~$50M currently supporting Algoma Power and Hydro One Remotes.*

# 2a. Enhance Ontario Electricity Support Program (OESP) Benefit

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills. The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices and at launch, it was estimated ~560,000 families could be eligible and some 261,000 applications have been submitted.

- The OESP program benefits could be increased across the board by 50%, which would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).

- The OESP program could also be further enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).

**Considerations**

- If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible.
  - At the time of program design, advice was given that a 40-50% participation rate would be high for an application-based program delivered through electricity bills.
  - The province would need to work with LDCs if the rebate was to appear on electricity bills rather than be delivered via the income tax system (e.g., through the Trillium Benefit).

# 1 & 2a. Fiscal Impacts of RRRP, OESP and First Nation Rate

- Table below shows estimates of program costs up to 2022:

| Year | OESP ($M) | OESP + 50%($M) | RRRP($M) | RRRP Enhancement ($M) | First Nations Delivery Rate($M) | TOTAL RANGE ($M) (from status quo to OESP and RRRP enhancements) |
|---|---|---|---|---|---|---|
| 2017 | $108 | $162 | $292 | $374 | $18 | $418 to $846 |
| 2018 | $150 | $226 | $300 | $384 | $18 | $468 to $928 |
| 2019 | $186 | $279 | $306 | $394 | $18 | $510 to $997 |
| 2020 | $215 | $322 | $315 | $404 | $18 | $548 to $1,059 |
| 2021 | $243 | $365 | $322 | $415 | $18 | $583 to $1,120 |
| 2022 | $272 | $408 | $329 | $426 | $18 | $619 to $1,181 |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections above assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
   - The second column forecast also assumes the existing credit amounts increase by 50%.
     - Forecast assumes 10% administration costs
     - Forecast does not account for the approximately 142,000 low-income households that OEB estimated are not eligible because they do not directly receive an electricity bill.

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.
   - Expansion to cap distribution rates for other customers is based at $374M and assumes escalation of 2.6% (historical average dx rate increase). This is a conservative estimate, as Hydro One and Toronto Hydro increases could drive program costs beyond the average increase.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 2b. Expand OESP Eligibility

**Expanded Coverage**

- When OESP was being created, the OEB estimated that are 713,000 low-income households, of which 20% do not receive electricity bills. Thus, only 571,000 would potentially be eligible for OESP.
- If moved to the tax base, the OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity.

**Eligibility Categories**

- OESP has two credits amounts:
    1) Basic credit of $30-50 per month, based on the level of income and the number of residents.
    2) Enhanced credit of $45-75 per month for those with unique electricity needs:
        a) Electric heating,
        b) Indigenous customers, and
        c) Certain electrically intensive medical devices.
- The enhanced credit can be expanded to include additional eligibility categories of customers. For example, a new “Low Density Consumer” category could be introduced that provides Hydro One R2 customers (highest distribution rates) eligible for OESP the enhanced credit.

**Considerations**

- Potential costs for expanded coverage and new eligibility categories depend on updated estimates and changes to program design and delivery.
- There would be value in keeping the OESP as an income-tested program to distinguish it from other initiatives (e.g. RRRP, which is designed to address disparity between rural and urban distribution costs).

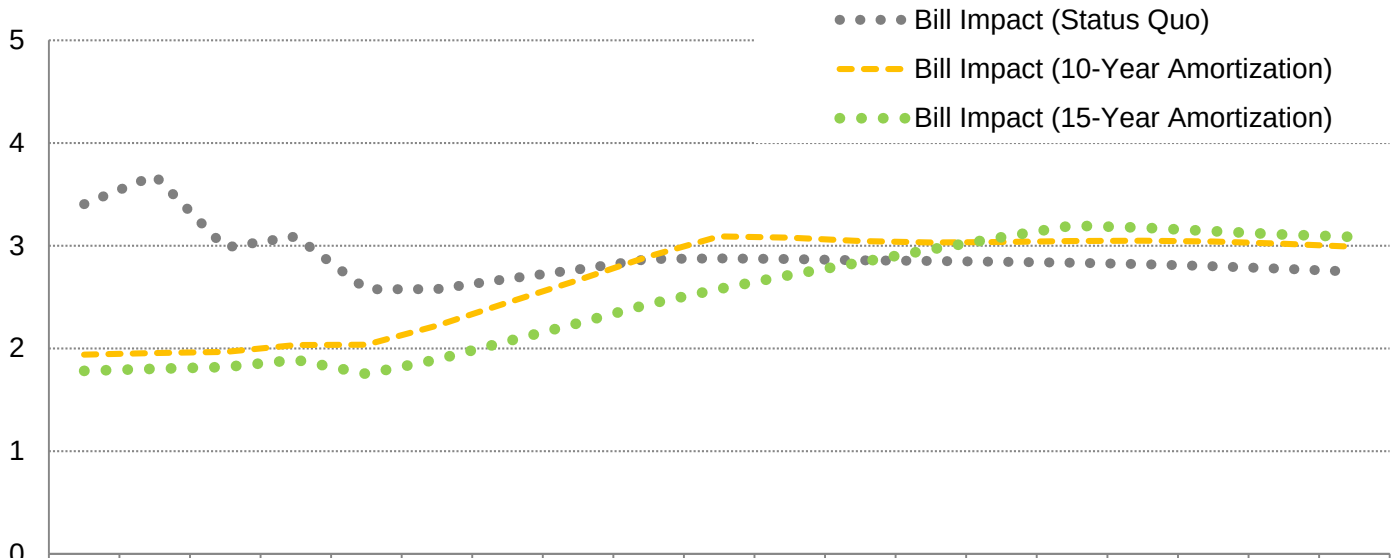
# 3a. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized. This would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs).
  - The time period over which costs could be amortized would be over the lifetime of funded CDM measures.
  - ENERGY is working with IESO to determine the appropriate lifetime period – the graph on the next slide, which illustrates residential bill impacts, presents two cases: **10-year and 15-year measure lifetimes**.
- In both cases, amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020. Over time the benefit would decrease and turn into a cost (higher electricity rates than would otherwise occur), as interest charges begin to grow. Estimated interest charges are as follows (a 3% interest rate is assumed; increases in interest rates could result in higher overall interest charges):
  - $712 million ($2016) – Amortizing eligible 2017-2035 CDM costs for 10-year period; and
  - $1.3 billion ($2016) – Amortizing eligible 2017-2035 CDM costs for 15-year period .
- Legislative changes would be needed to allow recovery of interest payments from ratepayers, or these costs could be recovered from the Consolidated Revenue Fund (CRF, or taxes).
- An alternative that could be explored would be to pay for CDM costs, or for a portion of these, from the tax-base (*see Appendix for more detail on tax funding option*).

# 3a. Amortize Conservation Program Costs (cont'd)

## Conservation Residential Bill Impact – Status Quo, 10-Year and 15-Year Amortization

***CDM Bill Impact ($/month)***




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bill Impact (Status Quo) | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | 2.68 | 2.77 | 2.87 | 2.88 | 2.87 | 2.86 | 2.85 | 2.84 | 2.83 | 2.82 | 2.80 | 2.78 | 2.75 |
| Bill Impact (10-Year Amortization) | 1.94 | 1.95 | 1.97 | 2.03 | 2.04 | 2.22 | 2.45 | 2.67 | 2.90 | 3.09 | 3.08 | 3.05 | 3.03 | 3.04 | 3.04 | 3.05 | 3.04 | 3.02 | 2.99 |
| Bill Impact (15-Year Amortization) | 1.78 | 1.80 | 1.82 | 1.89 | 1.75 | 1.89 | 2.07 | 2.25 | 2.43 | 2.58 | 2.71 | 2.84 | 2.96 | 3.08 | 3.20 | 3.18 | 3.14 | 3.11 | 3.09 |

Source: IESO; Ministry of Energy

**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10 of 15-year borrowing rate of 3.0%.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.
- Legislative amendments would be needed to allow recovery of loan interest charges from GA.
- ENERGY staff have developed a note to seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
- ENERGY is working with IESO to seek an opinion on the proposal from IESO's external auditor.
- ENERGY would then send the IESO external auditor's opinion along with ENERGY's explanatory note to the Ontario Provincial Controller (OPC) to seek a formal opinion on whether CDM costs could be amortized according to rate-regulated accounting standards.
- Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 3b. Rate Smoothing of Conservation Program Costs

- "Rate smoothing" could achieve the same rate reduction effect as amortization.
- Instead of taking out a loan to amortize conservation costs, a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Each year, IESO would defer recovery of a portion of annual conservation costs. Financing would also be required, such as from the OFA, to pay the interest on the deferral account. Interest would accrue on the deferred amounts, likely at the same rates as for the amortization option.
- Deferred costs could be recovered over any time period. If a 10 or 15 year-period was chosen, the rate impacts would be the same as in the amortization option.

**Considerations**

- Option would **not** require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open the Ministry to criticism by the Controller and/or Auditor General since the rate impact is the same.
- The Ministry would have more control under this option to change deferred amounts each year, as opposed to the terms set by a loan agreement under the amortization example.
- There is precedence to this approach for nuclear investments, which otherwise would result in volatile increases and decreases for Ontario ratepayers over the investment period. In 2015, the Ministry amended a regulation that requires the Ontario Energy Board (OEB) to set "smoothed" nuclear rates for OPG's Darlington and Pickering nuclear stations over a 20-year period.
  - The regulation allows OPG to defer recovery in rates of a portion of its nuclear revenue during the Darlington refurbishment (expected to be complete in 2026) and recover these deferred costs over the remaining ten years.
  - OPG will establish a "deferral account" to record the deferred amounts each year up to 2026 plus accumulated interest on the balance to reflect OPG's financing costs as a result of rate smoothing. The deferral account is then drawn down on a straight-line basis between 2026 and 2036.
- At minimum, new regulation would be required. However, further analysis is needed to determine the relevant regulation or legislation, to be amended for IESO (e.g., OEB regulation of IESO costs and fees, GA regulation for how IESO recovers its conservation costs from ratepayers).

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure

- Fund investments in specific energy infrastructure projects through the tax-base. **Note:** This could include the provincial portion of funding for the Remote First Nation Connection Project, a fund to support projects that improve adequacy and reliability in areas where new transmission would unlock economic growth and expansion of natural gas service to underserved communities.

**Considerations**

- Tax-base funding would allow for energy infrastructure to be built without impacting electricity and natural gas rates.
- Would require increasing the amount of funding committed to the Trillium Trust. All fiscal impacts from broadening Hydro One have been committed to the Trillium Trust $5.7 billion target and allocated to Moving Ontario Forward projects.
- There would be an ongoing fiscal impact from the amortization and funding of the investments. Where amortization is not possible there would be an upfront fiscal impact.

*Remote Connection Project:*

- Ontario ratepayers currently support costs of remote electricity service through RRRP on the order of $28 million/year
- Connecting 21 remote communities to the Ontario grid is supported by a positive business case due to diesel cost savings over time. If RRRP is funded through the tax base as proposed above, this project represents an opportunity to reduce impacts from RRRP.
- Direct investment in Ontario's portion of the capital costs of the project through a provincial fund (e.g., Trillium Trust) could also be considered along with mechanisms for cost recovery through transmission rates to refresh the fund as industry benefits from the transmission investment.
- The amount of investment and long-term savings depend on a federal contribution to the project and ENERGY is currently in discussions with Canada with the goal of concluding a cost-sharing agreement by spring 2017.
- A move to tax-based funding may have implications for cost oversight, since the OEB's mandate is to have oversight of ratepayer impacts. Alternative methods to review cost prudence of tax-based funding may be needed.

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (cont'd)

**Considerations (cont'd)**

*Transmission Projects to Enhance Economic Growth:*

- A tax-based fund could target investments in projects that have been identified in IESO regional plans and that would stimulate economic growth but are not proceeding due to cost barriers under the OEB's beneficiary pays principle. Investments could also target areas where the existing system poses challenges for delivering reliable service such as in parts of Northern Ontario with long single circuits.
- Potential opportunities for investment could include a transmission reinforcement in the **Greenstone area**, upgrades south of **Red Lake** and others TBD based on program design.
- This approach would allow a potion of project costs to be socialized to advance key projects without impacting rates or OEB's principles of cost allocation. Scope and scale of fund would be refined through program design.

*Natural Gas Expansion to Underserved Communities:*

- The Government has currently committed to expanding natural gas access to more communities in Ontario (i.e., $200 million Natural Gas Access Loan and $30 million Natural Gas Economic Development Grant).
  - Natural gas is an affordable heating source in Ontario. Its continues to be less expensive than alternative sources such as electric baseboards, heating oil and propane. For example, switching from oil to natural gas can save an average consumer an estimated $1,500 annually.
  - Increasing access to other energy sources such as natural gas, provides Ontarians with more options to meet their needs, reduce their energy costs and improve their quality of life.
  - Expansion of natural gas delivery infrastructure is widely supported in underserved communities (i.e., a recurring theme at ROMA) as a means to provide consumers and businesses in underserved communities with more affordable energy choices, attract new industry to Ontario and benefit agricultural producers.
- A grant program complements the Ontario Energy Board's recent decision enabling greater rate-based expansion to unserved areas, including rural and remote communities.
  - Applying Trillium Trust funding would make it possible to enhance the Grant Program and service more communities.

# 5. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.
- If the Province were to transfer $2.6 billion in economic benefits to the rate base over 10 years suggest the following fiscal impacts (assuming 140TWh per year):
  - Residential Ratepayer Impact (if spread over 10 years): up to $1.39 per month on a typical bill; and
  - Industrial Ratepayer Impact (if spread over 10 years): up to $1.86 / MWh
- There would be no certainty that the OEB could still decide to allocate some or all of Hydro One's deferred tax benefit to ratepayers which would have fiscal impact (lower share price and lower net income over time).

**Considerations**

- Cost savings to ratepayers and associated fiscal impacts would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- The departure tax was effectively a true-up for lower PILs payments from Hydro One in previous years – it was not a one-time windfall for the Province. In other words, it ensures that Hydro One paid all its tax obligations under the PILs regime before moving into the normal corporate tax regime.
- The related ~$2.4 billion fiscal benefit to the Province (from the deferred tax benefit) has already been credited to the Trillium Trust to be used to build infrastructure under Moving Ontario Forward.
- Repurposing funds paid to OEFC would ~~may~~ have an impact on the defeasance of electricity stranded debt and would cause the first increase in stranded debt since 2004.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to ~~infrastructure investments already made in the sector, or to specific initiatives such as conservation~~).

# 6a. Empower Energy Agencies – IESO / Market Renewal

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 6b. LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
  - Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
    - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.

**Considerations**

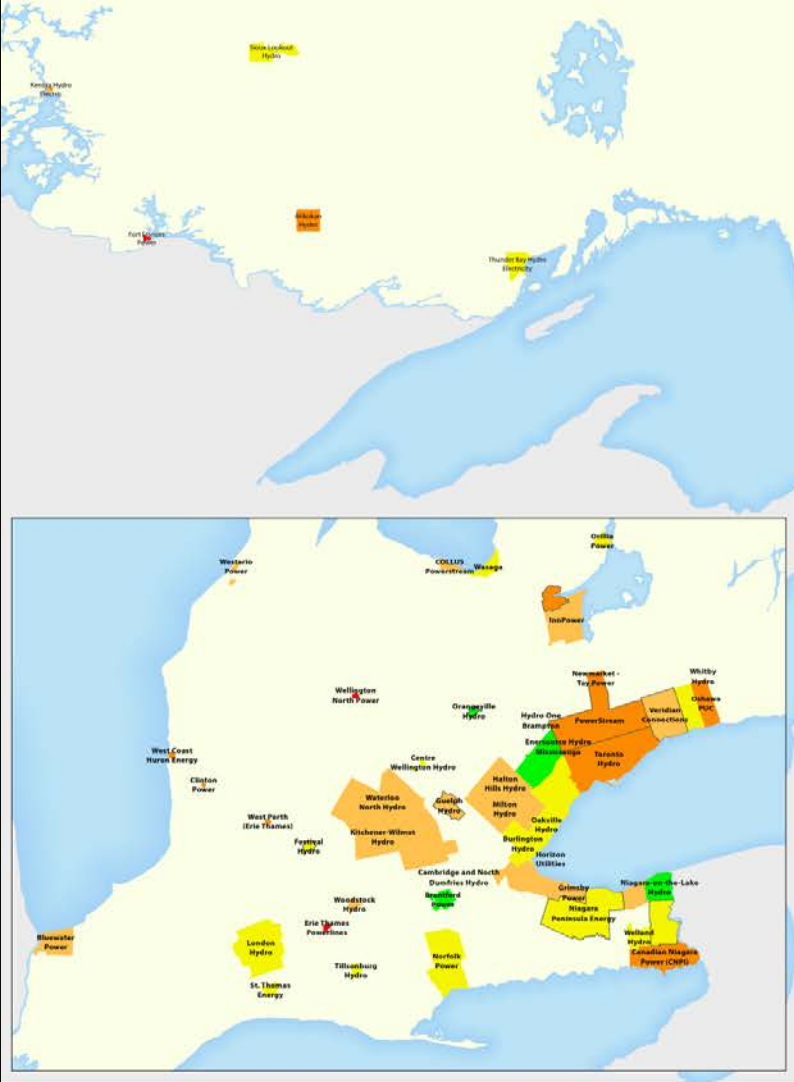
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.

- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
  - To further help address the costs associated with the Delivery line of the electricity bill, program such as the RRRP (previous slide) could be expanded to include other customers that may face higher costs.

- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.

- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation. Further changes to the tax incentives and/or revisiting legislated consolidation could be considered.

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

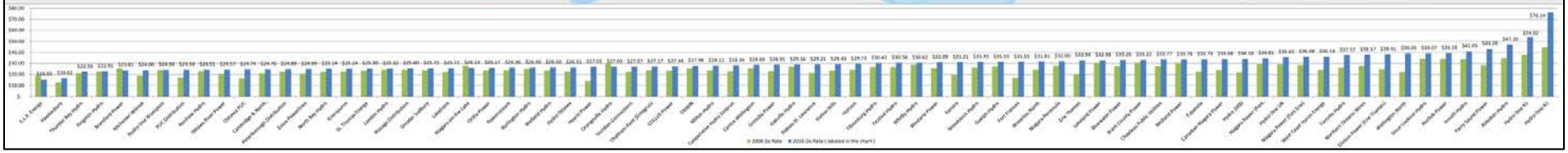
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# 6c. Empower Energy Agencies – OPG / Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

**Considerations**

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.
- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available, providing customers with pricing choice.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- Would provide consumers with electricity pricing choice.
- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro- November 2016 rates)

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7b. Give Consumers More Rate Choices and Greater Transparency – Detailed Global Adjustment

- Provide electricity consumers greater transparency with respect to electricity generation costs by providing more details regarding the Global Adjustment (e.g., adding a line on hydro bills, quarterly energy reports, etc).

**Considerations**

- As electricity bills have increased, many consumers have complained about a lack of transparency on the drivers of electricity costs. In particular, consumers and legislative officers have singled out the GA.

- Providing consumers with additional information on the cost components and amounts recovered through the GA would help consumers understand how the different forms of electricity generation in Ontario contribute to consumers costs.

- Providing additional information to consumers on electricity commodity cost drivers without sufficient context or background could simply lead to increased complaints about particular generating technologies that make up large shares of costs (e.g., nuclear).

- Adding a breakout of the amount of GA on residential electricity bills could lead to further confusion due to the existing breakout of multiple time-of-use buckets.

- Alternatively, the existing quarterly Ontario Energy Report, which provides various energy sector data, could be leveraged to show a breakout of quarterly GA costs by fuel type. A link on electricity bills could point to this information.

# 8. Help Small Business Manage Their Electricity Cost – End DRC Early for Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the proponents agreeing to a lower price in the near term.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period ; discussions/consultation may be required in advance of this potential option moving forward.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- Since the Minister of Energy is not a party, IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms would also reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.

- Projects over 500 kW would offer the most savings potential as they represent the majority of installed renewables capacity and are spread across fewer contracts.

- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.

- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh;
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
  - **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 million | $582 million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - For example, the New contract is $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 million | $632 million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# 10. Tax Relief for Solar and Wind Contracts

- In 2010 and 2011 Ontario procured large scale projects (>500 kW) through the FIT program at standard offer pricing.

- The FIT program was the centerpiece of the GEA which established the economic and social goals of growing the green economy, including establishing a local renewable energy manufacturing base, supporting the development of green energy jobs, and providing incentives for Indigenous participation.

- To help achieve these economic and social goals, the FIT program offered pricing at above competitive procurement rates, and provided Indigenous and Community participation adders, which resulted in economic benefits to all Ontarians, but resulted in additional costs borne by Ontario's electricity ratepayers.

- Ontario could fund the added cost of some or all of these economic and social incentives by shifting their costs from the rate-base to the tax-base.
    1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
    2. The tax base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT.

**Considerations**

- If applied to projects in commercial operation the benefit to the ratepayer would be immediate.
- Comparing FIT pricing to competitive procurement pricing could provide a reasonable representation of energy procurement without the added cost of economic and social incentives.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
   - For example, from 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
   - The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
   - If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
   - The $3.3 billion difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.
   - This represents estimated average ratepayer savings of $1.50/ month relative to OPO forecasts.
   - The same approach could be considered for solar projects however, prior to LRP I in 2016, Ontario had not procured solar capacity competitively and international cost comparisons are challenging given differences in regional development costs.
   - This example does not include the value of participation price adders available for community and indigenous participation.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

2. The tax-base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT 1 solar and wind projects.

   - For example, 17 large FIT 1 wind and solar projects have Indigenous and/or Community participation making them eligible for a price adder in addition to their base contract price.

   - The estimated value of these price adders is approximately $17.1 million (NPV 2017) over the expected remaining term of their contracts.

   - This represents estimated ratepayer savings of approximately $0.01/month relative to OPO forecasts.

# FIT 1 and GEIA Wind Projects in Commercial Operation
(source: IESO Active Contracts List, October 31, 2016)

| Count | Program | MW | COD |
|---|---|---|---|
| 1 | FIT 1 | 0.8 | Oct-10 |
| 2 | FIT 1 | 18 | Jul-15 |
| 3 | FIT 1 | 23 | Aug-15 |
| 4 | FIT 1 | 40 | Jan-15 |
| 5 | FIT 1 | 10 | Sep-14 |
| 6 | FIT 1 | 10 | Sep-14 |
| 7 | FIT 1 | 10 | Jun-14 |
| 8 | FIT 1 | 99 | May-13 |
| 9 | FIT 1 | 100 | Oct-15 |
| 10 | FIT 1 | 4 | Sep-12 |
| 11 | FIT 1 | 100 | Apr-16 |
| 12 | FIT 1 | 15 | Jun-15 |
| 13 | FIT 1 | 18 | Mar-12 |
| 14 | FIT 1 | 104.4 | Nov-13 |
| 15 | FIT 1 | 40 | Dec-15 |
| 16 | FIT 1 | 60 | May-14 |

| Count | Program | MW | COD |
|---|---|---|---|
| 17 | FIT 1 | 125 | Aug-13 |
| 18 | FIT 1 | 73.5 | Aug-14 |
| 19 | FIT 1 | 102 | Jan-15 |
| 20 | FIT 1 | 9 | Jan-12 |
| 21 | FIT 1 | 4.1 | Dec-15 |
| 22 | FIT 1 | 0.5 | Oct-13 |
| 23 | FIT 1 | 82.8 | Nov-11 |
| 24 | FIT 1 | 18.45 | Sep-16 |
| 25 | FIT 1 | 60 | Jul-14 |
| 26 | FIT 1 | 10 | Oct-16 |
| 27 | FIT 1 | 6.15 | Nov-14 |
| 28 | FIT 1 | 2.3 | Aug-15 |
| 29 | FIT 1 | 10 | Feb-16 |
| 30 | FIT 1 | 8.2 | Nov-14 |
| 31 | FIT 1 | 150 | Nov-14 |
| 32 | FIT 1 | 91.39 | Dec-14 |

| Count | Contract | MW | COD |
|---|---|---|---|
| 33 | FIT 1 | 25 | May-15 |
| 34 | FIT 1 | 82.8 | Nov-11 |
| 35 | FIT 1 | 30 | Mar-14 |
| 36 | FIT 1 | 17.6 | May-16 |
| 37 | FIT 1 | 23 | Dec-12 |
| 38 | FIT 1 | 99 | May-13 |
| 39 | FIT 1 | 48.6 | Dec-11 |
| 40 | FIT 1 | 19.44 | Aug-15 |
| 41 | FIT 1 | 10.8 | Mar-12 |
| 42 | FIT 1 | 38.88 | Sep-15 |
| 43 | FIT 1 | 60 | Aug-14 |
| 44 | GEIA | 270 | Mar-14 |
| 45 | GEIA | 180 | Dec-15 |
| 46 | GEIA | 148.6 | Dec-14 |
| 47 | GEIA | 270 | May-15 |

# Key Outcomes / Next Steps

- The proposed initiatives provide the following opportunities to:
  - Provide a greater focus on vulnerable consumers by funding electricity support programs through the tax-base.
    - Enhance existing and new support programs targeted at the most vulnerable consumers (i.e., OESP and RRRP); and
    - Better harmonize delivery rates across the province.
  - Re-set how energy infrastructure is funded by shifting costs to the tax-base from the rate-base.
  - Provide electricity consumers with greater choices and transparency (e.g., alternative rate plan based on a flat electricity rate, unpacking the Global Adjustment costs, etc);
  - Provide system benefits (e.g., market renewal);
  - Increase cost effectiveness and improve efficiency; and
  - Lower the cost of electricity for all consumers.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require legislative and/or regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

A. Rural or Remote Rate Protection (RRRP) – Overview and Enhancements
B. Fund Conservation Programs Through the Tax-Base
C. Eliminate the Industrial Conservation Initiative (ICI)
D. Cancel Large Renewable Procurement I (LRP I)

# A. RRRP Overview and Enhancements

- The Delivery line of the electricity bill is composed of Distribution and Transmission Costs. While transmission costs are uniform across the province, LDC costs vary by distributor and account for about 20% of the total bill for the electricity customers.
  - See slide X for a map of delivery rate increases between 2006 and 2016.
- The Rural or Remote Rate Protection (RRRP) framework was put in place in 2001 to help offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations.
- RRRP is available to: residential Hydro One R2 customers (~350,000 customers), Algoma Power customers (~11,600 customers); H1 remote customers (~3,500 customers).
  - To date, R2 customers receive a fixed amount of $125 million a year distributed amongst the customers. Algoma and Remote customers have RRRP calculated by the OEB each year that fluctuates based on average provincial distribution increases.
- Because the amount had been fixed for over a decade, the Province recently increased funding of the RRRP program for Hydro One R2 customers from $125 million to $240 million. This will be effective as of January 1, 2017, and will bring their delivery charges in line with the next highest charges from Hydro One's R1 customer class.

# B. Fund Conservation Programs Through the Tax-Base

- Propose to fund 2017-2020 electricity conservation and demand management program costs* using tax dollars instead of ratepayer dollars.
  - Funds received through the Hydro One Departure Tax could potentially be repurposed towards this.
- Total remaining 2017-2020 electricity conservation program costs are expected to be ~$2.1 billion.
- Post 2020, this option could evolve to funding conservation programs through the Greenhouse Gas Reduction Account.

**Considerations**

- Electricity conservation programs provide a number of benefits to society, however, Ontario's ratepayers have been covering these costs:
  - Avoiding/deferring future energy infrastructure investments, reducing disruption in communities (e.g., avoiding the need to build new natural gas generation);
  - Environmental benefits (e.g., reduced natural gas peaking generation and GHG emissions); and
  - Social and economic benefits (e.g., job creation and assistance managing electricity bills).
- There is precedence for using tax dollars to fund conservation programs.
  - Between 2007 and 2011, Ontario funded the Home Energy Savings retrofit program using tax dollars.
- Funding conservation programs though the tax-base is expected to result in a benefit of $3.40/month for residential electricity consumers in 2017. This could provide immediate short term relief to consumers while other rate mitigation initiatives are developed (e.g., market renewal, LDC efficiencies).

*** Note:** This includes costs towards the Conservation First Framework, Industrial Accelerator Program, Demand Response and the Conservation Fund)

# C. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

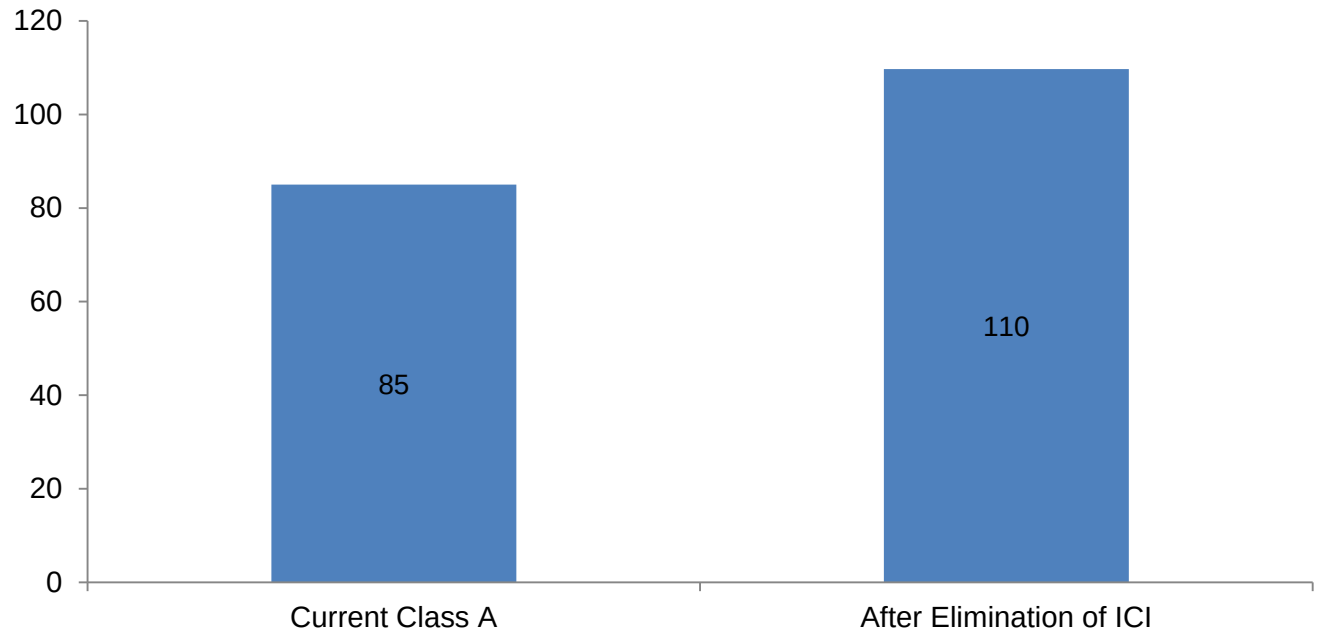
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# C. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# D. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period.
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g. rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

*Cancel/Adjust Announced Procurements:*

- Amendments to existing directions to IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

*Cancel Existing LRP I Contracts:*

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

**Legal Analysis**

- Any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements.
  - An amendment to an existing direction would not require Cabinet approval, however, further analysis is required to determine if direction to cancel LRP I contracts could be considered as amending existing direction.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights. This reasoning would likely apply equally to any direction to IESO to cancel LRP I contracts. Previous advice has also flagged a risk that the Province could be liable for damages in tort for inducing a breach of contract (or other claims).
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Salman Qadir |
| **Cc:** | Shajee Kathirgamanathan; Gavin He; Adam Prokop |
| **Subject:** | Fwd: rate mitigation |
| **Date:** | Thursday, January 12, 2017 1:48:38 PM |

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FYI

These proposals seem to relate to the transferring the contracts to oefc but not 100%

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 12, 2017 at 1:25:20 PM EST
> **To:** John Kim <John.Kim@ofina.on.ca>, Emily Kerr <Emily.Kerr@ofina.on.ca>
> **Subject: FW: rate mitigation**
>
> Hi,
>
> FYI. Some implementation questions.
>
> Ron
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** January-12-17 12:37
> **To:** Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>
> **Subject:** RE: rate mitigation
>
> Hi Scott,
>
> The quick thought I had was then on a question on what the roles of each OEFC and IESO would be.
>
> I had thought what was being contemplated was that IESO would be held whole, and OEFC would "pay" -- borrowing money to do so], instead of IESO having ratepayers pay through the GA. In this scenario, OEFC has an expense to IESO, financed through debt as OEFC has no associated revenue (at least at the outset until the relative GA size is reversed over time. As a sub-option, if the contracts could be assigned to OEFC, then OEFC's NUG regulation could potentially be listed and have OEFC recover the costs over time, not in the year-of – but that would have a fiscal impact since expense in the early years would exceed recoveries through the GA.
>
> Your alternative seems to be where IESO simply borrows from OEFC, so for OEFC all of this is happening on the balance sheet, where OEFC borrows from the Province and then lends to IESO, so no net income statement or stranded debt impact on OEFC.

However, in this case, IESO is short. It has cash from the OEFC financing, but it doesn't have the annual revenue to cover its contractual obligations. Wouldn't that likely affect the IESO and how it accounts for the contracts?

In either case, I'd think that implementation and accounting questions would need to be addressed, (e.g., objects of the corps, legislation / regulations).

Ron

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**From:** Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
**Sent:** January-12-17 12:04
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** rate mitigation

Hi Ron,

Thinking more about our conversation yesterday around financing of a portion of "out-of-market" generation costs. If IESO entered into a financing arrangement with OEFC and agreed to repay these costs + interest over a set time period, could OEFC record a receivable to offset / avoid the in-year expense?

I ask this in part because one of the other options on the table is to renegotiate wind contracts to reduce current costs by offering to extend the length of the contracts. That will rely on private proponents' cost of capital. We could do the same thing using the Province's costs of funds by financing a portion of the current cost through the OEFC and then agreeing to have ratepayers repay in years 20-30, once contracts have expired, but the facilities potentially still have remaining operating life.

Just a thought – happy to chat.
Scott

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Sandy Roberts; John Kim; Emily Kerr |
| **Subject:** | GGRA |
| **Date:** | Friday, November 04, 2016 11:06:12 AM |
| **Attachments:** | Cap and Trade Proceeds to Electricity - Interministerial briefing on Nov 7.pdf |

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Hi,

Did you see this version for review and comment?

Ron

Ontario

MINISTRY OF
ENERGY

# Cap and Trade Auction Proceeds for Commercial and Industrial Electricity Consumers

**Working Draft**

November 2016

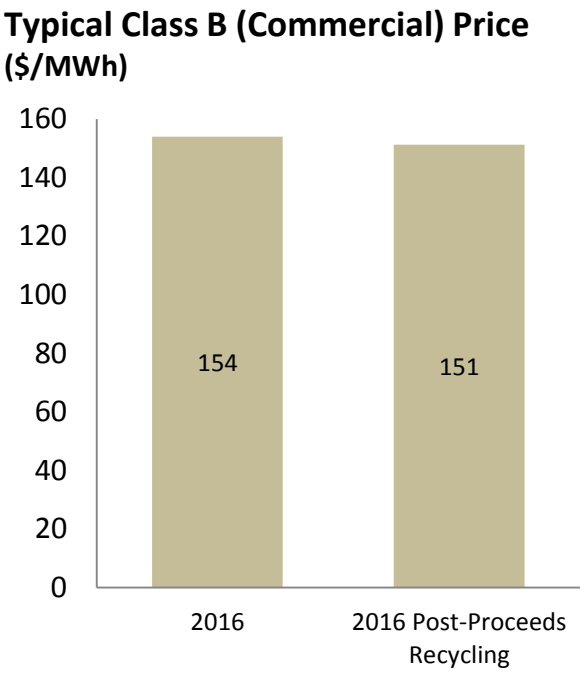
CONFIDENTIAL DRAFT

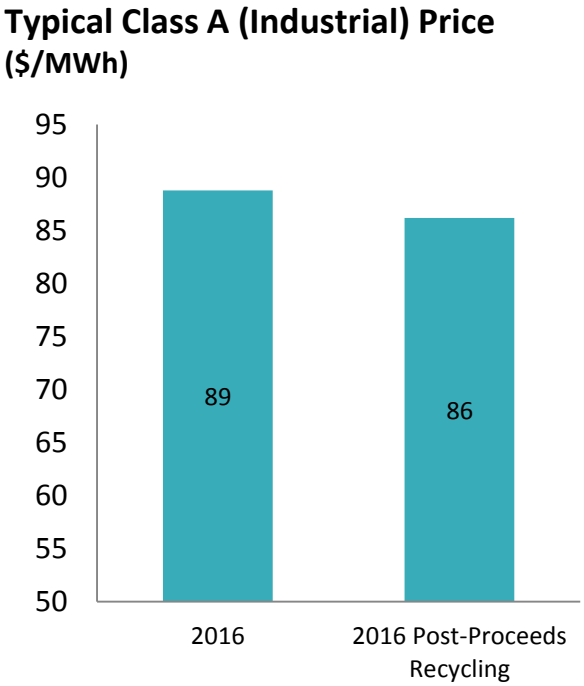
# Context / Current Status

- On September 12, 2016, the Throne Speech announced a number of initiatives to reduce electricity bills for consumers across Ontario, including the government's intention "to use a portion of the cap and trade auction proceeds to reduce greenhouse gas (GHG) emissions by helping industrial and commercial electricity consumers use less electricity, which will also help to keep rates affordable".
  - The Climate Change Action Plan (CCAP) indicates a desire to "Keep Electricity Rates Affordable" (Action 4.4) and states that up to $1.3 billion of cap and trade proceeds will be used to "offset the cost of greenhouse gas pollution reduction initiatives that are currently funded by residential and industrial consumers through their bills."
- On September 12, 2016, ENERGY was directed to work with MOECC to develop options to recycle cap and trade auction proceeds from the Greenhouse Gas Reduction Account (GGRA) to commercial and industrial electricity consumers over the first compliance period (2017-2020).
- The *Climate Change Mitigation and Low-carbon Economy Act, 2016,* requires that auction proceeds be used to fund initiatives that are reasonably likely to reduce, or support the reduction of, GHG emissions.

# Context – September 2016 Cabinet Submission

- In the September 12, 2016 Cabinet submission, ENERGY proposed to recycle approximately $1.1 billion of cap and trade auction proceeds through a volumetric rebate mechanism so commercial and industrial electricity consumers receive a net benefit. The below charts illustrate the consumer impacts of this recycling.




**Note:** Above graphs are for illustrative purposes. Recycling would not occur in 2016.

# Ontario's Climate Change Legislation and Action Plan

## Climate Change Legislation

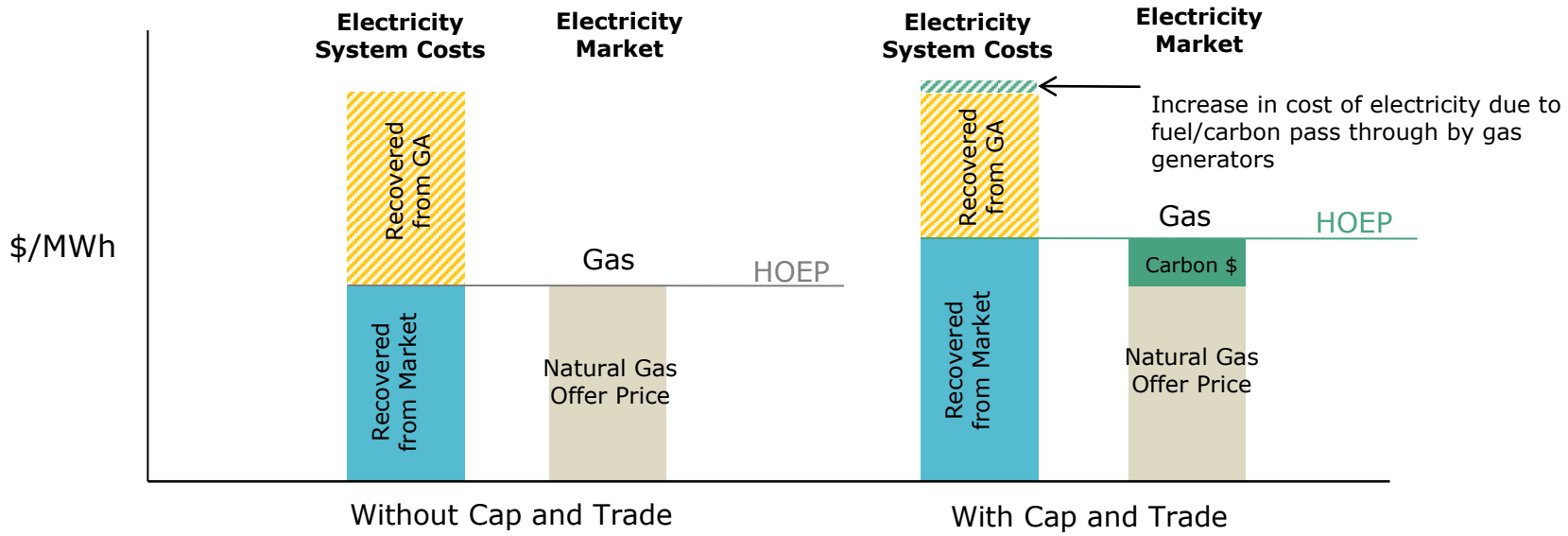
- The *Climate Change Mitigation and Low-Carbon Economy Act, 2016* requires that:
  - Auction proceeds from the Greenhouse Gas Reduction Account (GGRA) be used to directly and/or indirectly fund specific initiatives; and
  - Such initiatives must be reasonably likely to reduce, or support the reduction of, greenhouse gas (GHG) emissions, or be related to initiatives that are reasonably likely to do so (e.g., renewable energy, fuel switching, etc.).

## Climate Change Action Plan

- Released on June 8, 2016, Ontario's Climate Change Action Plan (CCAP) expresses support for actions that incent fuel switching to electricity, incent off-peak electricity consumption and offset the cost of current and future GHG reduction initiatives.
  - Action 4.4 of the CCAP states that up to $1.3 billion of cap and trade proceeds will be used to "offset the cost of greenhouse gas pollution reduction initiatives that are currently funded by residential and industrial consumers through their bills."
  - CCAP did not set out potential approaches for proceeds recycling to the electricity sector.

# Impact of Cap and Trade on the Electricity Market

- Under cap and trade, the wholesale hourly electricity price (HOEP) will increase in many hours as a result of peaking generators (i.e., often gas generators) including the cost of carbon in their offers. Fuel costs are essentially a pass through for these generators.
- The payments to gas generators through Global Adjustment (GA) will decrease a greater proportion of total system costs would be recovered through the market.
- On a net basis, these dynamics will cause the total system cost to increase as HOEP goes up, but GA goes down by a smaller amount.

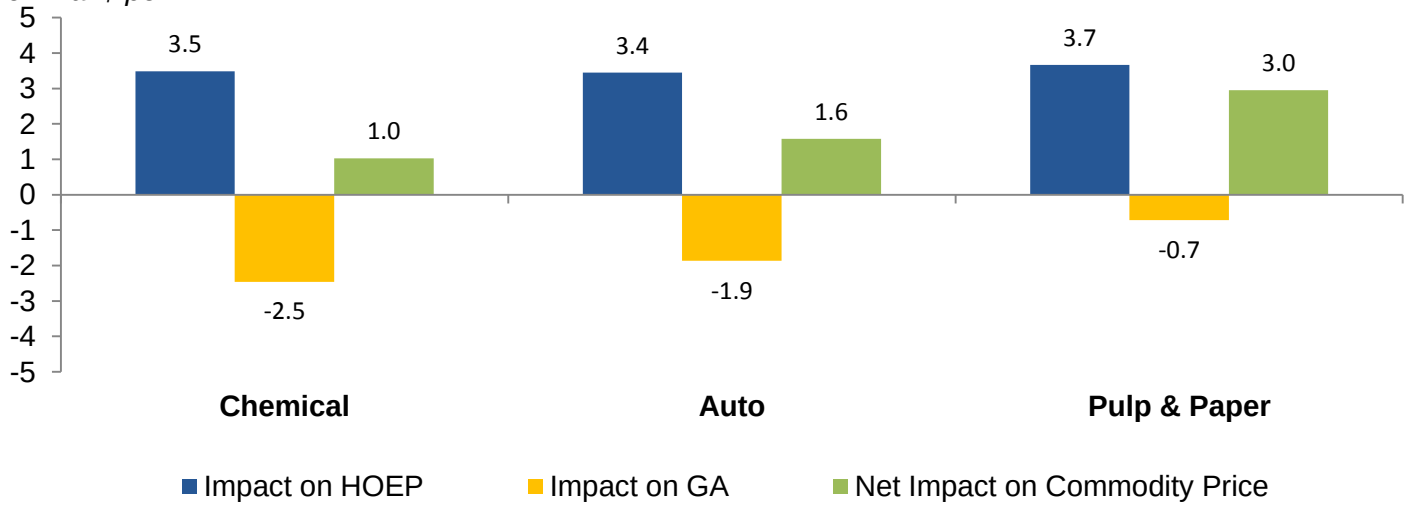


# Cap and Trade Impact on Electricity Consumers

- There is significant variation in the commodity cost of large electricity consumers due to differences in their Global Adjustment (GA) costs:
  - GA paid by Class A electricity consumers varies depending on their ability to take advantage of the Industrial Conservation Initiative (ICI) and reduce consumption during peak hours.
  - Under ICI, large electricity consumers pay GA based on their share of peak demand during the five peak hours of the year. These "Class A" consumers can pay lower GA if they are able to reduce consumption during peak times.

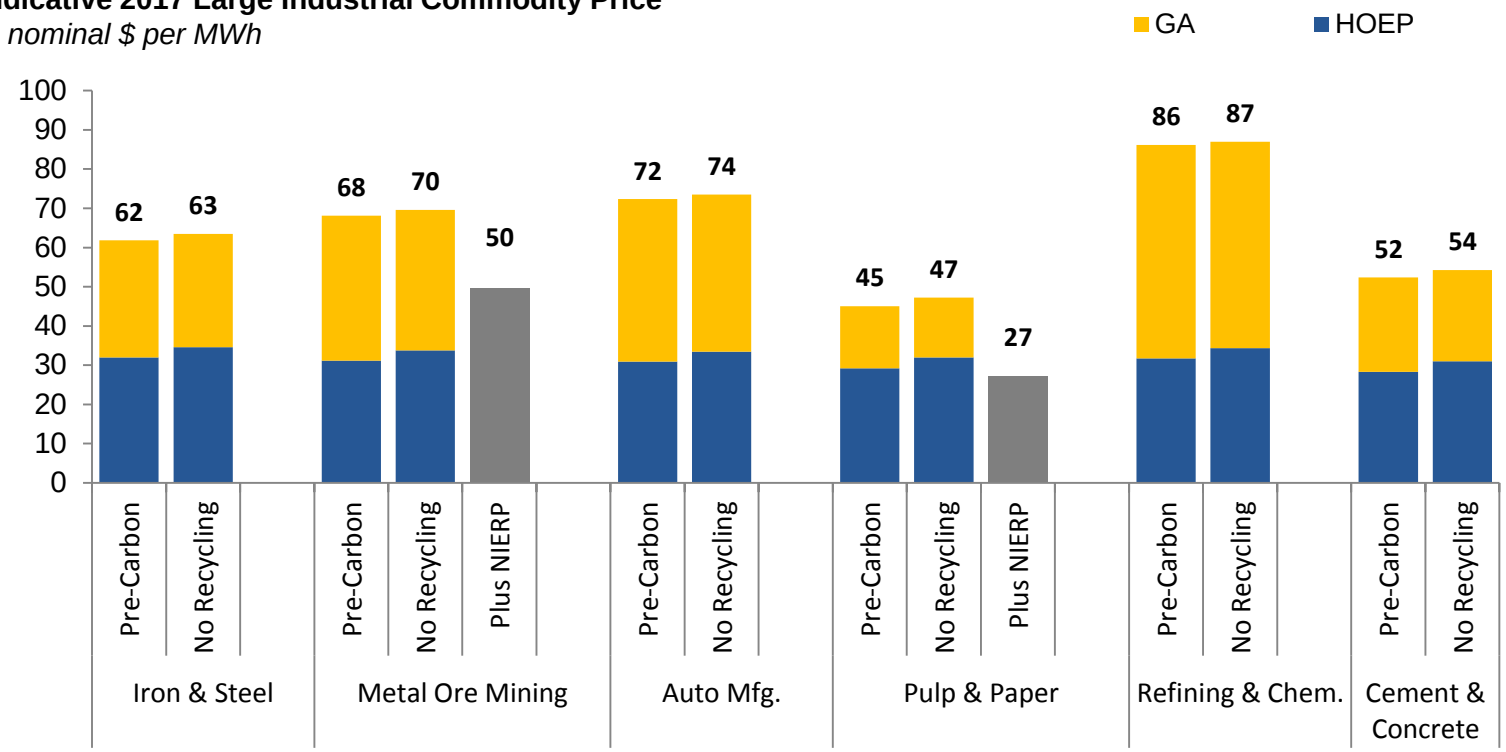
- Because of this variation, the net impact of cap and trade on the Hourly Ontario Energy Price (HOEP) and GA varies.

**Indicative Average Impact (2017-2020)**
*in nominal $ per MWh*



# Cap and Trade Impact on Electricity Consumers (cont'd)

**Indicative 2017 Large Industrial Commodity Price**
*in nominal $ per MWh*




**Note:**

**1)** The graph is based on transmission-connected industrials reflecting about 70 of the 300 consumers participating in ICI. While the graph shows an average, there is variation between individual facilities within sectors.

**2)** Most large industrial consumers in northern Ontario participate in the Northern Industrial Electricity Rebate Program (NIERP), which provides a $20/MWh rebate on eligible consumption. This impact is not included in the chart.

# Proceeds Recycling Options

# Proceeds Recycling Options – Overview

- Recycling cap and trade auction proceeds to lower the cost of electricity would:
  - Offset consumers' contributions to investments/initiatives which reduce GHGs (e.g., non-emitting generation and conservation programs);
  - Support CCAP goal of fuel-switching and electrification; and
  - Depending on the option chosen, incent "behavioural change" such as consuming electricity during off-peak times.

- The proposed auction proceeds recycling options include:
  1. Recycle proceeds back to electricity consumers via Global Adjustment (GA);
  2. Recycle proceeds volumetrically in all hours (as assumed in the September 12 Cabinet submission);
  3. Recycle proceeds volumetrically in off-peak hours; and
  4. Recycle proceeds via a hybrid approach through GA and volumetrically.

- The proposed options are intended to balance the ability to meet the CCAP commitments, provide consistency with the September 2016 direction, maintain the potential for linking funding to GHG reductions and minimize administrative complexity.

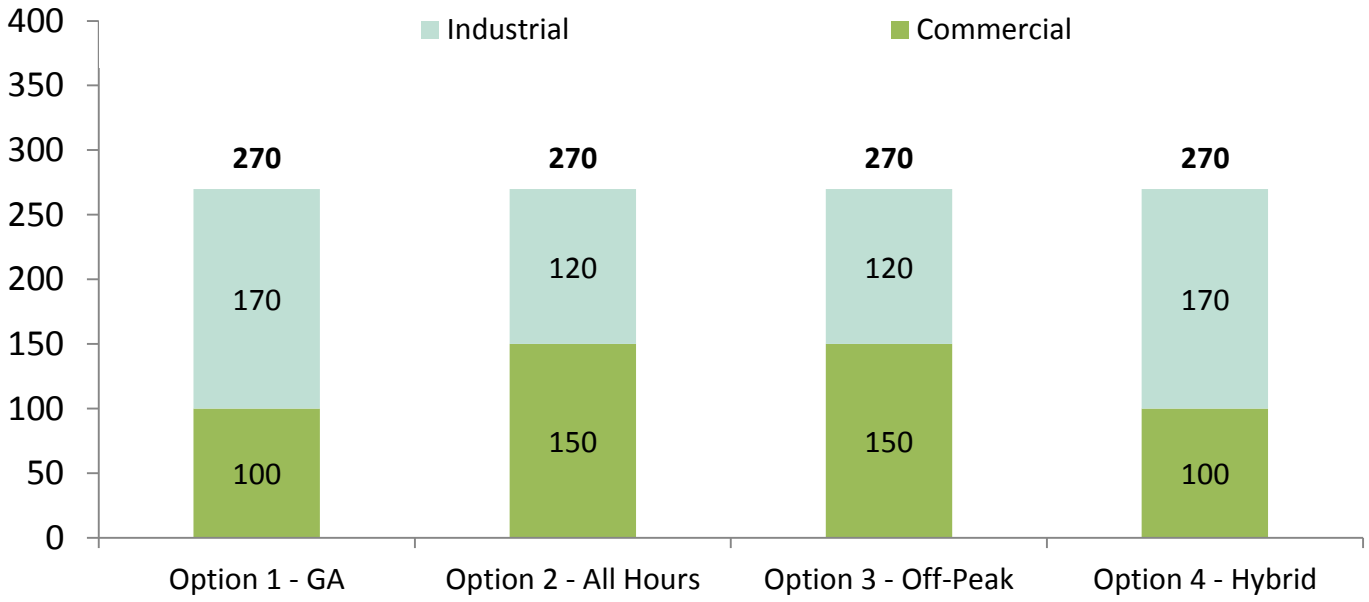
# Illustrative Impact to Electricity Consumers (2017-2020)

| Option | Total (2017-2020) | Avg. Residential Impact ($/month) | Avg. Class B Commercial Impact ($/MWh) | Class A Industrial Impact* ($/MWh) | | |
|---|---|---|---|---|---|---|
| | | | | High GA (e.g., chemical) | Medium (e.g., auto) | Low GA (e.g., pulp) |
| CCAP estimate was based on recycling via GA to offset the average industrial consumer | $1.3 billion | - $2.00 | - $2.50 | - $1.10 | $0 | $2.35 |
| 1. **Global Adjustment (GA) recycling** (Targeted amounts to Class A and Class B electricity consumers) | $1.1 billion | N/A** | - $1.70 | - $6.90 | - $4.50 | $0.60 |
| 2. **Volumetric recycling in "all hours"** (as assumed in the September 12 Cabinet submission) | $1.1 billion | N/A** | - $2.70 | - $3.25 | - $2.70 | - $1.30 |
| 3. **Volumetric recycling in "off-peak hours"** | $1.1 billion | N/A** | - $2.70 | - $3.15 | - $2.50 | - $1.60 |
| 4. **Hybrid option** (targeted amounts via GA to Class A, plus volumetric amount in "all hours" to Class A)*** | $1.1 billion | N/A** | - $1.70 | - $6.20 | - $4.50 | - $0.80 |

*** Note:** The above benefits do not include the cost of ICI expansion (impact of about $1/MWh) and the RRRP update (impact of about $0.76/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).
**** Note:** Most residential consumers pay under the Regulated Price Plan (RPP). For simplicity, all non-RPP Class B consumers are referred to as "Class B/Commercial" throughout the deck. On September 15, 2016, the government introduced legislation that would provide an 8% rebate equal to the provincial portion of the Harmonized Sales Tax (HST) to consumers eligible for the RPP, such as residential households, small businesses and farms – exceeding the 2016 Budget commitment.
*****Note:** The estimates assume that 60% of proceeds for Class A is recycled via a targeted GA and 40% is recycled volumetrically; Class B consumers are assumed to receive recycling via a targeted GA.

# Average Annual Proceeds Required

**Average Annual Proceeds Required (2017-2020)**
*in $ millions per year*




**Note:** The CCAP estimate which was based on recycling via GA to offset the average industrial consumer allocated an average of $40 million per year to industrial electricity consumers and approximately $175 million per year to commercial electricity consumers over the first compliance period.

**Note:** Option 2 reflects the assumptions in the September 12, 2016 Cabinet submission. Option 4 assumes that 60% of proceeds for Class A is recycled via a targeted GA and 40% is recycled volumetrically; Class B consumers are assumed to receive recycling via a targeted GA.

# 1. Recycling Proceeds via the Global Adjustment (GA)

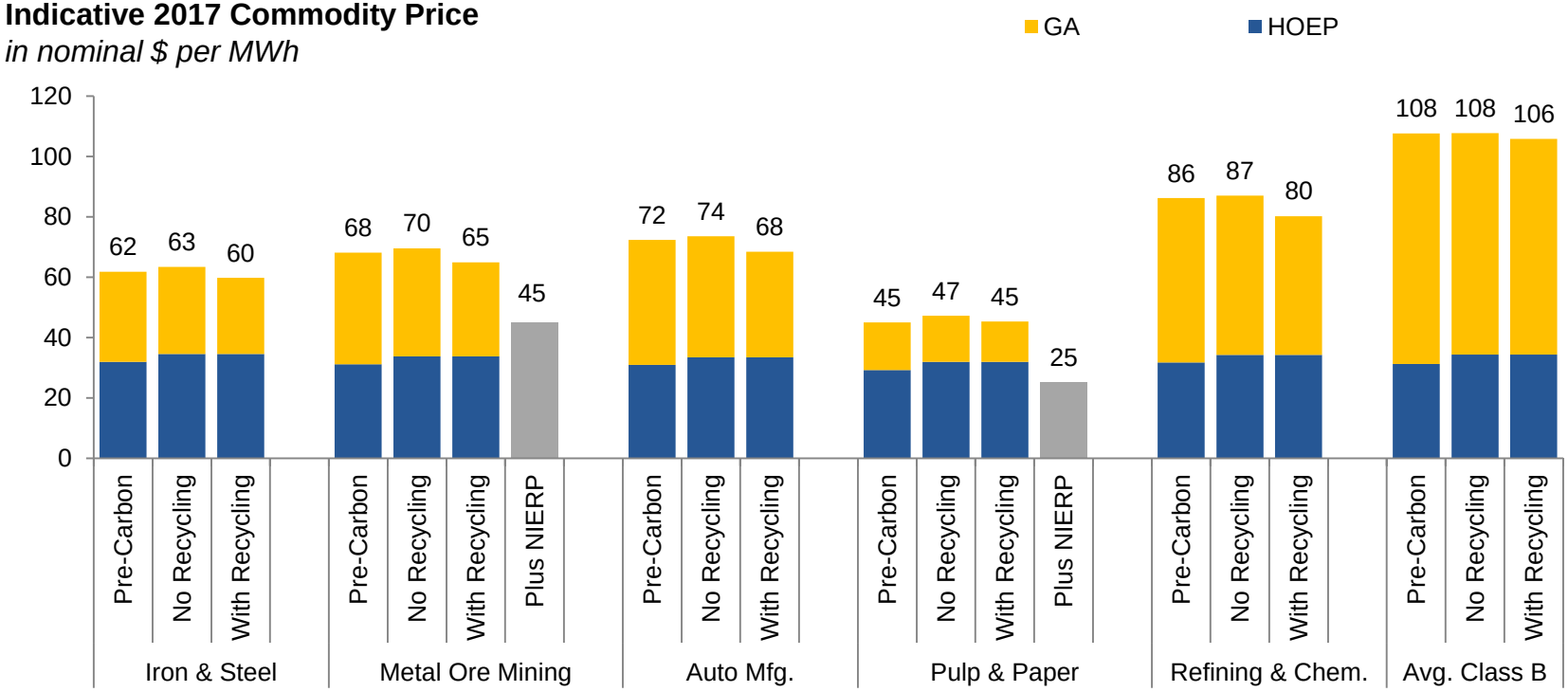
- Propose to recycle an annual average of $270 million in cap and trade auction proceeds through the Global Adjustment (GA) mechanism to commercial and industrial electricity consumers.
  - Proposal would recycle an annual average of approximately $100 million to offset the impact to the average Class B electricity consumers (i.e., commercial) and allocates the remaining $170 million per year to Class A electricity consumers (i.e., industrial) over the first compliance period (2017-2020).
  - Represents a reduction of approximately $60 million per year on average from the CCAP commitment.

**Considerations**

- Does not meet the September 12, 2016 commitment to provide a benefit to all industrial and commercial electricity consumers. Under this option, some industrial electricity consumers would continue to pay a carbon price and the net benefit would differ between consumers.
  - Many large industrials (particularly those participating in the ICI program) would not pay sufficient GA to benefit enough to offset the costs associated with the cap and trade program.
  - Class A consumers in sectors that are currently paying lower GA (e.g., pulp & paper, cement, iron & steel) would receive relatively less proceeds recycling compared to consumers in sectors that currently pay higher GA (e.g., auto manufacturing, petroleum products refining and chemical producers).
- Provides a strong link to the MOECC legislation and the GGRA since amounts would be used directly to lower the costs associated with GHG-lowering activities and initiatives (including the pooled costs of the FIT, microFIT, Large Renewables, Conservation and Demand-side Management (CDM)) and ratepayers incurring the highest GA costs would also see greater benefits.

# 1. Recycling Proceeds via GA – Variation in Electricity Costs

**Indicative 2017 Commodity Price**
*in nominal $ per MWh*




**Note:** The graph is based on transmission-connected industrials reflecting about 70 of the 300 electricity consumers that participate in ICI. While the graph shows an average, there is variation between individual facilities within sectors for Class A electricity consumers. The above benefits do not include the cost of ICI expansion (impact of $1/MWh) and the RRRP update (impact of $0.76/MWh).

# 2. Recycling Proceeds Volumetrically in “All Hours”

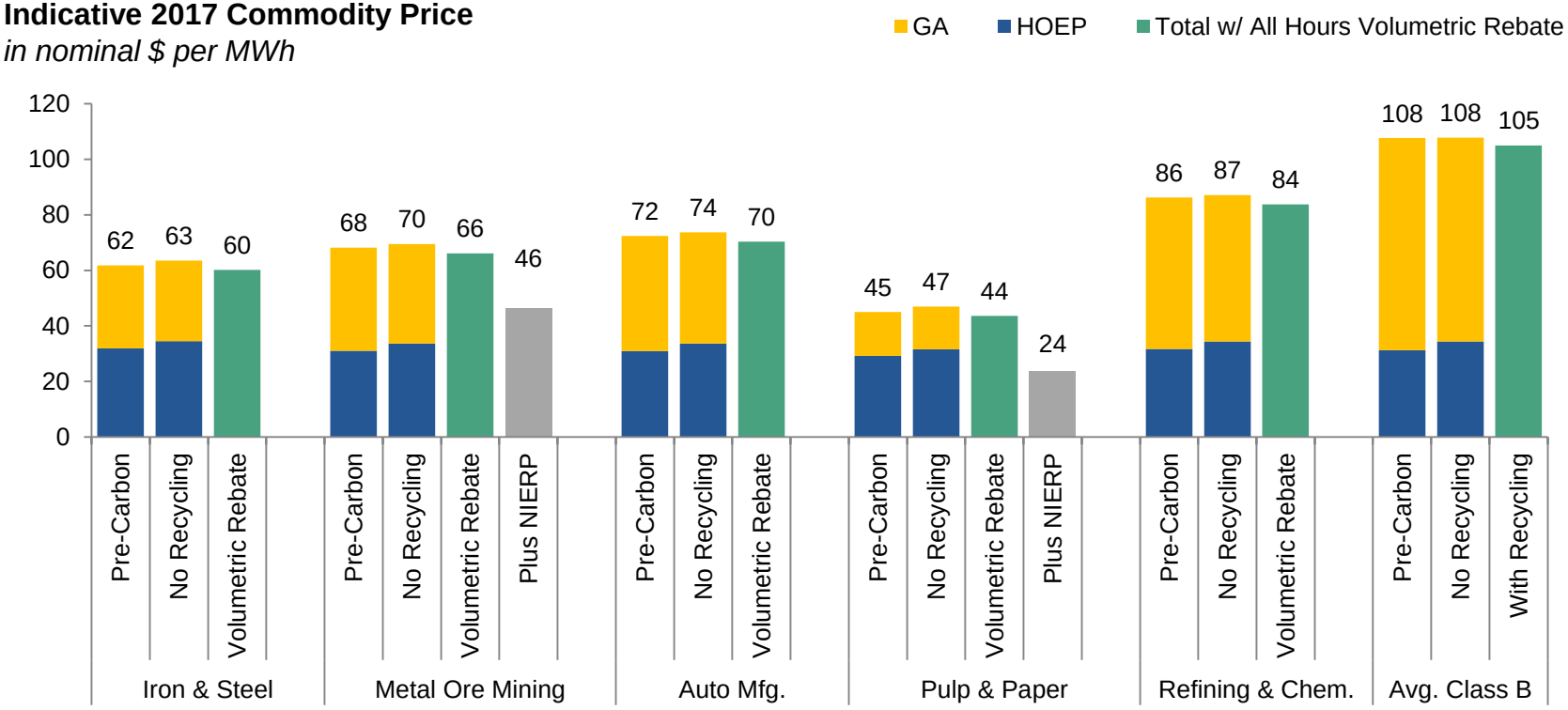
- Propose to recycle an annual average of $270 million in cap and trade auction proceeds through a volumetric mechanism in “all hours” to commercial and industrial electricity consumers.
  - Proposal would recycle an annual average of approximately $150 million for Class B electricity consumers ((i.e., commercial) and approximately $120 million per year for Class A electricity consumers (i.e., industrial) over the first compliance period (2017-2020).
  - This represents a reduction of approximately $60 million per year on average from the CCAP commitment.

**Considerations**

- Consistent with the September 2016 commitment to use cap and trade auction proceeds to provide a net benefit to commercial and industrial electricity consumers.
- Volumetric recycling is more administratively complex than recycling through GA.
- Under this option, the cost of continuing investments in cleaner generation and conservation which decrease GHG emissions would be offset for industrial and commercial consumers. Additionally, this option would maintain the price differential between on- and off-peak hours, thereby encouraging “behavioural change”.

# 2. Volumetric Recycling in "All Hours" – Variation in Electricity Costs

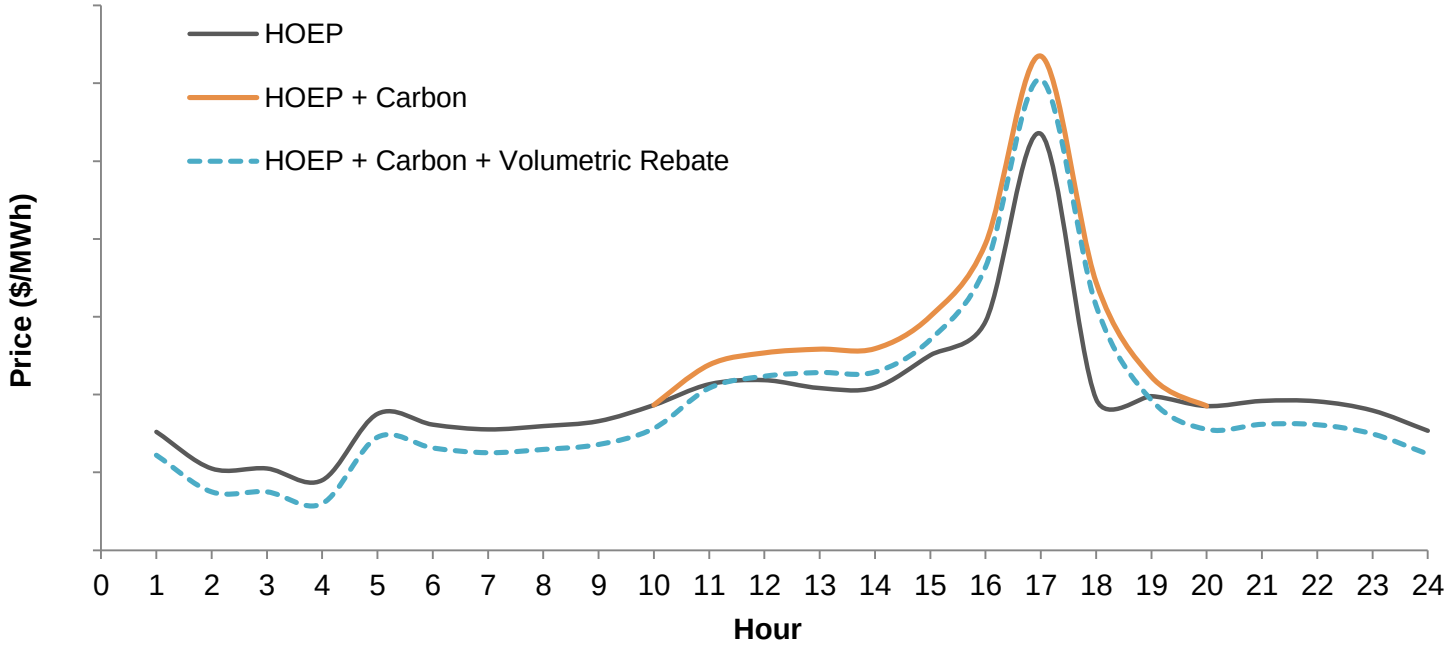
**Indicative 2017 Commodity Price**
*in nominal $ per MWh*




**Note:** The graph is based on transmission-connected industrials reflecting about 70 of the 300 electricity consumers that participate in ICI. While the graph shows an average, there is variation between individual facilities within sectors for Class A. The above benefits do not include the cost of ICI expansion (impact of $1/MWh) and the RRRP update (impact of $0.76/MWh).

# 2. Volumetric Recycling in “All Hours” – Illustrative Example

- Cap and trade will result in an increase in on-peak electricity prices. Redistributing auction proceeds volumetrically across “all hours” would maintain the incentive for off-peak electricity usage.



# 3. Recycling Proceeds Volumetrically in “Off-Peak” Hours

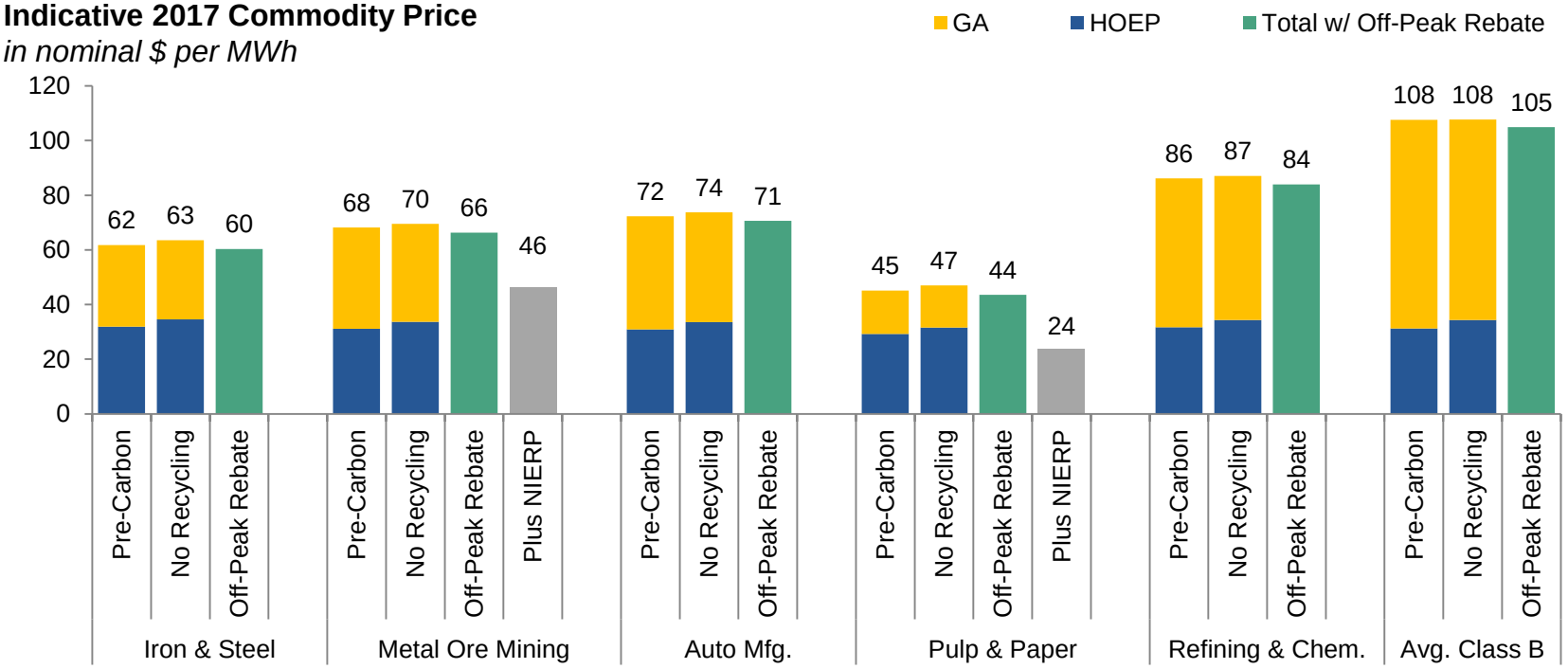
- Propose to recycle an annual average of $270 million in cap and trade auction proceeds through a volumetric mechanism in “off-peak” hours to commercial and industrial electricity consumers.
  - Proposal would recycle an annual average of approximately $150 million for Class B electricity consumers (i.e., commercial) and approximately $120 million per year for Class A electricity consumers (i.e., industrial) over the first compliance period.
  - This represents a reduction of approximately $60 million per year on average from the CCAP commitment.

**Considerations**

- Consistent with the September 2016 commitment to use cap and trade auction proceeds address the impact of cap and trade on commercial and industrial electricity consumers.
- Under this option, no industrial/commercial electricity consumer would be worse off as a result of the imposition of cap and trade.
- Volumetric recycling is more administratively complex than recycling through GA. Recycling in only off-peak hours would add further complexity to the process.
- Incenting consumption during “off-peak” hours, when Ontario’s current mix of resources typically emit low levels of emissions, could further reduce GHGs.

# 3. Volumetric Recycling in "Off-Peak" Hours – Variation in Electricity Costs

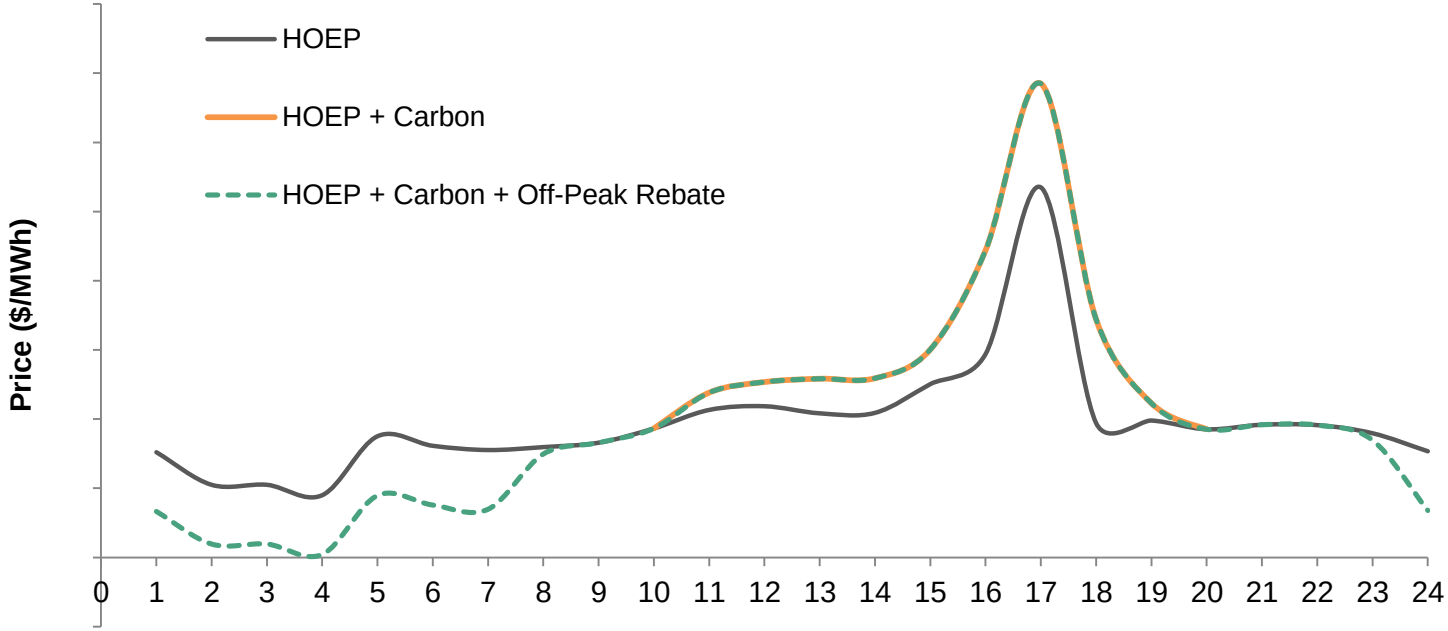
**Indicative 2017 Commodity Price**
*in nominal $ per MWh*




**Note:** The graph is based on transmission-connected industrials reflecting about 70 of the 300 electricity consumers that participate in ICI. While the graph shows an average, there is variation between individual facilities within sectors for Class A. The above benefits do not include the cost of ICI expansion (impact of $1/MWh) and the RRRP update (impact of $0.76/MWh). Estimates based on IESO's definition of "on peak" (hours 8 to 23 Monday to Friday ) and "off-peak" (all remaining hours in the week) for informal purposes; the wholesale market does not use a formal definition of on and off-peak hours.

# 3. Volumetric Recycling In "Off-Peak" Hours – Illustrative Example

- To further incent "off-peak" consumption, proceeds could be redistributed to off-peak hours only.




**Note:** Based on IESO's definition of on peak (hours 8 to 23 Monday to Friday ) and off-peak (all remaining hours in the week) for informal purposes; the wholesale market does not use a formal definition of "on-peak" and "off-peak" hours.

# 4. Recycle Proceeds via GA and Volumetrically (Hybrid)

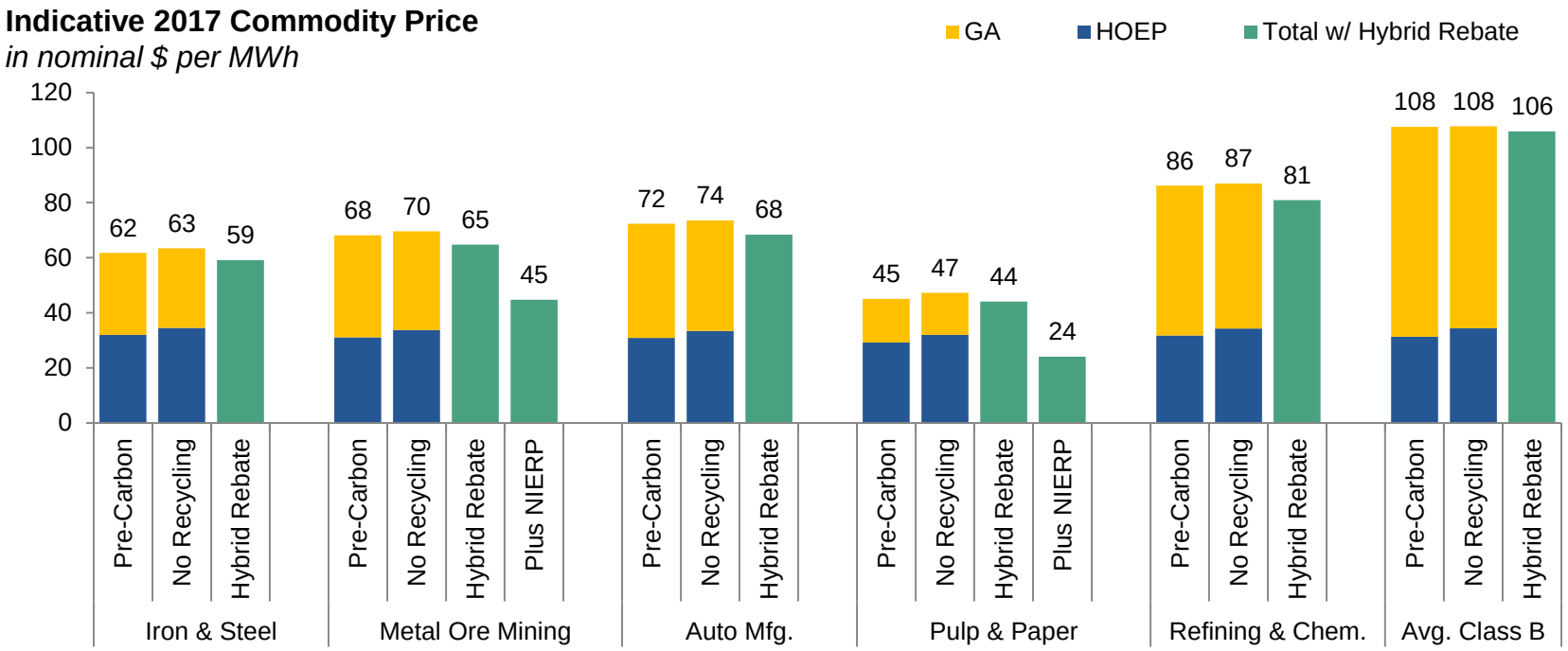
- Propose to recycle an annual average of $200 million in cap and trade auction proceeds through the GA mechanism to commercial and industrial electricity consumers, and an annual average of $70 million volumetrically to industrial electricity consumers.
  - Proposal would recycle an annual average of approximately $100 million to offset the impact to the average Class B electricity consumers (i.e., commercial) and approximately $170 million per year to Class A electricity consumers (i.e., industrial) over the first compliance period.
  - Represents a reduction of approximately $60 million per year on average from the CCAP commitment

**Considerations**

- Consistent with the September 2016 commitment to use cap and trade auction proceeds to provide a net benefit to commercial and industrial electricity consumers. Similar to the GA-only option, companies with a specific load profile (e.g., such as the ability to avoid the top five peaks to pay lower GA while consuming on-peak in all other hours) would receive less relative to other companies due to their exposure to GA.
  - While the use of the volumetric portion of a hybrid approach could lower the cost impact on consumers who not pay sufficient GA to benefit from a GA-only approach, certain Class A consumers would receive relatively less proceeds recycling.

- A hybrid approach provides a strong link to the MOECC legislation and the GGRA since amounts would be used directly to lower the costs associated with GHG-lowering activities and initiatives funded through GA. However, this option is the most administratively complex given that it involves multiple mechanisms.

# 4. Recycling Proceeds via Hybrid Approach – Variation in Electricity Costs




**Note:** The graph is based on transmission-connected industrials reflecting about 70 of the 300 electricity consumers that participate in ICI. While the graph shows an average, there is variation between individual facilities within sectors for Class A electricity consumers. The above benefits do not include the cost of ICI expansion (impact of $1/MWh) and the RRRP update (impact of $0.76/MWh). Assumes that two amounts could be targeted via GA. The estimates assume that 60% of proceeds for Class A is recycled via a targeted GA and 40% is recycled volumetrically.

# Rationale / Considerations

# Achieving the CCAP Commitment / Cost Savings

- The Climate Change Action Plan (CCAP) committed up to $1.3 billion over four years for electricity mitigation for industrial, commercial and residential electricity consumers from GGRA proceeds.

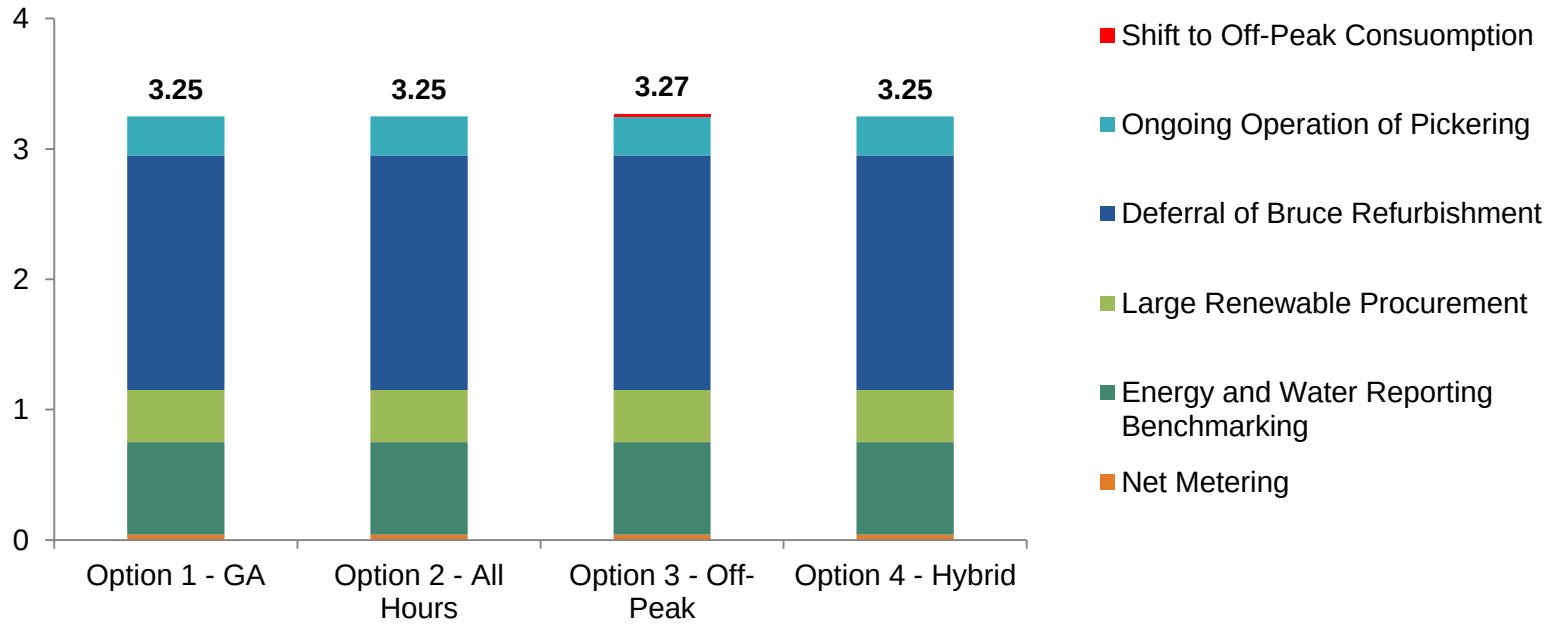
- The proposals require approximately 20% less in auction proceeds, saving approximately $0.24 billion relative to the CCAP commitment over the first compliance period (2017-2020).
  - The GA option assumes that two amounts could be targeted via GA – one specific to Class A electricity consumers and one specific to Class B consumers. This option does not meet the September 12 commitment as some industrial consumers would continue to pay a carbon price.
  - The volumetric proposals (i.e., “all hours” and “off-peak”) meet the 2016 Budget commitment and ensure that no industrial/commercial electricity consumer would be worse off as a result of cap and trade.
  - The hybrid option also assumes that two amounts could be targeted via GA and that government would specify amounts that would flow through GA and through a volumetric mechanism for Class A consumers. However, some industrial consumers with “specific load” shapes would continue to be disadvantaged compared to other consumers due to their lack of exposure to GA.

- Consistent with the September 12 minute, consideration could be given to allocating the $0.24 billion in reduced proceeds required towards other existing initiatives that also reduce greenhouse gas (GHG) emissions.

# Reducing GHG Emissions – Summary

- ENERGY has estimated the GHG emissions reductions associated with “planned/committed” electricity sector initiatives that were developed following the 2013 LTEP and the rebate in off-peak periods.

**Average Annual GHG Reductions (2017-2020)**
*in megatonnes (Mt) CO2*



# Reducing GHG Emissions – Investments in Clean Electricity and Conservation

- All the proposed options are capable, once fully developed, of demonstrating a link between proceeds recycling and the lowering of GHGs by offsetting the costs of investments in clear electricity generation and conservation (i.e., 90% GHG-free).

- Since 2003, Ontario has invested more than $30 billion in over 11,000 megawatts (MW) of new and refurbished clean generation, including nuclear, hydro, wind and solar – this represents about 30% of our current supply.

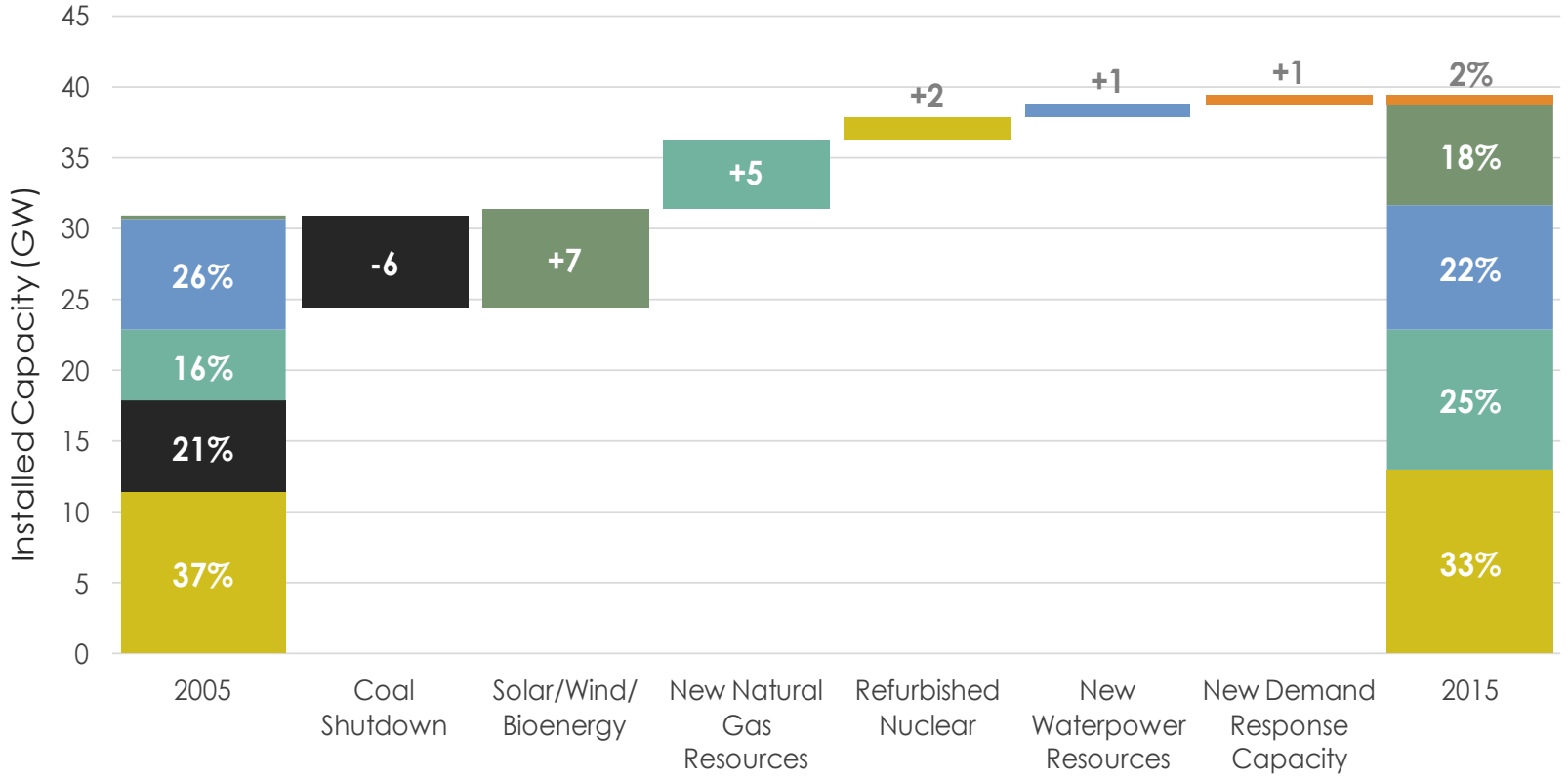
- The costs associated with these ongoing investments in the electricity sector to ensure a clean, low-GHG-emitting system are significant and continue to be borne by electricity ratepayers. Recycling helps pay for committed investments/initiatives which reduce GHGs (e.g., non-emitting generation, nuclear and conservation programs).

- Due to the long-term nature (typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about $7 billion dollars annually during the first cap and trade compliance period. These costs will continue well beyond the timelines described in the CCAP.

- Decisions made since the 2013 LTEP, including approving Ontario Power Generation's plan to pursue Pickering life extension, represent an estimated more-than-3Mt reduction in emissions during the first compliance period.

# Reducing GHG Emissions – Investments in Clean Electricity and Conservation (cont'd)

**Change in Installed Supply Resources (2005-2015)**




Source: Ontario Planning Outlook, 2016

# Reducing GHG Emissions – Load Shifting / Fuel Switching

- All of the proposed options have the potential to reduce GHG emissions by incenting consumers to switch from using electricity over fossil fuels and using electricity during periods when there is less carbon in our electricity generation.

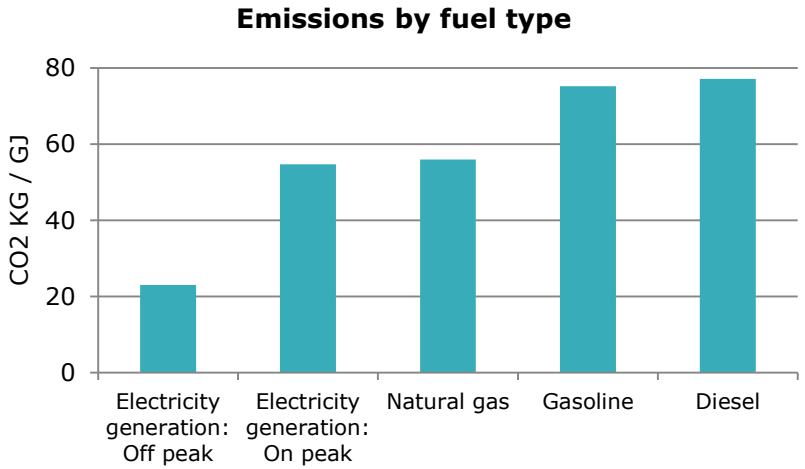
- All four options would make electricity more affordable, incenting fuel switching to electricity that is relatively cleaner than other fuels (i.e., natural gas, oil).

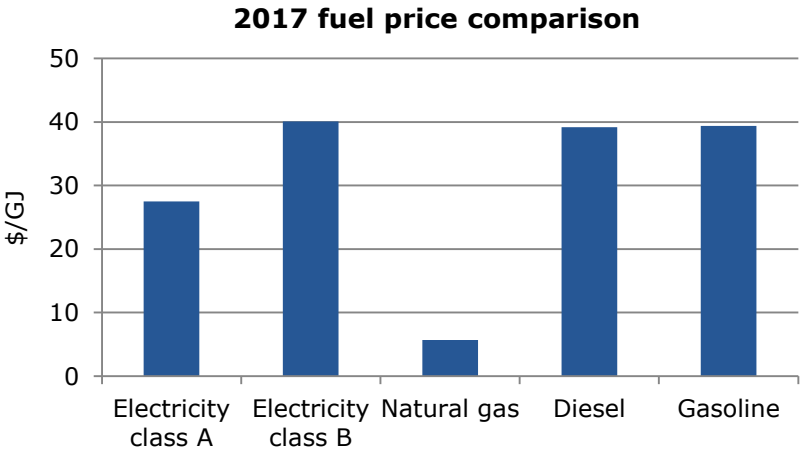
- The volumetric “all hours” option maintains existing price differentials while lowering the overall cost impact on consumers. This preserves the current market price-signal to load-shift from on-peak periods to off-peak.
  - The volumetric “off-peak” hours option would further increase the incentive to shift to off peak periods.
  - Both volumetric recycling options could lead to implementation/administrative complexity for LDCs.

- Based on ENERGY preliminary analysis, providing the rebate in off-peak periods could further reduce emissions by up to 20,000 tonnes (i.e., 0.02 Mt) over the first compliance period, with higher savings expected over the long term as the carbon price, consumer response and amount of recycling increases.

# Reducing GHG Emissions – Load Shifting / Fuel Switching (cont'd)

- The use of cap and trade auction proceeds to lower the cost of clean electricity would make it more competitive with traditionally cheaper fossil fuels, providing an incentive to fuel switch from fossil fuels to electricity is a "behavioural change" consistent with the goals of CCAP.
- During "off-peak" hours, Ontario's current mix of resources typically emit extremely low levels of GHG emissions.
- Ontario's grid electricity currently has an emission factor which is far lower than the carbon content of natural gas or diesel. This puts Ontario's electricity sector in a strong position to support fuel switching as a GHG-reducing activity.




*Source: ENERGY analysis, FTR 2016, OPO 2016, EIA, STATCAN*

# Implementation Considerations

- While the impact of cap and trade would be added to electricity bills as of January 2017, the offsetting effect of proceeds recycling may not occur immediately depending on implementation and potential alignment with the first auction expected in March 2017.

- Due to IESO and LDCs' need to implement billing system changes, proceeds recycling would likely not appear on bills immediately after January 1, 2017, but would require an initial catch-up/true-up payment at first. Recycling either primarily or exclusively to "off-peak" hours would increase administrative complexity for the IESO and LDCs.

- Any of the recycling options would require the tracking of the impact of carbon on HOEP. However, a "true-up" mechanism may need to be done more frequently (i.e., monthly) for the volumetric "all hours" and "off-peak" options.

- The volumetric options may require a "separate regulatory" line item of Class A and non-residential Class B electricity consumers' bills. Staff analysis is ongoing.

- Contemplated legislative amendments to implement proceeds recycling would require approval of the House (Legislature) including its committee process. However, legislation provides more certainty regarding legal authority.

# Stakeholder Considerations

| Stakeholder | Current Status / Comments |
|---|---|
| AMPCO | • ENERGY has regularly met with the Association of Major Power Consumers of Ontario (AMPCO). IESO and MOECC have attended some of the meetings.<br>• AMPCO expressed concerns regarding the GA option as some consumers would see an increase in the cost of electricity associated with the cap and trade program. These concerns would likely persist for a hybrid option.<br>• AMPCO is generally supportive of "volumetric" recycling and of providing a net benefit to electricity consumers. **Note:** Additional information on the potential impact was requested by AMPCO and its members.<br>• Following initial discussions on the "off-peak" proposal in October 2016, AMPCO raised concerns that some of their members would be worse off under the proposal. |
| LDCs | • ENERGY has established a rate mitigation working group with LDCs and the Electricity Distributors Association (EDA). Proceeds recycling has been discussed with the working group.<br>• LDCs have expressed concerns regarding the timing of implementing billing system changes which could take several months or more depending on complexity.<br>• LDCs have requested for further clarity on timing and the approach in order to scope the changes needed. |

# Legal Considerations

- Three broad legal issues arise with the proposal to use cap and trade auction proceeds for commercial and industrial electricity consumers:

1. Meeting the requirements of the *Climate Change Mitigation and Low-carbon Economy Act, 2016* (the “Act”)

2. Addressing constitutional law requirements to ensure that cap and trade proceeds will not be characterized as an unconstitutional tax; and

3. Ensuring sufficient authority within the electricity system to receive GGRA proceeds and apply them as intended.

# 1. Legal Considerations – Meeting the Requirements of the Act

- The Act allows funds collected from cap and trade to be used to fund, directly or indirectly, costs relating to listed initiatives that are reasonably likely to reduce, or support the reduction of greenhouse gas (GHG) emissions and costs relating to any other initiatives that are reasonably likely to do so.

- Listed initiatives include initiatives relating to the reduction of GHGs from energy sources and uses through the use of renewables and alternative energy sources, including:
  i. The production or installation of renewable, low-carbon, carbon-free and net zero alternative energy; and
  ii. distributed renewable energy generation and energy management technologies to eliminate the need for grid-based electricity during natural gas peaking.
  iii. Initiatives relating to the reduction of GHGs from industry, including fuel switching.

- The MOECC Minister must review and provide an evaluation of the initiatives to Treasury Board that considers, among other things, the potential GHG reductions of the initiative.

- The selected proceeds recycling option must therefore be able to demonstrably reduce GHGs.

- Evidence that links the use of proceeds with the GHG reduction will be required for compliance with the Act.

# 2. Legal Considerations – Constitutional Law

- In addition to meeting the requirements of the Act, in order for the cap and trade program to be characterized as a "regulatory charge", rather than an unlawful tax, it is critical that auction proceeds be spent on the regulatory purpose of the program - initiatives that are reasonably likely to reduce or support the reduction of GHGs**.**

- The way auction proceeds are used will be significant to characterizing the program as a regulatory charge:
  - The more tenuous the link between expenditures and the regulatory purpose of GHG emissions reduction (e.g., climate change adaptation), the greater the constitutional risk;
  - There is no requirement to spend proceeds received from one sector proportionally on that sector;
  - Ontario should begin by investing in projects very clearly related to reducing GHG emissions;
  - A court is unlikely to second guess the government's assessment of the value or wisdom of particular investments in GHG reduction initiatives; and
  - Auction proceeds can be spent on existing GHG reduction initiatives.

- The link between the use of proceeds in the electricity sector and the reduction of GHGs must be based on evidence that can withstand the scrutiny of the court.

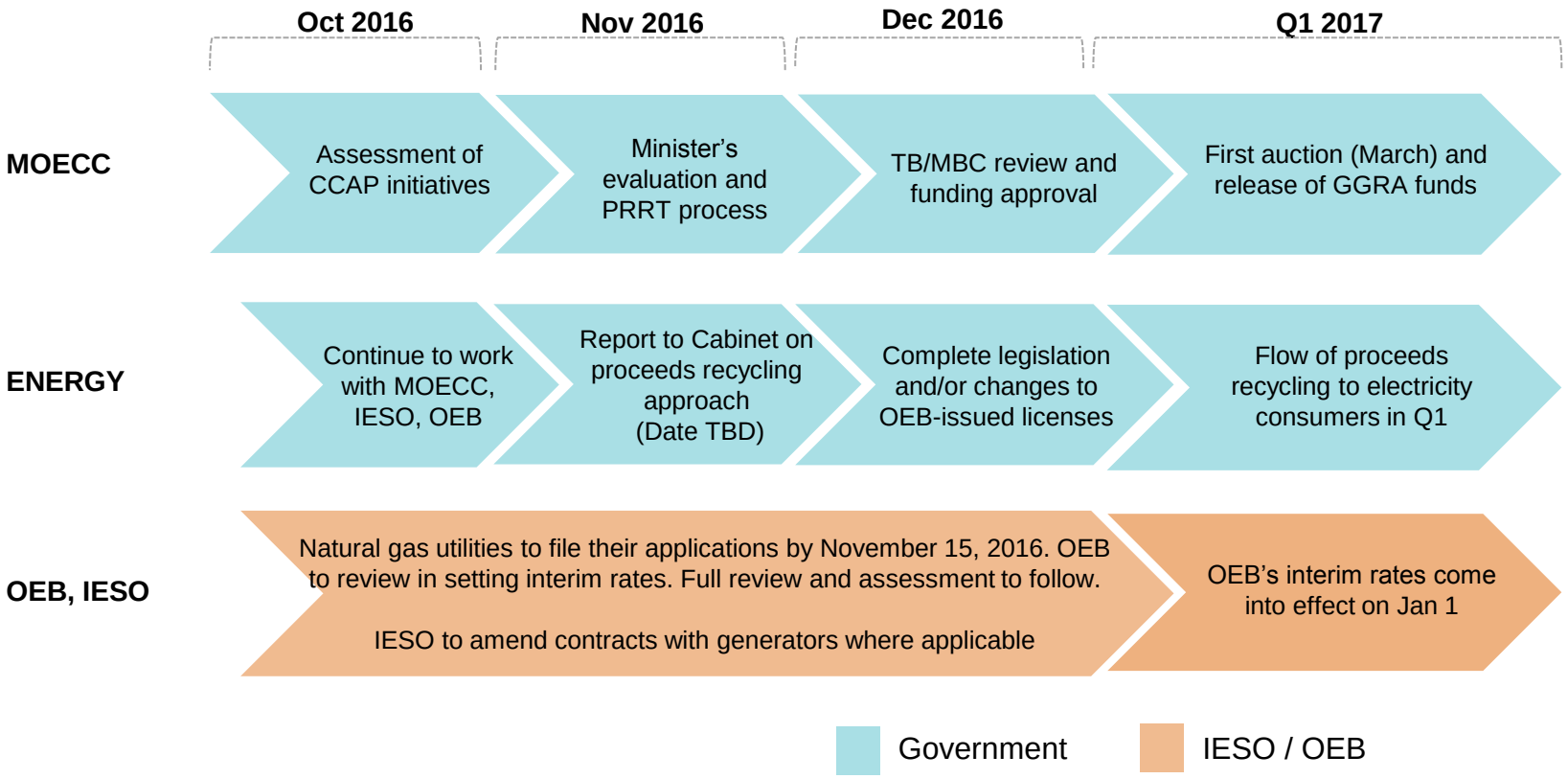
# 3. Legal Considerations – Ensuring Authority to Use Cap and Trade Proceeds

- While the Act allows funds collected from cap and trade to be used to fund various initiatives, neither the *Electricity Act, 1998* (EA) nor the *Ontario Energy Board Act* (OEBA) contemplate the use of cap and trade proceeds.
- This creates uncertainty about the abilities of IESO to receive and settle cap and trade amounts.
- Legislative amendments that allow IESO to receive and pay out cap and trade proceeds for the benefit of certain rate payers would provide this certainty.
- Similarly, legislative amendments that give the Ontario Energy Board (OEB) authority to take steps to implement proceeds recycling (such as amend licenses, create or amend a Code) would provide certainty.
- Without such certainty, IESO may feel constrained in their abilities to recycle proceeds as contemplated in this deck and their actions could be subject to scrutiny and, potentially, challenge.
- Despite the risk of legislative uncertainty, it is possible that existing legislative authority could be used to facilitate proceeds recycling.
- Implementation of all four options could be further supported with legal instruments such as an LGIC-approved directive to the OEB or a Memorandum of Understanding/ Service Level Agreement with IESO.

# Legal Considerations – Ensuring Authority to Use Cap and Trade Proceeds (cont'd)

| Option | Implementation Mechanism | Potential Additional Measures |
|---|---|---|
| GAM | • Legislation<br>• Amendments to O. Reg. 429/04 (GA Reg.) made under Electricity Act, 1998 | • MOU/SLA with IESO<br>• Amend IESO objects regulation |
| Volumetric all hours | • LGIC OIC and directive to OEB | • MOU/SLA with IESO<br>• Amend IESO objects regulation |
| Volumetric off-peak | • LGIC OIC and directive to OEB | • MOU/SLA with IESO<br>• Amend IESO objects regulation |
| Hybrid option | • Legislation<br>• Amendments to O. Reg. 429/04 (GA Reg.) made under Electricity Act, 1998<br>• LGIC OIC and directive to OEB | • MOU/SLA with IESO<br>• Amend IESO objects regulation |

# Key Dates and Milestones



# Next Steps

- ENERGY to work with Independent Electricity System Operator (IESO), Ontario Energy Board (OEB), LDCs (as necessary) and MOECC, MNDM and MEDG on final recycling approach.
  - Depending on the option chosen, begin working with OLC on legislative and regulatory amendments and creation of other instruments as needed.

- ENERGY to consult with LDCs and stakeholders regarding the design and implementation of proceeds recycling.

- ENERGY to report back to Cabinet on a recommended approach in November 2016.

# Appendix

# Cost of Electricity

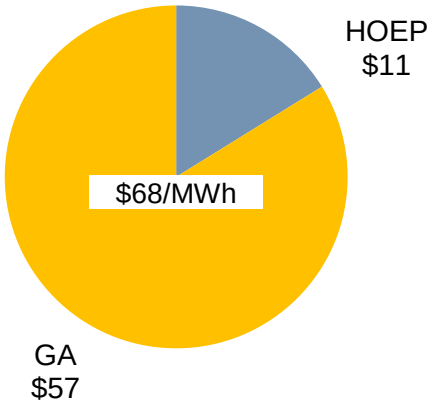
- Ontario's electricity consumers pay for electricity in different ways. The commodity cost of electricity is the sum of:
  - Hourly Ontario Energy Price (HOEP) which is the hour-by hour market clearing price that reflects the short run cost of producing power; and
  - Global Adjustment (GA) which ensures recovery of long run generation. Ontario's conservation programs and clean sources of electricity supply (e.g., renewables, etc.) are funded through the GA.

- Under the Industrial Conservation Initiative (ICI), part of the Global Adjustment regulation, large consumers pay GA based on their share of peak demand during the five peak hours of the year. These "Class A" consumers can pay lower GA if they are able to reduce consumption during peak hours.
  - Class A consumers* are typically large industrials.
  - In 2015, the "cost shift" from Class A to Class B consumers was about $890 million (i.e., a bill impact of approximately $4.90/month for a typical residential consumer).
  - About 300 participating consumers collectively reduced Ontario's peak demand by an estimated 1,000 MW in 2015.

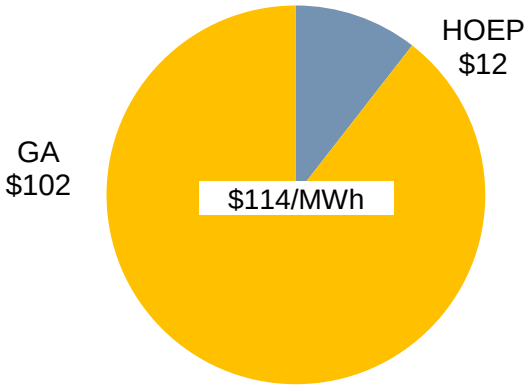
- Consumers not eligible for ICI pay GA on each unit of consumption.
  - These are known as Class B consumers and are typically commercial or institutional facilities.

**Commodity Cost of Electricity YTD June 2016**

**Class A (Industrial) in $/MWh**



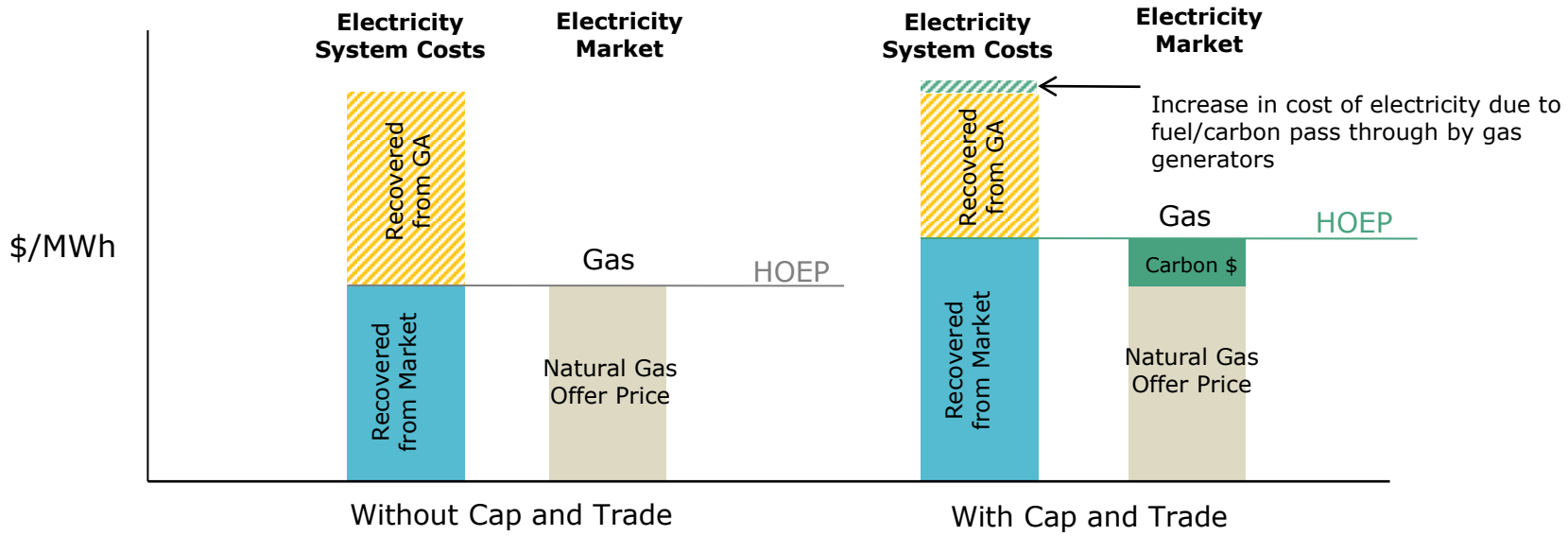

**Class B (Commercial) in $/MWh**




***** Reflects consumers are those with peak demand greater than 5 MW, and in electricity-intensive sectors with peak demand between 3 MW and 5 MW. Ontario is expanding the ICI by lowering the threshold to 0 MW and removing sector restrictions; new participants who in would see the change on their bills in 2018.

# Impact of Cap and Trade on the Electricity Market

- Under cap and trade, the wholesale hourly electricity price (HOEP) will increase in many hours as a result of peaking generators (i.e., often gas generators) including the cost of carbon in their offers. Fuel costs are essentially a pass through for these generators.
- The payments to gas generators through Global Adjustment (GA) will decrease as a greater proportion of total system costs would be recovered through the market.
- On a net basis, these dynamics are expected to cause the total system cost to increase as HOEP goes up, but GA goes down by a smaller amount.

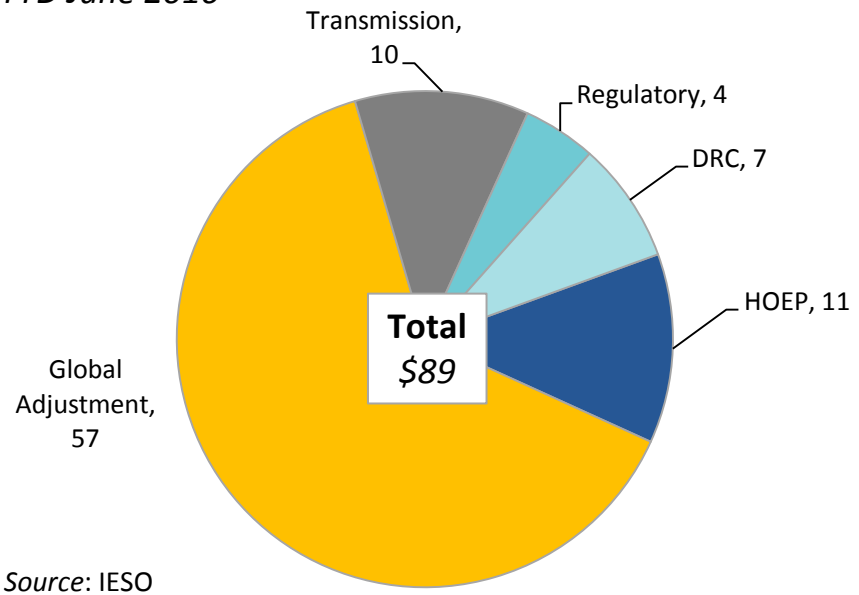


# Class A (Industrial) Electricity Prices

- There are currently about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include the Industrial Conservation Initiative (ICI) and Northern Industrial Electricity Rate Program (NIERP).
- Under ICI, Class A consumers are charged GA based on their share of peak demand. ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates one-third on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*




*Source*: IESO

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

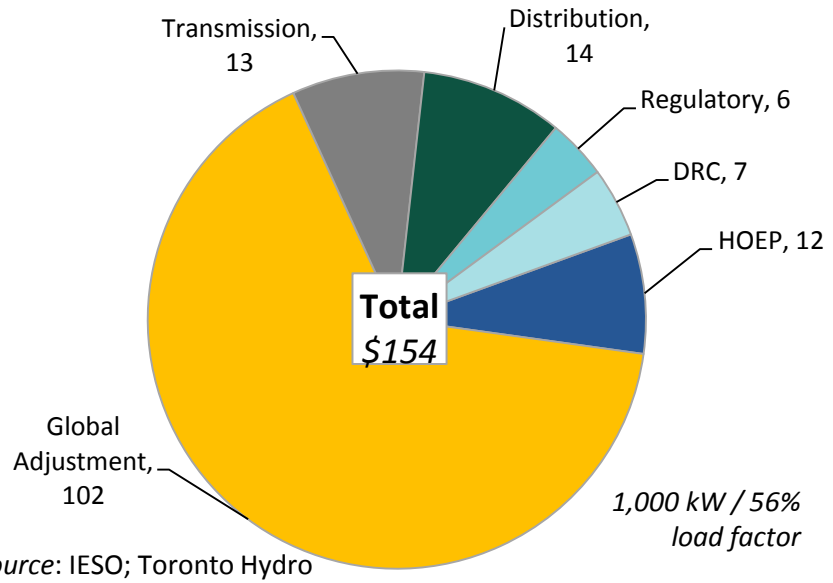
*** Note:** Industrial consumers receive input tax credits for their HST.

# Class B (Commercial) Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*



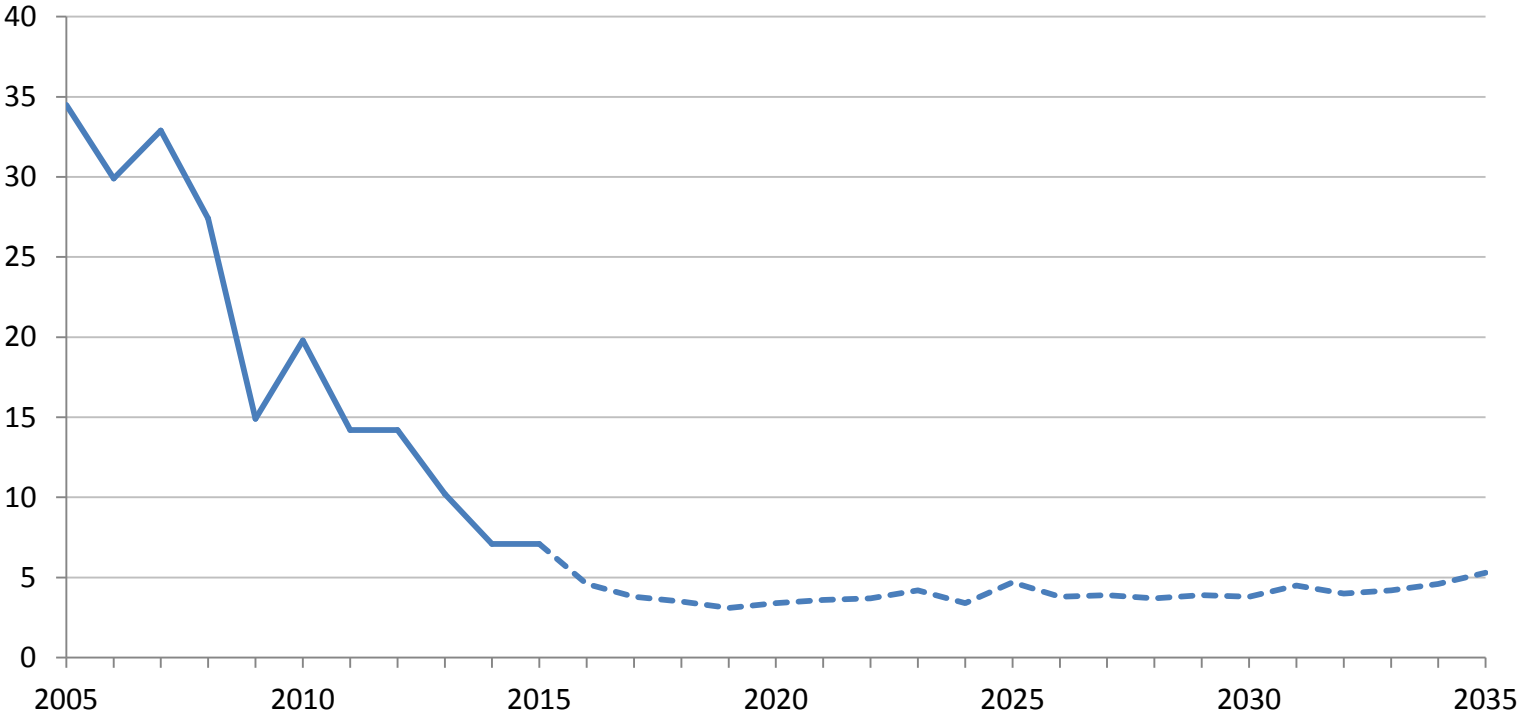

*Source*: IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

*** Note**: Most commercial consumers receive input tax credits for their HST.

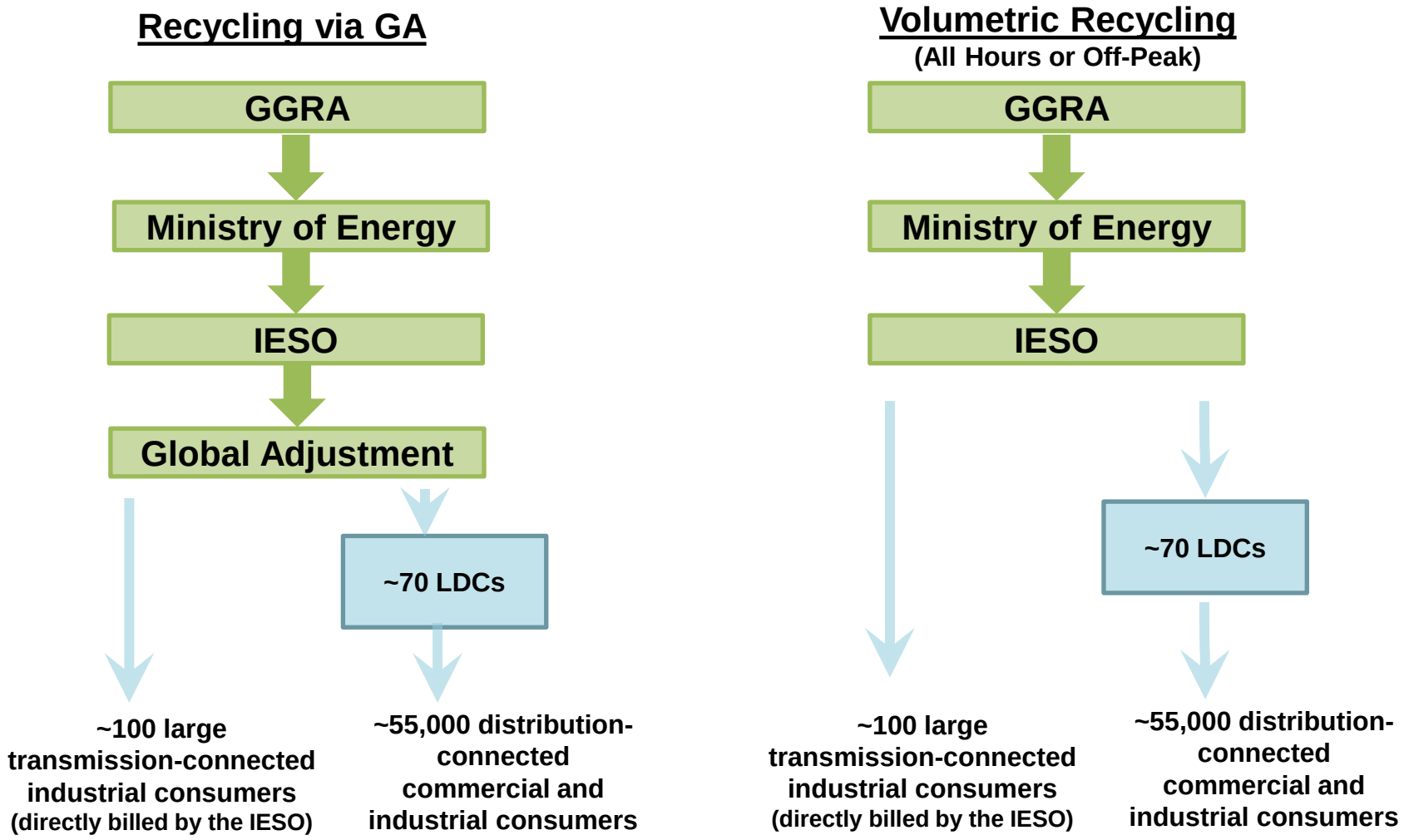
# Electricity Sector Emissions

**Electricity Sector Emissions**
*in millions of tonnes CO2*




Source: Ontario Planning Outlook, 2016

# Illustrative Disbursement



| | |
|---|---|
| **From:** | John Kim |
| **To:** | Ronald Kwan |
| **Cc:** | Francisco Chinchon |
| **Subject:** | IESO and OPCD are having a call at 9am |
| **Date:** | Monday, January 23, 2017 8:48:09 AM |
| **Attachments:** | FW OPA Accounting Treatment for Regulatory Based Assets and Liabilities.msg<br>Electricity Price Mitigation teleconference MOE OFA IESO OPCD.docx.msg |

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Fyi the attached materials.

Nadine called me to pick some information this morning ahead of the call.

I'll review the attachment but wanted to share the materials.

**From:** Petsche, Nadine (TBS) [Nadine.Petsche@ontario.ca]
**To:** John Kim [John.Kim@ofina.on.ca]
**Subject:** FW: OPA Accounting Treatment for Regulatory Based Assets and Liabilities
**Date:** Monday, January 23, 2017 09:37:56
**Attachment 1:** OPA Accounting Treatment for Regulatory Based Assets and Liabilities.docx

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**Memorandum**

**To: File**
**Date:** March 22, 2012
**Re**: Accounting Treatment for OPA Charges, Other Financial Assets and Other Financial Liabilities

---

1. **Charges – Overview**

"Charges" are amounts incurred by the OPA to recover amounts paid or payable by the OPA to another person with respect to electricity.

The OPA has a legislated responsibility to record the transactions flowing through the global adjustment mechanism. The global adjustment and settlement accounts have been created for this purpose. The global adjustment and settlement accounts record charges that flow between the OPA and the IESO. The account flows include the amounts paid and received for: Demand Response 2 (DR2), Demand Response 3 (DR3), non-utility generation (NUG), regulated nuclear generation balancing amount (nuclear) and regulated hydro electric generation balancing amount (hydro). These accounts are settled simultaneously by the IESO. The account also records the amounts paid and received for OPA contracts (standard offer, generation and conservation/demand management, Feed-In Tariff and hydroelectric contract initiatives) which the OPA settles on a monthly basis with the IESO.

The DR3, NUG, nuclear, hydro, and OPA contract balances are offset in the global adjustment account eliminating the need for a flow of funds between the IESO and the OPA. The OPA records the effect of the transactions to meet its legislated responsibility. The OPA's generation contracts are estimated each month and settled on the actual amount owing in the following month. This gives rise to timing differences. The settlement dates can cross calendar months, creating a monthly balance in the account. Differences created from timing or settlement dates are reclassified into accounts receivable at month end.

The OPA is entitled under legislation to recover eligible charge amounts, as per section 25.2 (3) of the Electricity Act:
*(3) For greater certainty, the OPA may, subject to the regulations, establish and impose charges to recover from consumers its costs and payments under procurement contracts.*

### 1.1 Accounting Treatment for OPA Contract and Conservation Charges

Charges are currently recorded as accounts receivable from the IESO in the OPA's financial statements, as they represent current assets that are recoverable within 1 year. Specifically, charges represent financial assets, as per **PS.S.1000.40** below and are only recorded as receivable once they have been incurred by the OPA. Under legislation, the OPA has a contractual right to receive cash from another party (in this case the IESO via the Global

Adjustment Mechanism) with respect to amounts incurred for eligible charge amounts. This concept is consistent with criteria (c) of the definition below:

*.**40*** *A financial asset is any asset that is:*

*(a) cash;*
*(b) a realizable asset that is convertible to cash;*
*(c) a contractual right to receive cash or another financial asset from another party;*
*(d) a contractual right to exchange financial instruments with another party under conditions that are potentially favourable to the government;*
*(e) an equity instrument of another entity;*
*(f) an investment in a government business enterprise or government business partnership;*
*(g) a financial claim on an outside organization or individual; or*
*(h) an inventory or item for sale that meets the criteria in FINANCIAL STATEMENT PRESENTATION, paragraph* **Error! Hyperlink reference not valid.***. [Former paragraph* **Error! Hyperlink reference not valid.** *retained in Archived Pronouncements]*

**Amounts Payable**

Amounts payable arise for OPA contract charges when the value of HOEP exceeds the value of the suppliers' contract price. In this case, the charges would become an OPA liability to the market in the form of charges payable to the IESO (which, in turn, must be returned to the market via the Global Adjustment). Such charges payable to the market meet the criteria for recognition as a liability, as outlined below:

**PS.3200.03**

*Liabilities should be recognized in the financial statements when:*

*(a) there is an appropriate basis of measurement; and*

*(b) a reasonable estimate can be made of the amount involved.* [SEPT. 2004]

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## 2. Other financial assets and liabilities

Other financial assets and liabilities are made up of retailer settlement amounts, government procurements and regulated price plan variance amounts.

### 2.1 Other Financial Assets - Retailer Settlements and Government Procurements - Overview

Legislative provisions ensure that electricity retailers are made whole by the OPA for contracts with low-volume and designated consumers that were entered into before prices were frozen by legislation effective November 11, 2002. The OPA and retailers settling any differences between the HOEP and the contract price for each contract meet these provisions. When HOEP is greater than the contract price, the OPA receives payments from the retailers and records a financial liability. When HOEP is less than the contract price, the OPA pays the retailer and records a financial asset. The OPA tracks these variances in the retailer contract settlement deferral accounts. The retailer contract discount settlement account captures the funds related to the retailer incentives existing at the creation of the RPP. The retailer incentives captured are

held in a separate deferral account for settlement concurrent with the retailer settlement deferral accounts.

The OPA began amortizing these costs over the period of 2009-2011 to reflect the recovery of these amounts through its annual usage rate approved by the OEB. As at December 31, 2011, the balances of the retailer settlements are nil and have been recovered in full.

The OPA reimburses the government for costs incurred for electricity procurement and records the costs as a financial asset. Any subsequent balances are included in future revenue requirement submissions. The OPA began amortizing the government procurement costs in 2009 on a straight-line basis, and as at December 31, 2011, the balance to recover for these costs is nil.

### 2.2 Accounting Treatment – Retailer Settlements and Government Procurements

Under PSAS, retailer settlements and government procurements are treated as other financial assets in the OPA's financial statements. As they are normally not recovered within one year, they are categorized as non-current assets. As per **PS.S.1000**, retailer settlement and government procurement balances qualify as financial assets as per criteria (c) below:

> *.**40** A financial asset is any asset that is:*
>
> *(i) cash;*
> *(j) a realizable asset that is convertible to cash;*
> *(k) a contractual right to receive cash or another financial asset from another party;*
> *(l) a contractual right to exchange financial instruments with another party under conditions that are potentially favourable to the government;*
> *(m) an equity instrument of another entity;*
> *(n) an investment in a government business enterprise or government business partnership;*
> *(o) a financial claim on an outside organization or individual; or*
> *(p) an inventory or item for sale that meets the criteria in FINANCIAL STATEMENT PRESENTATION, paragraph* **Error! Hyperlink reference not valid.***. [Former paragraph* **Error! Hyperlink reference not valid.** *retained in Archived Pronouncements]*

The OPA is required to carry the balance related to retailer settlement variances between the HOEP and contract price, as per legislation. The OPA is also entitled to recover these balances through legislative provisions, which represent a contractual right to receive cash or another financial asset from another party, as per criteria (c) above. Where retailer settlements fall into a liability balance, they would be categorized as other financial liabilities, as they would meet the criteria for recognition of a liability, as outlined in section 3.1 below.

## 3. Other Financial Liabilities – Regulated Price Plan (RPP) Variance - Overview

While prices for RPP consumers are set every six months by the OEB based upon a forecast of the cost of power over the next year, it is likely that there will be a difference between the actual and forecast cost of supplying electricity to all RPP consumers. When the hourly Ontario

energy price (HOEP) is greater than the RPP, the OPA pays the excess amount and records a financial asset as the electricity market funds paid are receivable from the market. When the HOEP is less than the RPP, the OPA receives the difference and records a financial liability as the funds received will be returned to the market. The OPA tracks this variance in the RPP variance account.

### 3.1 Accounting Treatment – RPP

RPP variance amounts are recorded by the OPA as other financial liabilities in the financial statements, as they meet the liability criteria outlined below:

**PS. S.1000**

***.45*** *Liabilities have three essential characteristics:*

*(a) they embody a duty or responsibility to others, leaving a government little or no discretion to avoid settlement of the obligation;*

*(b) the duty or responsibility to others entails settlement by future transfer or use of assets, provision of goods or services, or other form of economic settlement at a specified or determinable date, on occurrence of a specified event, or on demand; and*

*(c) the transactions or events obligating the government have already occurred.*

Under legislation, the OPA is required to fund RPP variances where the HOEP is less than the RPP, which implies a duty or responsibility that the OPA has little to no discretion to avoid, as per criteria (a). For instances where the HOEP exceeds the RPP rate, the OPA would record a financial asset, as this circumstance would meet the criterion of **PS.S.1000.40** (financial asset), outlined in section 2.2 above.

**External Auditor Approval of Accounting Treatment**

The accounting treatment of OPA charges, retailer settlement, government procurement and RPP balances has been consistent since the OPA's inception and is approved by the OPA's external auditors on an annual basis. Based on governing legislation, the external auditors agree that these balances represent true assets and liabilities to the OPA. The signed auditors' report, along with the OPA's audited annual financial statements, can be found on the OPA website in the MD&A section of the OPA annual report.

**From:** Petsche, Nadine (TBS) [Nadine.Petsche@ontario.ca]
**To:** John Kim [John.Kim@ofina.on.ca]
**Subject:** Electricity Price Mitigation teleconference MOE OFA IESO OPCD.docx
**Date:** Monday, January 23, 2017 09:20:42
**Attachment 1:** Electricity Price Mitigation teleconference MOE OFA IESO OPCD.docx

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Hi John,

In advance of our meeting, just sharing a draft summary I prepared based on what I heard on the call. There are likely many errors as I joined the call late. Can you perhaps suggest edits based on your understanding (in track changes mode). Thanks. N

**Electricity Price Mitigation**
**Teleconference call summary**
**January 20, 2017**
**Participants: IESO (Kim Marshall), KPMG (Michel Picard), Cindy Veinot & N. Petsche (OPCD), Steen Hume (MOE), Ronald Kwan (OEFC/OFA)**

| General: | CFS | IESO | |
|---|---|---|---|
| | Notes | Notes | Actions |
| Variance accounts are not all recognized on the CFS? In order to have an asset recognized on the books, need to have a receivable (amounts billed), unless an asset can be established another way (through legislation)<br><br>Current vs. future IESO role: if move from current settlement related role, and have to negotiate and manage the debt then it will seem more like the OFA. Option to use another party to provide this advice, and not have OFA hold the debt. | - Questionable whether any receivable reflected on the Province's f/s would be sufficiently supportable from the AG's perspective under PSAB.<br>- Consider if might be off-balance sheet financing based if debt acquired through 3rd party vs. OFA.<br>- Want to understand why the debt for the GA is not on the Province's books. (Q from MOE…why would it be assumed that cash flows related to the rate base would be consolidated on the Province's books and intermingled with cash flows related to tax base) | - Issue: 4 M Consumers wouldn't have a liability on their books that would correspond with a recoverable (one to many scenario with no amounts billed)<br>- Strategically difficult to pass along the recoverable to the LDCs as it would impact the d/e ratios; uncertain how many follow IFRS without rate regulated accounting; LDCs also don't have the credit capacity to absorb the debt<br>- Current IESO role: used as a settlement system to support the market (sets | - Considering creating a receivable through legislation (vs. direct contracts or billing)<br>- Need an 'authorized' expenditure in order to be recoverable. Assess on what basis we can create an asset which is recoverable. All extra costs need to be recognized as being recoverable (even interest)<br>- Since need legal authority to recover, presumably you would also need legal authority to defer and collect in the future but need to address the proposed change in role of the IESO<br>- Consider who would hold debt (OFA or third party) . Would be |

| | | | |
|---|---|---|---|
| | | HOEP every 5 mins, matches supply and demand, collects through GA for costs of reliable T,D, generation)<br>- As a successor company to previous Ontario Hydro, the IESO would borrow from the OEFC; OPA is a new construct so would borrow from the OFA if needed.<br>- IESO's original accounting was established as an agent for settlement purposes. Legacy contracts were for cash to suppliers which were recovered through the GA. John and Adrian were involved with est of the OPA and est of the RPP variance acct. Was never a GA var. OPA always reported the RPP act (1 set of books) – entered into 3500+ contracts with generating | higher rates? Would be provincial guarantee? OPA had AA credit rating and contracts entered into and debt borrowed based on that rating (one ranking lower than the province)<br>- James (legal) asked by Steen Hume to help to id what the new legislative responsibilities of the IESO might look like. |

| | | | |
|---|---|---|---|
| | | entities (40B) which NEVER appeared on the Province's books (no rev/exp or debt. These were considered executory contracts, or contractual obligations but NOT liabs of the OPA.<br>- On a monthly basis any GA amounts are settled through the GA; no liability reflected on the IESO's books – currently $10B of recoverable amounts not reflected on the IESO's books (no legal obligation, just an agent for settlement). Seen as a conduit to collect the monies paid to producers, even if does take possession.<br>- Proposal is that the RPP accounts which normally had a term of 6-12 months for recovery would be extended to 25 years | |

| | | | |
|---|---|---|---|
| | | - 2 sets of books (operating/market vs. financial)<br>- Amounts recoverable through GA NOT reflected on IESO's b/s as a flow through – no impact on the p&l<br>- Currently, the only debt that shows on the IESO's books is related to its operations, NOT MARKET DEBT | - IESO/KPMG to provide background supporting accounting for GA recoveries off book |
| ON vs. MB – legislates that all people of the province must be rate payers (cannot opt out of paying rates). ON doesn't have this requirement, but has a strong ratebase now so reasonable recoverability of costs through rates (the GA). Lenders rely upon this reasonable probability of recovery (AA rating) as basis to lend money to IESO to cover the time gap w.r.t. billings for GA. | | - The OEB has oversight and determines rates. If a regulator agreed that costs could be recovered, would meet requirements of rate regulated asset; but PSAB doesn't recognize rate regulated assets/liabs<br>- regulatory assets normally recovered over 5 years, so 25 years would have to be defended and proven as collectible<br>- would need certainty of recoverability to be an | |

| | | | |
|---|---|---|---|
| | | asset (OEB would consider intergenerational equity) in assessing recoverability | |
| Noted that 25 year period for rate mitigation is not the same as a longer term recovery period for capital refurbishment (intergenerational equity considerations)<br>Noted that other jurisdictions might have longer contract periods (wind and solar>20), and that operating period >20 in reality, so future costs likely lower to consumers. AB wind contracts>25 years. Justification for change → contract periods are too short | | | |
| | | | |
| Policy considerations:<br>1) Argument for rate mitigation deferral period (contracts to short; precedents)<br>2) IESO's changing role (James to consider)<br>3) Legislative requirements to allow for deferral (which costs would be authorized as recoverable)<br><br>Accounting considerations<br>4) How to create an asset (accounting vs. legislation) Would legislation create an asset on the IESO's books?<br>5) Off balance sheet financing (3rd party vs. OFA) and related accounting on IESO and CFS | | | |
| | | | |

| | |
|---|---|
| **From:** | Fung, Felix (TBS) |
| **To:** | Jenarra DeSouza (MEDTE/MRI); Tomasz Bugajski; Shajee Kathirgamanathan; John Kim; Birks, Ryan (MOF); Ann Langleben (MOF) |
| **Cc:** | James Strang (MOF); Madeleine Morgenstern (PPAGS) |
| **Subject:** | Latest Electricity Note for Chair"s briefing |
| **Date:** | Wednesday, September 07, 2016 12:45:51 PM |
| **Attachments:** | RAN Electricity Price Mitigation v6 2016 09 07.doc |

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Hi everyone,

Here's the latest electricity price TB assessment note for Chair's briefing today. We made some changes based on the Minister's comments yesterday but we will continue to make changes as we get more information over the coming days. Can I ask that you please track-change any changes back to us should you have any further comments?

Please note that Chair's briefing for this item is at 2:30 pm - please join us for the briefing.

Thanks,
Felix

# TREASURY BOARD / MANAGEMENT BOARD OF CABINET REQUEST ASSESSMENT NOTE

| | |
|---|---|
| **Ministry:** | Energy |
| **Meeting Date:** | September 13, 2016 |
| **Agenda Class:** | Major |
| **Last reviewed by:** N/A | **Tracking to:** Cabinet - September 14, 2016 |

| **SUBMISSION TITLE:** | Electricity Price Mitigation |
|---|---|

**NO MATERIALS RECEIVED –BASED ON DRAFT POLICY SUBMISSION**

## I. DECISION BEFORE THE BOARD

The Ministry of Energy is requesting approval of a suite of initiatives providing relief to various electricity consumer classes.

## II. RECOMMENDATIONS:

| | |
|---|---|
| • Approve a suite of initiatives to provide relief to various electricity consumer classes (pending Cabinet policy approval):<br>– Providing a pre-tax 8% rebate to Regulated Price Plan consumers;<br>– Expanding the Industrial Conservation Initiative;<br>– Updating the Rural and Remote Rate Protection program; and,<br>– Using $270M in cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade (A 1% reduction in rates). Balance of proceeds, $60M, intended for electricity relief through the Climate Change Action Plan could provide some fiscal offsets.<br>• Approve in principle an expenditure increase estimated at $261M in 2016-17 for the Electricity Price Mitigation, offset from the Treasury Board Contingency Fund. [estimate subject to refinement from the Ministry]<br>• Direct the Ministry to report back to TB/MBC with implementation details, including confirmation of financial implications, and required TB/MBC approvals to implement.<br>• Recommend to Cabinet that the Ministry proceed to Cabinet with the proposed legislation (TBD).<br>• | *Board Judgment* |

## III. FINANCIAL SUMMARY

| **$ Millions** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|
| Initiative cost requested | 261.0 | 1006.0 | 1004.0 |
| Initiative cost recommended | 261.0 | 1006.0 | 1004.0 |
| Recommended program base | 261.0 | 1006.0 | 1004.0 |
| Offset Recommended – Applies if cap and trade proceeds | 0.0 | 60.0 (TBD) | 60.0 (TBD) |

| | | | |
|---|---|---|---|
| diverted to in-plan initiatives | | | |
| Total Fiscal Impact | 261.0 | 946.0 | 944.0 |

## IV. KEY COMMENTS AND CONSIDERATIONS

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online. Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period. Appendix C provides supporting background information.

As part of the 2016 Budget, the government committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. This included a commitment to provide a modest benefit of up to $2 per month, on average, to residential consumers. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable for residential and industrial consumers.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the CCAP commitment and additional price mitigation, the Ministry of Energy has developed price mitigation options that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

The Ministry is proposing the following to mitigate electricity prices for consumers (Appendix D provides more information on each item below):

- Provide an 8% rebate on the pre-tax cost of electricity to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms), equivalent to the provincial portion of HST
- Expand Industrial Conservation Initiative (ICI) eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial)
- Update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers
- Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest (1%) reduction in rates

Public high-profile communications would coincide with introduction of legislation (September 2016). Currently, the 8% rebate would be available starting January 1, 2017 (it could be

prescribed earlier), along with updating the RRRP. Expanding ICI won't be added to bills until 2018 due to the time required to implement the expansion and for billing changes. Recycling cap and trade proceeds would commence in 2017.

The following tables provide an overview of the four initiatives, recipients, projected financial impact, grouping them based on whether taxpayers or ratepayers cover the costs:

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Taxpayers cover the costs (Potential to impact the Province's Fiscal Plan)** | | | |
| **1.** | 8% Rebate to Regulated Price Plan | Fiscal $1B* | Residential, small business and small farms, and other small users |
| **2a.** | Use cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates. (Implementation details under development). | ($270M) in cap and trade proceeds to offset $270M in costs of reducing rates by 1%.<br><br>No Fiscal Impact | For the 2016 Budget, cap and trade proceeds were projected at $330M/year.<br><br>See item 2b. regarding the residual amount of cap and trade proceeds ($330M - $270M = $60M) |
| **2b.** | The 8% rebate above allows for a portion of cap and trade proceeds to be redirected to other GHG reduction initiatives already in the fiscal plan. | ($60M) | Provides Fiscal Plan flexibility of $60M only if these proceeds are diverted to offset costs of other existing in-plan initiatives that reduce GHG emissions. |
| | **Total Fiscal Impact** | $946M | Matches Financial Summary on page 1 for 2017-18 |

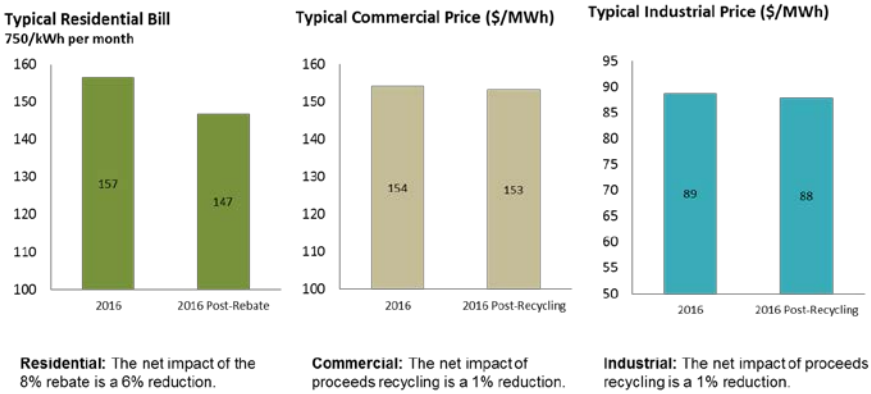
* Annual numbers from ENERGY.

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Ratepayers cover the costs (No impact to the Province's Fiscal Plan)** | | | |
| **3** | Expanding ICI eligibility to customers above 1MW in all sectors | Rate base ($47M/$82M)** | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors |
| **4.** | Updating Rural and Remote Rate Protection | Rate base ($110M) | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. |

** Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.

Due to the nature of the ICI Global Adjustment mechanism and cost recovery of RRRP, the rate base proposals (#3 and #4) above benefit the targeted recipients, but come at a cost to all other electricity rate payers in Ontario.

The graphic from the Ministry on the following page highlights the bill impacts by electricity consumer class.




The residential net impact of the 8% rebate is a 6% reduction due to the costs of RRRP and ICI expansion being factored in after the 8% pre-tax rebate is calculated and applied. The original HST amount is then added in. The net benefit for residential is the 8% rebate less the cost of RRP and ICI expansion.

Fiscal Impact

The most recent Electricity Price Mitigation Options deck notes that "proceeding with an 8% Regulated Price Plan (RPP) rebate without a cap would cost an estimated $1 billion per year".

The $1 billion figure is a 2017 to 2020 calendar year average of cost estimates developed by Ministry of Energy staff, as follows:

| *$ millions* | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|
| | 1,003 | 1,014 | 975 | 1,049 |
| Avg. 2017-20 | 1,010 | | | |

- On a fiscal year basis, the above estimates become:

| *$ millions* | **2016-17** | **2017-18** | **2018-19** | **2019-20** |
|---|---|---|---|---|
| | 261 | 1,006 | 1,004 | 994 |
| 3-Year Avg. | 1,001 | | | |

The Ministry also indicates the current proposal would provide recycling of cap and trade proceeds to commercial and industrial consumers on a volumetric basis. This would require an estimated $60 million less per year in proceeds than previously estimated (i.e., providing fiscal plan flexibility of about $60M per year to commit to other GHG reduction initiatives in the fiscal plan).

There are no details as this point if the $261M in 2016-17 would be offset from the Treasury Board Contingency Fund or provided through supplementary estimates.

Cap and Trade Proceeds

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers (on

average). While residential and other consumers would benefit from the 8% pre-tax rebate, this does not apply to non-Regulated Price Plan consumers (larger industrial, commercial, and other consumers). As such, the Ministry is proposing to direct a portion of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to go beyond mitigating cap and trade impacts and provide a 1% bill impact (shown in the graphic at top of page 4).

To be characterized as a regulatory charge under the cap and trade program, auction proceeds need to be spent on programs that are reasonably likely to reduce or support the reduction of greenhouse gases. It is unclear from current materials whether this proposal meets this requirement.

Considerations – Implementation

At this point, the Ministry has presented a high level overview of major implementation pieces:

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010. If passed, the legislation would require a general regulation. Amendments would also be required to various regulations to expand ICI and RRRP.
- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. The Ministry indicates will consult with LDCs (possibly through Ontario Energy Board) to accurately assess these impacts once the program has been announced. In the past, LDCs have asked for at least six months' notice when implementing billing system changes. Timing concerns may be alleviated by allowing LDCs to provide retroactive payments rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- Detailed messaging on bills could be implemented (A bill mock-up is pending from the Ministry). The rebate would not be directly linked to HST. With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.
- The Ministry will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

Legal Considerations

8% Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):

- Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):

- To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are

subsidized provide an overall system benefit enjoyed by those who subsidize them.

RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):

- Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):

- To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

<u>Other Considerations</u>

- This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets.
- The 8% rebate would provide a typical residential consumer about an $11 per month benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average cap and trade commitment. Also, the budget committed to offsetting the impact of cap an trade on industrial and commercial consumers, a 1% reduction is being proposed using cap and trade proceeds, which could be recycled elsewhere on GHG reduction initiatives.
- Reduction in electricity prices that does not consider consumption amounts (e.g., without the cap in the previous OCEB program) does not promote electricity conservation and may be seen as unaligned with climate change objectives.
- There is potentially a need for supplementary estimates as the existing vote (2905) Electricity Price Mitigation does not include a separate item for the 8% rebate (2905 was used for the Ontario Clean Energy Benefit and currently includes the Northern Ontario Energy Credit).
- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
  - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
  - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
  - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

| | | | |
|---|---|---|---|
| **Name of analyst:** | James Strang<br>With input from TPD and OFA | **Phone number:** | 416-327-2071 |
| **Date:** | September 6, 2016 | **Log number:** | |
| **Branch / Division:** | GGPR/ PEMD/ Treasury Board Secretariat | | |

| | |
|---|---|
| | Tax Policy Division/ Ministry of Finance<br>Ontario Financing Authority/ Ministry of Finance |

## APPENDIX A: PROPOSED MINUTE
## UNDER DEVELOPMENT

# APPENDIX B: FINANCIAL TABLES

| FINANCIAL IMPACTS: CHANGES TO EXPENSE AND REVENUE | | | | | TABLE B1 |
|---|---|---|---|---|---|
| | | *Fiscal Plan Basis* | | | *Appropriations Basis* |
| **$ Millions** | | **2016-17** | **2017-18** | **2018-19** | **2016-17** |
| Initiative cost recommended | | 0.0000 | 0.0000 | 0.0000 | |
| *Expense changes:* | | | | | |
| Operating item | Oper | 261.0000 | 1006.0000 | 1004.0000 | 261.0 |
| Operating Offset | Oper | 0.0000 | 0.0000 | 0.0000 | 00000 |
| | | | | | |
| | | | | | |
| *Revenue changes:* | | | | | |
| Revenue Increase/ Offset | | 0.0000 | 60.0000 | 60.0000 | |
| Revenue decrease | | 0.0000 | 0.0000 | 0.0000 | |
| **Total Fiscal Impact (draw from c-funds)** | | **261.0000** | **946.0000** | **944.0000** | **261.0000** |

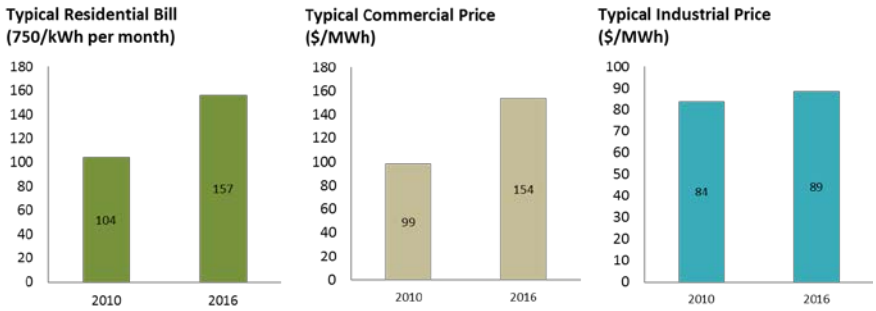
## APPENDIX C: ELECTRICITY SECTOR BACKGROUND

The Ministry has provided the following information to provide electricity sector context this item.

There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period.




**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

Existing Rate Mitigation efforts are on-going:

- Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs.
  - For example, Northern Ontario residential electricity consumers receive tax credits in recognition of higher electricity costs in the north and rural consumers receive a subsidy funded through the rate-base due to the higher cost of delivering power to rural areas.
  - As of 2016, the government removed the Debt Retirement Charge (DRC) from residential electricity bills. While this saves a typical residential electricity ratepayer about $60 per year, it is less than the benefit previously provided through the Ontario Clean Energy Benefit (OCEB).
  - OCEB provided a tax-base rebate of 10% rebate on the total cost of electricity charges related to electricity consumption on eligible bills between 2011 and 2015.
- Because electricity costs must be fully recovered from electricity consumers, rate mitigation funded through the rate-base often represents a shifting of costs from one consumer group to another (i.e., industrial to residential and commercial consumers).

- Rate-based initiatives are generally associated with incenting changes in behaviour that provide electricity system benefits (i.e., shifting electricity consumption from on-peak to off-peak periods).

- The following slides provide an overview of the programs currently available to different electricity consumer classes along with the cost shift associated with several of the programs:

| Program | Consumer Type | Rate/Tax-based | Description |
|---|---|---|---|
| Northern Ontario Energy Credit | **Residential** | Tax | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year. |
| Ontario Energy and Property Tax Credit | | Tax | Also delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families. |
| Ontario Electricity Support Program | | Rate | Provides ongoing assistance directly on the bills of eligible low-income electricity consumers. |
| Rural or Remote Rate Protection | | Rate | Provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas. |
| saveONenergy Conservation Programs (including Home Assistance Program for low income customers) | | Rate | Delivered by LDCs which provide financial incentives for electricity-saving measures like LEDs, ENERGYSTAR certified ceiling fans, baseboard programmable thermostats, clotheslines, and advanced powerbars. |
| saveONenergy Conservation Programs (including Retrofit Program for Buildings and other programs) | **Commercial** | Rate | saveONenergy suite of electricity conservation programs for commercial customers offered by local distribution companies (LDCs) help businesses save energy to better manage their electricity consumption and reduce their annual electricity costs. See Appendix for more information. |
| Industrial Conservation Initiative | **Industrial** | Rate | Encourages Ontario's largest consumers to reduce consumption during peak periods to save on average 25% on their electricity bills. |
| Industrial Accelerator Program | | Rate | Provides financial incentives of up to $10 million to transmission-connected electricity consumers, to invest in energy-efficiency or self-generation which would reduce the amount of electricity withdrawn from the provincial grid. |
| Industrial Electricity Incentive | | Rate | Provides reduced electricity rates for companies starting or expanding operations in Ontario. |
| Northern Industrial Electricity Rate Program | | Tax | Provides $20 megawatt per hour (MWh) rebate for qualifying large northern industrial consumers. |
| Demand Response | | Rate | Provides payments to businesses and industry to shift consumption at times when the electricity system is stressed. DR currently provides ~500 MW of capacity to the system. |

Ontario has implemented several programs that have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial). The table below shows the estimated cost shifts in the province's electricity system that result from three existing government programs (i.e., ICI, RRRP and OESP):

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

A number of actions have and are being taken to reduce overall electricity system costs. Despite these actions to reduce system costs, electricity rates continue to increase for consumers:

- Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
- Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
- Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.

- Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
- Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

## APPENDIX D: FURTHER INFORMATION SUPPORTING PROPOSED INITIATIVES

he following information has been provided by the Ministry.

**1. Provide an 8% rebate to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms), equivalent to the provincial portion of HST**

The Ministry is proposing to introduce legislation/regulation to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit. This would be equivalent to the provincial portion of the HST.

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).
- An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

| **Eligible for the 8% rebate** (< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate** (> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>– Coffee / snack retailer<br>– Convenience store<br>– Apparel store<br>– Hair salon<br>– Small insurance office | • Class A consumers<br>– Manufacturer<br>– Large grocery store<br>– Mines<br>– Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>– Commercial offices (low rise)<br>– Hotel<br>– General warehousing |

**2. Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial)**

Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers). Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:

- Reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods;
- Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
- Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| Short-term | Up to 21% | 80 | 47 | Increase of $0.42/month |
| Long-term | Up to 34% | 165 | 82 | Increase of $0.74/month |

The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility. The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating. Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.

## 3. Update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers

The Ministry is proposing to provide an additional $110M in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

RRRP is a rate-based funded subsidy program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.

- Today, RRRP is a $175M program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
- The majority of the program funding ($125.5M) provides a subsidy to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a monthly subsidy for R2 customers of $31.50.
- RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

An additional $110Mn in program funding would see an increased subsidy of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.

- This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
- The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the subsidy remains constant.

## 4. Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.

- To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).
- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $240M over the first four year compliance period).

The following table identifies the illustrative impacts.

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Impact | | Class B (Commercial) Impact | Class A (Industrial) Impact | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural** (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion | $270 million annually | -$10/ month<br><br>(-6%) | -$45/ month<br><br>(-20%) | -$1/MWh<br><br>(-1%) | -$1/ MWh<br><br>(-1%) | Up to -$52/MWh<br><br>(-34%) |

***Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

****Note**: Rural customers refers to customers of Hydro One eligible to receive RRRP (R2 rate class customers)

## APPENDIX E: PROPOSED POLICY MINUTE

CABINET AGREED THAT:

1. THE MINISTRY OF ENERGY (ENERGY), WITH SUPPORT FROM THE MINISTRY OF FINANCE (MOF), SHALL PREPARE LEGISLATION THAT WOULD PROVIDE AN EIGHT PERCENT (8%) REBATE ON THE PRE-TAX COST OF ELECTRICITY FOR THE FOLLOWING CLASSES OF CONSUMERS:
   A. ALL CONSUMERS ELIGIBLE TO BE BILLED UNDER THE ONTARIO ENERGY BOARD'S REGULATED PRICE PLAN; AND
   B. ANY OTHER CONSUMERS WHO WERE ELIGIBLE FOR FINANCIAL ASSISTANCE UNDER THE *ONTARIO CLEAN ENERGY BENEFIT ACT, 2010* (OCEBA) DURING THE PERIOD THAT PROGRAM WAS IN PLACE.

2. THE LEGISLATION SHALL BE GENERALLY MODELLED UPON THE OCEBA, AND WOULD INCLUDE THE FOLLOWING ELEMENTS:
   A. THE REBATE WOULD BE AVAILABLE STARTING JANUARY 1, 2017 AND BEFORE SUCH DATE AS MAY BE PRESCRIBED;
   B. THE REBATE WOULD NOT BE SUBJECT TO A CAP UNLESS A CAP IS PRESCRIBED;
   C. THE LEGISLATION WOULD SPECIFY THE TYPES OF COSTS TO WHICH THE REBATE WOULD OR WOULD NOT BE APPLIED, WITH AUTHORITY TO MAKE CHANGES BY REGULATION;
   D. THE LEGISLATION WOULD ADDRESS INVOICING REQUIREMENTS, INCLUDING AUTHORITY TO PRESCRIBE HOW THE REBATE IS TO APPEAR ON CONSUMER ELECTRICITY BILLS;
   E. THE LEGISLATION WOULD INCLUDE AUTHORITY TO PRESCRIBE THE WAY IN WHICH THE REBATE IS TO BE FLOWED THROUGH TO CONSUMERS, AND THE WAY IN WHICH ELECTRICITY VENDORS PROVIDING THE REBATE ARE TO BE REIMBURSED;
   F. THE LEGISLATION WOULD INCLUDE RECORD-KEEPING REQUIREMENTS FOR ELECTRICITY VENDORS AND ANY OTHER PRESCRIBED PERSONS; AND
   G. THE LEGISLATION WOULD INCLUDE INSPECTION POWERS FOR INSPECTORS APPOINTED BY THE MINISTER OF FINANCE, INCLUDING POWERS RELATED TO RECOVERY OF OVERPAYMENTS.
3. ENERGY AMEND O. REG. 429/04 (ADJUSTMENTS UNDER SECTION 25.33 OF THE ACT) MADE UNDER THE ELECTRICITY ACT, 1998 TO EXPAND ELIGIBILITY FOR CLASS A CONSUMERS AND CLASS A MARKET PARTICIPANTS UNDER THE INDUSTRIAL CONSERVATION INITIATIVE (ICI) TO ALL ELECTRICITY CONSUMERS AND MARKET PARTICIPANTS WITH A PEAK DEMAND ABOVE AN AVERAGE OF ONE MEGAWATT (1MW) WITH NO SECTORAL RESTRICTIONS ON PARTICIPATION.
4. ENERGY AMEND O. REG 442/01 (RURAL OR REMOTE ELECTRICITY RATE PROTECTION) MADE UNDER THE ONTARIO ENERGY BOARD ACT, 1998 TO INCREASE THE TOTAL AMOUNT OF RATE PROTECTION AVAILABLE TO LOW DENSITY HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE RATE PROTECTION PROGRAM BY $110 MILLION, EFFECTIVE JANUARY 1, 2017.
5. ENERGY CONSIDER AND, IF APPROPRIATE, UTILIZE A MECHANISM TO PERIODICALLY ADJUST THE TOTAL ANNUAL AMOUNT OF RATE PROTECTION AVAILABLE TO HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE ELECTRICITY RATE PROTECTION REGULATION / PROGRAM, EFFECTIVE JANUARY 1, 2018.
6. ENERGY TO RECYCLE UP TO AN AVERAGE OF $270 MILLION OF CAP AND TRADE AUCTION PROCEEDS FROM THE GREENHOUSE GAS REDUCTION ACCOUNT PER YEAR OVER THE FIRST COMPLIANCE PERIOD (2017-2020) TO COMMERCIAL AND INDUSTRIAL ELECTRICITY CONSUMERS.
7. ENERGY AND MOF TO WORK WITH CABINET OFFICE (CO) AND PREMIER'S OFFICE (PO) ON COMMUNICATIONS PLAN.

**From:** Francisco Chinchon
**To:** Ronald Kwan; John Kim
**Subject:** Latest price mitigation deck
**Date:** Thursday, January 12, 2017 1:31:04 PM

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Hi Ron, John,

Just got a call from Helen G. at OPCD. They received the latest draft of Energy's price mitigation deck and they would want to discuss the concept of a potential amortization of the GA (or the concept included in the deck) as there might be reporting/accounting issues. She is happy to discuss once you have reviewed the deck…

Thanks,

Francisco

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Tomasz Bugajski |
| **Subject:** | MO Bi-Weekly August 22v1.docx |
| **Date:** | Tuesday, September 06, 2016 5:47:38 PM |
| **Attachments:** | MO Bi-Weekly August 22v1.docx |

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Pls. see attached.

Thanks,

John.

**ANNOTATED AGENDA**
**MO UPDATE: September 7, 2016**

## 1. Electricity Price Mitigation

- The Ministry of Energy is asked to consider options on electricity price mitigation, including HST rebates.
- Current options include:
    - Providing an 8% rebate to Regulated Price Plan consumers, similar in structure to the level of support provided in the former OCEB program at 10%.
    - Providing rate-based relief to certain electricity consumers by shifting costs within the electricity sector, such as expanding the ICI eligibility threshold to customers above 1MW in all sectors.
- CEFD staff are working to provide support based on its experience with the OCEB modelling.

| | |
|---|---|
| **From:** | Gavin He |
| **To:** | John Kim; Francisco Chinchon; Mara Bakic; Emily Kerr |
| **Cc:** | Ronald Kwan |
| **Subject:** | MO Bi-weekly |
| **Date:** | Sunday, December 11, 2016 10:35:11 PM |
| **Attachments:** | Annotated Agenda MO Nov 28 2016_Markup_Clean.docx<br>Annotated MO Policy Paper Nov 28 2016_v2.docx |

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Hi Directors,

Ron will be having his MO Bi-weekly tomorrow afternoon, so could you please send me an annotated agenda **before noon on Monday, December 12, 2016**?

I am really sorry for the short turnaround time as I just noticed the meeting is tomorrow. I will send out the request earlier going forward.

For you convenience, I have attached the previous annotate agenda and policy one paper for your consideration.

Thanks,
Gavin He

**ANNOTATED AGENDA**
**MO UPDATE: November 28, 2016**

## 1. Trillium Trust Disbursements

- CEFD staff continue working on a TB and PRRT submission to set a framework for drawing on the balance of the Trillium Trust. OFA and MOF are working with staff from TBS and other ministries responsible for infrastructure projects.

    - The proposed framework would determine the methodology for allocating Trillium Trust amounts that will go to support spending on identified Moving Ontario Forward projects.

    - Recommended approach is to
        1) divide the total Trillium Trust amounts evenly between inside the GTHA and outside the GTHA, and
        2) draw a pre-determined share of Moving Ontario project spending from the Trillium Trust: 30% for inside the GTHA projects and 50% for outside the GTHA projects.

      Given lower total projected spending on projects outside the GTHA in the medium term, and in order to accelerate the use of Trillium Trust amounts, those projects would receive a higher portion of their overall funding from the Trust as compared to projects inside the GTHA.

- The submission will also seek approval for amounts in 2016/17, and is currently tracking for Treasury Board on December 14.

- Following approval, amounts for 2017/18 and later years will be set through the annual PRRT process, based on the formula in the framework.

## 2. Debt Retirement Charge (DRC) Regulation Update

- Ministry of Energy has proposed amendments to the 2005 Net Metering Regulation (O. Reg. 541/05) in the Ontario Energy Board Act, 1998, (OEBA) which includes removing the 500 kilowatts (kW) maximum output capacity restriction to expand the eligibility to larger customers. The intention of that proposal is to enable larger customers to “right-size” renewable energy systems to their load.
    - Energy is tracking to LRC on December 13th, 2016.

- This proposal will require s corresponding change to the definition of net metering generation facility in O. Reg 493/01 related to the DRC, a regulation under the Electricity Act, 1998.
    - As a DRC regulation, this proposed amendment would be under the signature of the Minister of Finance.

- This change is expected to have a small fiscal impact, up to $100,000, in reduced DRC revenues. (Budget 2016 projected about $625 million in DRC revenues.)
    - As there is an estimated fiscal impact, TBS staff advise that TB/MBC approval is required prior to the LRC approval, and TBS staff are liaising with CO on the logistics for the December 6, 2016 TB date.
    - TBS staff stressed that due to the timeline, a strong rationale regarding the timeline as well as MO (MOF) to MO (TBS) outreach would likely be required.

- The suggested change may require a regulatory registry process, staff and MOF Legal are checking if an exemption can be granted [if pursuing the December 13 LRC date].
    - Ministry of Energy posted its planned OEBA regulation amendment in August.
    - Legislative Counsel subsequently informed Energy of the associated DRC regulation issue.

### 3. IESO $975M Line of Credit Extension Minister's Directive Package

- CEFD staff have put together a package on a Minister's Directive to the OFA, following the Independent Electricity System Operator's (IESO) request for a three-year extension, to December 31, 2019, of the $975 million revolving credit facility provided by the Ontario Financing Authority (OFA).

### 4. Loans to Trusts of the Power Workers' Union (PWU) and Society of Energy Professionals (SEP)

- The Minister of Finance's consent will be required for amendments to the PWU and SEP trusts loan agreements to clarify the distribution waterfall for the purpose of paying Administrative Costs of up to $100,000 each, annually, permitted out of Excess Hydro One Distributions. Excess Hydro One Distributions are, for any quarter, residual Hydro One dividend payment amounts left after payment of all interest owed and taxes payable by the respective Borrowers.

- OFA staff are reviewing with MoF Legal the amendments prepared by Tory's to ensure that it is clear that PWU/SEP are allowed to each deduct and pay $100,000 in administrative costs from the excess distributions prior to using the balance of the excess distributions to make a mandatory payment.

- The proposed timing is a target date of December 15 to have the above-noted amendments in place. This would be in advance of the next quarterly dividend payment from Hydro One, allowing for the improved clarity on the distribution waterfall to be in place by then.

- The Power Workers Union (PWU) had also asked about assigning its beneficial interests in the trust it established for the purposes of the Hydro One loan transaction to a new trust. This new trust would have PWU's members as secondary beneficiaries, and the PWU as the primary beneficiary. The initial trust was

established with the PWU as the ultimate beneficiary so that the parties could execute the Hydro One share sale transaction without a prospectus, with the PWU having sufficient assets to qualify as an accredited investor.

- OFA and MoF Legal have no major concerns with the proposed assignment. However, given the material change to the purchaser of the shares, the Province should require an opinion from Tory's that this change will not affect the initial precept under which the share purchase was made.
  - For transparency, the Minister needs an OIC to consent to this change, which may become public, hence the request for confidentiality re this change is problematic; and
  - Legal fees incurred by the Province to accommodate this request should be borne by PWU.
- We are waiting to hear back from PWU to confirm that they still wish to proceed with the above-noted assignment request given that an OIC would be required.

## 5. ALGP: Coral Rapids Conditional Offer Package

- Coral Rapids Power Corporation ("CRP"), wholly-owned by Taykwa Tagamou Nation ("TTN"), is seeking a loan guarantee under the ALGP of about $18.2 million. This loan would allow CRP to finance its investment in a partnership which was formed to own and operate the 28 MW Peter Sutherland Sr. Generating Station at a lower interest rate than the alternative (a loan from its partner).

- In addition, the IESO, which holds the power purchase agreement with the project requires CRP hold a minimum level of interest in the partnership.
  - As such, CRP is eager to finalize the loan guarantee as soon as possible.

- This item is currently on the December 13 LRC agenda in order to obtain an OIC for this application that would authorize the Minister of Finance to provide a loan guarantee, subject to certain terms and conditions.
  - Receipt of an OIC is required prior to execution of the final loan guarantee agreement.

- As this application involves the interest of a Schedule 1 bank (the proposed lender is TD) the screening measures are expected to apply.
  - Staff propose that approval to proceed to LRC and of the conditional offer letter be sought from the President of the Treasury Board. The briefing for Minister Sandals is scheduled for Thursday December 1.

## 6. NUG Curtailments

- IESO has recently engaged with several NUG owners, in consultation with OEFC, to explore potential curtailments of gas-fired NUG facilities.

- IESO has offered curtailment over the remainder of the existing contract terms for contracts expiring pre-2020 or for the next 1-2 years for those contracts expiring post-2020.

- Currently, these discussions have been most active with Atlantic Power and TransAlta with respect to the following facilities.

| Owner | Facility Name | Fuel | Capacity (MW) | Location | PPA Expiry Date |
|---|---|---|---|---|---|
| Atlantic Power | North Bay Power Plant | Natural Gas | 31 | North Bay | 31-Dec-2017 |
| | | Waste Heat | 9 | | |
| Atlantic Power | Kapuskasing Power Plant | Natural Gas | 30 | Kapuskasing | 31-Dec-2017 |
| | | Waste Heat | 10 | | |
| TransAlta | Mississauga Cogeneration Plant | Natural Gas | 110 | Mississauga | 31-Dec-2018 |
| Atlantic Power | Nipigon Power Plant | Natural Gas | 32 | Orient Bay | 31-Dec-2022 |
| | | Waste Heat | 8 | | |

- IESO is aiming to have curtailments of the above NUGs begin at the start of 2017. Staff for OEFC will work with IESO staff on implementing any curtailments agreed to by IESO and NUGs.

## 7. Global Adjustment Lawsuit

- On June 20, 2016, OEFC submitted an application for leave to appeal to the Supreme Court of Canada the April 19, 2016, decision by the Ontario Court of Appeal that dismissed OEFC's appeal of the March 12, 2015, lower court decision.
    - OEFC's position has consistently been that it has administered these power purchase agreements in a manner that it believes has been correct.
    - A decision on the leave to appeal application is expected this fall.

- A decision on the leave to appeal application may occur anytime between now and the end of the year.

- On September 13, 2016, the Ontario Court of Appeal denied OEFC's motion for a stay of the court order that would require payment of increased rates that result from the March 12, 2015, decision of the Ontario Superior Court of Justice.

- OEFC made the retroactive payment of $178 million, including interest on October 21, 2016.
    - In addition to the payments to the NUGs, NUGs with generator debt are entitled to retroactive increased rates totalling approximately $3.5 million. This

amount will be recovered by OEFC from IESO and applied to reduce outstanding generator debts.
    - Therefore, OEFC will recover a total of approximately $181.5 million from the IESO.

- OEFC's recovery of the retroactive payments from the IESO is occurring over three months (October to December 2016), in response to a request from the Deputy Minister of Energy.

## 8. MaRS proposed $290M takeout financing, with associated MRIS $94M loan

- MRIS will be seeking TB approval on November 29th, followed by seeking Cabinet approval on December 6th.

- OFA is not opposed to the proposed MRIS loan.

- OFA provided the following comments on the TB submission:
    - Interest rate provided to the Province is lower than that provided to Manulife et al even though we are in a riskier position in terms of priority of payment and holding lower-ranking security.
    - The overall cost that the transaction will impose on MaRS compared to their current payments on the Provincial financing are significant ($24M higher).
    - The new MRIS loan would not be one term loan (like the Manulife loan) bur rather two facilities: one $32M term loan with a fixed interest rate and one $52M floating rate facility based on a "cash flow sweep" approach with the Province at the bottom of the cash flow priority for payment of these loans.
    - The security retained by the Province may not be enforceable until 20135 per standstill agreement requested by Manulife.
    - MaRS should provide written assurance to the Province that it will not seek a debt service subsidy or any other additional funding in the event that it is unable to cover its new debt service obligations.

## 9. FAA Section 28 Sharing Protocol

- TBS comments on the sharing protocol has been incorporated. Protocol is undergoing a final staff level review before being circulated to DM/MO and briefings set up.

- An OFA/MoF/TBS working group has been established to review options for modernizing s.28 of the FAA.

## 10. OCGC New Mandate & Scale-Up Venture Fund

- MRIS/OCGC TB submission on OCGC's new mandate is on the back burner.

- OFA working with MRIS/OCGC staff re: finalization of documentation to support MRIS Minister's request for s. 28 approval of Scale-Up Venture by Minister of Finance.

## 11. Green Bank

- MOECC's submission on the establishment of and the accountability framework for the new climate change agency is now tracking to a TB/MBC meeting on either Dec 14th or 15th (per TB staff).

- A revised draft submission is being reviewed by staff. A copy of the draft regulation has not been circulated yet.

- Major concern is lack of specifics re proposed financing programs and what the draft regulation will contain, given that the draft regulation is expected to be filed with the TB submission, but most of the agency's programs - especially the financing programs - are still in the very early development stage.

**Broadening Ownership of Hydro One and associated transactions**

Following the Premier's Advisory Council on Government Assets' final report the 2015 Budget announced the government was moving forward with an initial public offering (IPO) of 15 per cent, with additional shares being made available in subsequent years until totalling up to 60 per cent of the Province's common shares in Hydro One.

- In May 2016 the government completed a secondary offering of 14 per cent common shares. After this sale the government holds about 70 per cent of the common shares in Hydro One.
    - Discussions will be needed with OPCD to determine the accounting treatment of the purchase of shares by OPG.
    - A regulation under the Trillium Trust Act is required to dedicate the net revenue gains.
    - Providing an amount to OEFC under s.50.3 of the Electricity Act is also required.

- In July 2016 the Province announced that in connection with broadening the ownership of Hydro One, the government agreed-in-principle to sell up to 2.5% of Hydro One common shares at $18 per share to First Nations in Ontario and to provide a 25 year loan (Ministry of Finance) for $268 million to finance the acquisition of the shares. Ontario also agreed to provide up to $45 million in cash (Ministry of Energy) to be used as seed capital by First Nations.
    - The government will have to approve the terms agreed with COO and subject to 80 per cent or more of FNs agreeing to the terms the government will be expected to execute the sale purchase agreement (SPA) and associated loan agreement with FN represented by COO in December 2017
    - The Loan Agreement is anticipated to be provided through the Ministry of Finance (an operating asset is requested through the PRRT process, and to be signed by the Minister of Finance.

- As part of the 2017 Budget and fiscal planning process the government has to decide when to sell additional shares and how to allocate sales through fiscal 2017/18 and 2018/19.

- The government will also need to decide on crediting the Trillium Trust with the net revenue gains from asset optimization transactions that may close in calendar 2017 (Hydro One shares, Seaton Lands, OPG head office properties).

**Electricity Price Mitigation**

Following the implementation of Ontario Rebate for Electricity Consumers (OREC), effective January 1, 2017, other electricity price mitigation policies would be on the governments, and specifically the Ministry of Energy's agenda, in the coming months.

- Any electricity price mitigation policy initiatives not on the rate base would have a fiscal impact.
- The OREC is expected to cost $300M in 2016-17 and about $1.2Bn starting in 2017-18.

**OPG Lending, Darlington Refurbishment**

- Received Minister's Directive on June 17, 2016, for general corporate purposes including Darlington Refurbishment project up to $700 million.
- Directive provides approval for subsequent loans not totalling more than $3 billion but is subject to approval of OPG's business plan.
- Ontario Power Generation (OPG) has commenced refurbishment of the first of four units at its Darlington Nuclear Generating Station in October 2016. [Prior to commencement of each additional Unit, OPG will seek Cabinet Approval.]

**OPG Business Plan**

OPG is expected to provide its 2017-2019 Business Plan to the Minister of Energy for approval in the first half of 2017. Energy should provide a draft OPG business plan projection for fiscal planning purposes in January 2017.

**OPG Rates**

OPG has provided submitted its 2017-2021 Rate Application to the Ontario Energy Board in May 27, 2016. The rate application is currently undergoing the regulatory review process.

| | |
|---|---|
| **From:** | Ken Kandeepan |
| **To:** | John Kim |
| **Cc:** | Gavin He; Robert Bozinoski; George Sakura |
| **Subject:** | MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v4 (002).docx |
| **Date:** | Monday, December 12, 2016 12:45:51 PM |
| **Attachments:** | MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v4 (002).docx |

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Hi John

One small edit including an explanatory comment.

Thanks

Ken k

**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the ~~[~~*Ontario Rebate for Electricity Consumers Act, 2016*~~] – NTD, pending the legislature considering the Bill], including~~ and the regulations thereunder (the "Act"), certain consumers will be entitled to receive ~~a credit, known as the~~ financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers ("~~" or "~~OREC"), against~~", in respect of~~ the cost of electricity consumed by them ~~during the period~~ commencing January 1, 2017;

2. ~~Funds in respect of the~~ Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to ~~most~~specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act~~, its regulations and the Market Rules~~;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the OREC Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f) of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

1. **Payment Authorization**

   (i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

   (ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

   (iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

      i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

      ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

2. **Payment Process**

   ~~a) The Ministry is registered with the IESO as an IESO Program Participant.~~

   a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

   ~~c)~~b) The Ministry will take all necessary steps to provide the OFA with access to the ~~Ministry's~~ IESO ~~account and will arrange for~~Portal so that the OFA ~~to~~will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

   ~~d)~~c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

   ~~e)~~d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

   ~~f)~~e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

3. **Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ~~ensure that~~provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of ~~has full access to~~ such of those records as the Ministry may request from time to time.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

~~e)~~

## 4. OREC Cost Forecasting

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the ~~Corporate and Electricity Finance Division of~~ the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies, retailers, and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to ~~complete and accurate~~ data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process~~.~~.

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

~~d)a) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.~~

d) ~~e)~~ The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement ~~of~~on the forecasts.

e) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for the appropriated amount or for a change in the appropriated amount for OREC.

## 5. Limited Role of the OFA

**Commented [KK2]:** Throughout the MOU we have used "OFA" to stand in for all divsions, referring to the OFA here as well keeps it consistent.

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**Commented [SQ23]:** The only change outlined in the latest version.

**Commented [KR4]:** Does the OFA agree that there should be a provision contemplating agreement on the forecasts? Would it be sufficient to simply reqire tht senior management be briefed?

**Commented [RK5]:** How about dealing with it by switching the order and slightly amending the new "e)"?

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:
email:

c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy
880 Bay Street, 5th Floor
Attention:
email:

**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

**From:** John Kim
**To:** John Kim
**Date:** Sunday, January 15, 2017 11:08:40 AM
**Attachments:** OPG 2017 Business Plan Summary v3_Markup.docx

## ONTARIO POWER GENERATION – 2017-19 BUSINESS PLAN

On November 28, 2016, OPG provided its 2017-19 Business Plan ("Business Plan") to the Minister of Energy. This Business Plan is similar to the previous 2016-18 Business Plan, which was enclosed in OPG's 2017-2021 rate application, submitted to the Ontario Energy Board (OEB) on May 27, 2016, notwithstanding the redacted portions.

### Fiscal Impacts

The following tables provides a comparision between Budget 2016 and the latest financial projectsions submitted by OPG in its 2017-19 Business Plan.

Note that OPG contributions to the fiscal plan in Budget 2016 was primarily based on OPG's 2015 business plan, as its board-approved 2016-18 multi-year business plan had not yet been approved and provided when the 2016 Budget fiscal plan was locked.

Earnings Before Tax is now forecasted to be lower by $250 million in 2016-17, lower in 2017-18 by $173 million, lower in 2018-19 by $42 million and higher in 2019-20 by $84 million.

The 2017-18 forecasts in the Business Plan have had preliminary adjustments for fiscal planning purposes to remove for this table~~account for~~ the projected pre-tax gain on the sale of OPG headquarters properties to avoid double-counting as those revenue amounts are included under asset optimisation.

Note that the following is on OPG's U.S. GAAP basis of accounting, and does not show consolidation adjustment for the nuclear funds, nor potential IFRS consolidation adjustments.

| Budget 2016 / Fiscal Plan ($M) | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
|---|---|---|---|---|
| Net Income After Tax (Adjusted) | 471 | 586 | 673 | 705 |
| Income Tax PILs | 224 | 159 | 182 | 108 |
| **Earnings Before Tax** | **695** | **745** | **855** | **812** |

| OPG 2017-19 Business Plan ($M) | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
|---|---|---|---|---|
| Net Income After Tax (Adjusted) | 349 | 406* | 678 | 726 |
| Income Tax PILs | 96 | 166** | 135 | 170 |
| **Earnings Before Tax** | **445** | **572*** | **813** | **896** |
| **EBT Variance to Fiscal Plan** | **(250)** | **(173)***** | **(42)** | **84** |

* Pre-tax gain on sale of OPG head office property of $296M is backed out in the net income after tax calculation in 2017-18. In 2017 Business Plan, Net Income Attributable to Shareholder in 2017-18 is $702M. The expected gain on sale is reflected as an asset optimization component captured in the Sales and Rental line under Non Tax Revenue.
** Income Tax PILs do not have OPG head office sale backed out. Further details required from OPG.
*** Budget 2016/Fiscal Plan included OPG headquarter sales in 2016-17 which was deferred to 2017-18 in the 2017 Business Plan, and impacts removed in the above table.

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**Key Highlights**

*Fiscal and Rate Payer Impacts*

- The 2017-19 Business Plan is largely unchanged from the 2016-18 one in terms of commitments for Net Income. Consistent with the previous plan, the 2017-19 Business Plan projects net income growing to about $730 million in 2019 and $1 billion in 2021.
    - The OPG business plan reflects its rate application, which includes OPG rate increases of about~~...~~ 1.5% per year for hydroelectric base rate starting in 2017 and 11% per year increase for nuclear generation consistent with its rate smoothing proposal, which are estimated ~~is expected~~ to result in average increases of about 0.7% or $1.05 per month annually on a typical residential customer's monthly bill. (Commodity costs represent about ~~xx~~50% of a typical bill, and OPG generation accounts for about yy% of total commodity costs.)
- As the decision for OPG's rate application is not expected until Q3 2017, the outcome of the new rate application will not be known in time to be reflected in OPG's projected results that will be included in the 2017 Document's fiscal plan, nor consolidated with the Province's 2016-17 fiscal year results.
    - In the 2017-19 Business Plan, new regulated rates are effective January 1, 2017.
    - A delay in this effective date is expected to result in an approximately $50 million to $60 million reduction in net income per month.
    - The b~~B~~usiness p~~P~~lan does not assume retroactive application for the rates, but does have the recognition of regulatory assets for the portion of the nuclear revenue requirement deferred for future recovery under nuclear rate smoothing starting in 2017.

~~*Accounting Treatments and Reporting Standards*~~

- ~~As the OEB has been holding a generic consultation on the treatment of rate-regulated utilities' pensions and other post-employment benefits (OPEBs), OPG currently collects pension and OPEB costs on a cash basis with the difference between cash and accrual recorded in a deferral account until the conclusion of the consultation.~~
    - ~~There would be a significant financial impact if OPG is required to permanently collect pension and OPEB costs on cash basis.~~
- ~~Adoption of International Financial Reporting Standards (IFRS) would result in a significant increase in income volatility and would require a reassessment of OPG's fiscal commitments in the Business Plan. OPG's current exemption with the Ontario Securities Commission that allows it to report on a basis other than IFRS expires at the end of 2018.~~

*Executive Compensation Framework*

- OPG reports that it~~'~~s current management compensation restraint initiatives have made attracting and retaining talent a challenge. OPG has requested approval for a proposed Executive Compensation Framework (ECF), generally targeted at the 50th percentile of market peers.
    - *CEFD Staff Comments*: On November 22, 2016, the Province amended the Executive Compensation Framework regulation to ensure broader public sector organizations can benchmark compensation for senior nuclear technical experts against other jobs that



**Commented [RK1]:** Can we say that OPG has asked for the rates to be retroactive to January 2017 (through deferral accounts to be recovered going forward?) Has OPG asked for an effective date for its new rates, and, if so, has the OEB agreed?

Is the effective date a risk to the projections?

Does OPG`s BP assume retroactive application so 16-17 includes an accrued amount for new rates to approved in 2017:Q3?

**Commented [AP2]:** BP assumes effective date in application is January 1 , 2017. It seems that OPG has not yet asked for rates to be retroactive, but they will likely do that during the first hearings (will be considered a preliminary matter) similar to what Hydro One did during the November 24, 2016 hearing for EB-2016-0160 (got deferral account approved for rates as of January 1, 2017 due to proceedings surpassing that date).

**Commented [AP3]:** BP states it is within OEB's authority to set a later effective date, which would negatively impact OPG's monthly income by ~$50M to $60M per month for the 2017/2018.

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require the same unique skills and experience. This amendment will ensure Ontario is able to attract and retain the highly specialized executive talent necessary to safely operate its large nuclear facilities and generate Ontario's single largest source of emissions-free electricity.

*Other Highlights*

- The sale of OPG's head office is on track for 2017-18 fiscal year.
- OPG's headcount continues to decline, as reported in the monthly update. Note that the Darlington Refurbishment headcount is not considered part of ongoing operations.
- Total long-term debt for general corporate (i.e., financing through OEFC) is forecast to increase by $1.6 billion, from $0.2 billion in 2016 to $1.8 billion in 2017.
- The Business Plan includes approved budget and schedule for the Darlington Refurbishment Project, with first unit beginning in October 2016, and assumes it returns to service in February 2020.
- The plan assumes all six operating Pickering units operate until 2022, with four of these units operating until 2024. The plan includes additional costs and outage days to achieve Pickering operations beyond 2020, in line with the business case approved by the Board.
    - The Business plan reflects currently approved station service lives, *for accounting purposes*, for the Pickering GS to the end of 2020 and for the Darlington GS to 2052.
        - The Pickering service life will be reassessed upon technical work confirming ability to achieve operations beyond 2020.

- OPG presented 4 proposals in the Business Plan to provide greater sharedholer value and keeping electricity prices low. Note, while these proposals are presented in the BP, they are **not** assumed in the Business Plan.
    - Align OPG's Capital Structure with the OEB's deemed capital structure to improve OPG's actual return on equity.
        - *CEFD Staff Comments:* OPG's revenue requirements are based on deemed capital structure rather than actual capital structure. As a result, OPG's shareholder (the Province) is not compensated for the increased equity capital put at risk. Therefore, OPG is referring to a higher measured percentage rate of return being higher, not higher net income. For the same net income, with lower equity, the ROE percentage would be higher. Furthermore, should the level of debt be increased to achieve the deemed capital structure, the weighted cost of capital and revenue requirement would reflect the increased debt service costs.
        - ~~*CEFD Staff Comments:* While this would likely achieve greater shareholder value, it is not clear how this would enable OPG to provide electricity rate benefits~~.
    - Invest in OPG's assets to maintain OPG's critical size, so it can continue to mitigate prices for customers, about 30% to 40% below other generators.
    - OPG to establish a dividend program tied to key business outcomes, which could return about $2.4 billion to the shareholder. The Province could use this dividend to fund government priorities including lowering the price of electricity should it so choose.



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- Staff comment: Dividends are not revenues to the Province. OPGès net income is. Using the dividend cash for rate mitigation would have a dollar-for-dollar fiscal impact upfront, plus an IOD impact.

  - Use OPG public debt to reduce Provincial debt through public financing strategy.
    - Maturing debt and future additional debt could be financed through the public debt markets. In addition, the OEB's deemed capital structure can be achieved and drive a level of discipline and commercial orientation within the Company.
      - Staff comment: To-date, the government has not permitted OPG to borrow in public capital markets for general corporate purposes. OPG borrowing on its own would likely have a negative foscal impact as its cost of borrowing is expected to be higher than the Provincee's.

**Key Risks**

*Risk: Accounting Treatments and Reporting Standards*

- As the OEB has been holding a generic consultation on the treatment of rate-regulated utilities' pensions and other post-employment benefits (OPEBs), OPG currently collects pension and OPEB costs in regulated rates on a cash basis, with the difference between cash and accrual recorded in a deferral account until the conclusion of the consultation and OEB decision.
  - There would be a significant financial impact if OPG is required to permanently collect pension and OPEB costs on cash basis with no deferral account recovery.
- Adoption of International Financial Reporting Standards (IFRS) would result in a significant increase in income volatility and would require a reassessment of OPG's fiscal commitments in the Business Plan. OPG's current exemption with the Ontario Securities Commission that allows it to report on a basis other than IFRS expires at the end of 2018.

*OEB's decision on OPG's 2016 rate application*

- Could have potential impact on OPG's rate-regulated operations.
  - Furthermore a delay in the effective date of the newly regulated rates might reduce OPG's net income by approximately $50 million to $60 million per month, for the 2017-18 fiscal year. The Business Plan assumes an effective date of the newly regulated rates on January 1, 2017.

*Other Risks*

- Failure to keep the Darlington refurbishment project on track in terms of cost, schedule, and other associated activities.
- Failure to maintain appropriate staff level and resources during Darlington refurbishment and Pickering operations.
- Risk of technical challenges in confirming ability to operate Pickering beyond 2020.
- Additional rRisks from reporting OPG on an IFRS basis, as OPG planning and financials are still on a U.S. GAAP basis.



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- IFRS 14, the interim standard for rate regulated accounting effective January 1, 2016, allows entities adopting IFRS to avoid major changes in accounting policy until the IASB broader project to develop a reporting standard on rate-regulated activities is completed.
- Some regulatory accounts may not be recognized by the eventual IFRS principles as creating economic benefits and obligations, resulting in the loss of potential repayments through the OEB process.
- IFRS adoption may lead to the creation of new regulatory accounts, including regulatory liabilities that, if disposal is approved by the OEB, would lead to recovery payments from OPG to ratepayers.
- Principle differences for several different accounting methods between US GAAP and IFRS, including pension costs, asset retirement obligations, and fair value measurement, may significantly impact the financial statements of OPG as well as the Province on consolidation.
- The cost of switching accounting standards, including the retrospective application of IFRS principles, must also be considered.

**Corporate and Electricity Finance Division**
**January 10, 2017**

***COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS***

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**Commented [GH5]:** It seems to me that this is not a risk, but a risk mitigation rather, so not sure if it fits here. Suggest to remove.

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| | |
|---|---|
| **From:** | Salman Qadir |
| **To:** | Caroline Swerdlyk; Kenneth Russell |
| **Cc:** | John Kim |
| **Subject:** | MoE - OFA MOU for OREC |
| **Date:** | Monday, December 05, 2016 10:46:12 AM |
| **Attachments:** | MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean.docx<br>MOU - MoE OFA- DAP Nov 25.doc<br>MOU - MoE OFA re OREC(v3)_Clean.doc |

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Hi Caroline/Ken,

We have received a marked up version of the MOU between the OFA and MoE related to the OREC regulation. I did a quick blackline and there were actually other changes that were not highlighted and was advisable to check with you whether you see any issues/comments. The changes seem to revolve around the definitions of the program etc.

V3_clean = what we had last sent over
DAP Nov 25 = the latest markup we received
Track changes to v3_clean - quick blackline to show additional changes not shown in the markup received.

Hoping you can take a quick look.

Thank you,
Salman

**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the ~~[~~*Ontario Rebate for Electricity Consumers Act, 2016*~~] – NTD, pending the legislature considering the Bill], including~~ and the regulations thereunder (the "Act"), certain consumers will be entitled to receive ~~a credit, known as the~~ financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers ~~("~~" or "OREC~~"), against~~", in respect of the cost of electricity consumed by them ~~during the period~~ commencing January 1, 2017;

2. ~~Funds in respect of the~~ Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to ~~most~~specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act~~, its regulations and the Market Rules~~;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the ~~OREC~~Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f)of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

1. **Payment Authorization**

   (i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

   (ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

   (iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

      i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

      ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

2. **Payment Process**

   ~~a) The Ministry is registered with the IESO as an IESO Program Participant.~~

   a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

   ~~c)~~b) The Ministry will take all necessary steps to provide the OFA with access to the ~~Ministry's~~ IESO ~~account and will arrange for~~Portal so that the OFA ~~to~~will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

   ~~d)~~c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

   ~~e)~~d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

   ~~f)~~e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

3. **Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ensure that the Ministry has full access to such records.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

e)

**Commented [SQ22]:** What would this access look like? Are they expecting us to set up up an external site with all of our files/modeling as well?

Just need to clarify expectations.

## 4. OREC Cost Forecasting

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to ~~complete and accurate~~ data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process .

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.

e) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement of the forecasts.

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## 6. Review and Termination

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

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email:

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d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

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b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:
email:

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c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy
880 Bay Street, 5th Floor
Attention:
email:

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**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the *Ontario Rebate for Electricity Consumers Act, 2016* and the regulations thereunder (the "Act"), certain consumers will be entitled to receive financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers" or "OREC", in respect of the cost of electricity consumed by them commencing January 1, 2017;

2. Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f)of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

**1. Payment Authorization**

(i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

(ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

(iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

**2. Payment Process**

a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

b) The Ministry will take all necessary steps to provide the OFA with access to the IESO Portal so that the OFA will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

**3. Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ensure that the Ministry has full access to such records.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

e)

**4. OREC Cost Forecasting**

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process .

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.

~~d)~~ e) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement of the forecasts.

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**5. Limited Role of the OFA**

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

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c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

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d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:
email:

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c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy

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880 Bay Street, 5th Floor
Attention:
email:

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**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated: , 2016**

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the [*Ontario Rebate for Electricity Consumers Act, 2016*] – NTD, pending the legislature considering the Bill], including the regulations thereunder (the "Act"), certain consumers will be entitled to receive a credit, known as the Ontario Rebate for Electricity Consumers ("OREC"), against the cost of electricity consumed by them during the period commencing January 1, 2017;

2. Funds in respect of the OREC will flow to most distributors and unit sub-metering providers through the Independent Electricity System Operator ("IESO") in accordance with the Act, its regulations and the Market Rules;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the OREC (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f)of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

**1. Payment Authorization**

(i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

(ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

(iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

**2. Payment Process**

a) The Ministry is registered with the IESO as an IESO Program Participant.

b) The Ministry will take all necessary steps to provide the OFA with access to the Ministry's IESO account and will arrange for the OFA to have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

**3. Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

## 4. OREC Cost Forecasting

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies and unit sub-metering providers) to the IESO received by the Ministry. This includes providing electronic portal access to complete and accurate data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process .

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.

## 5. Limited Role of the OFA

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

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a) The Ministry and the OFA will review this MOU annually.

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880 Bay Street, 5th Floor
Attention:
email:

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The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

| | |
|---|---|
| **From:** | Emily Kerr |
| **To:** | John Kim |
| **Subject:** | Price Mitigation Deck |
| **Date:** | Tuesday, December 06, 2016 10:56:07 AM |
| **Attachments:** | Price Mitigation Proposals_Dec5-16_v11_SPFB Markup.pptx |

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Hi John,

I have included comments in the attached version of the price mitigation deck on slides 3, 4, 5, 8, 13, 14, 15, 20.

I will be out this afternoon, so could you combine with comments on the deck you will submit to Ron.

Emily

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II); and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.

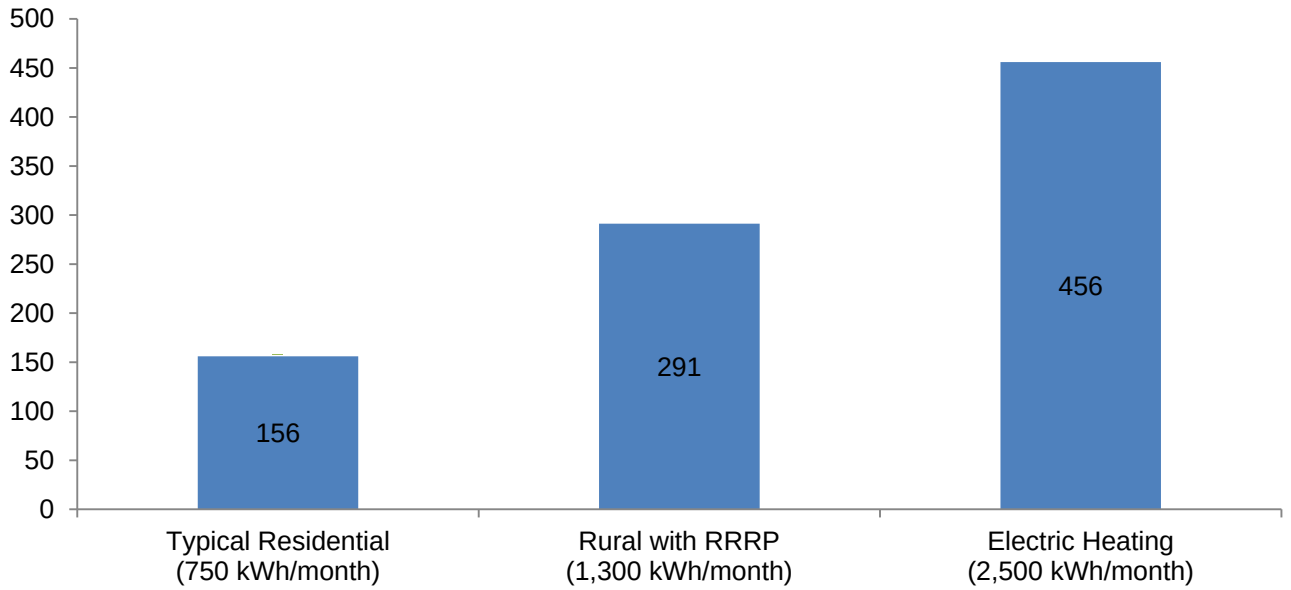
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

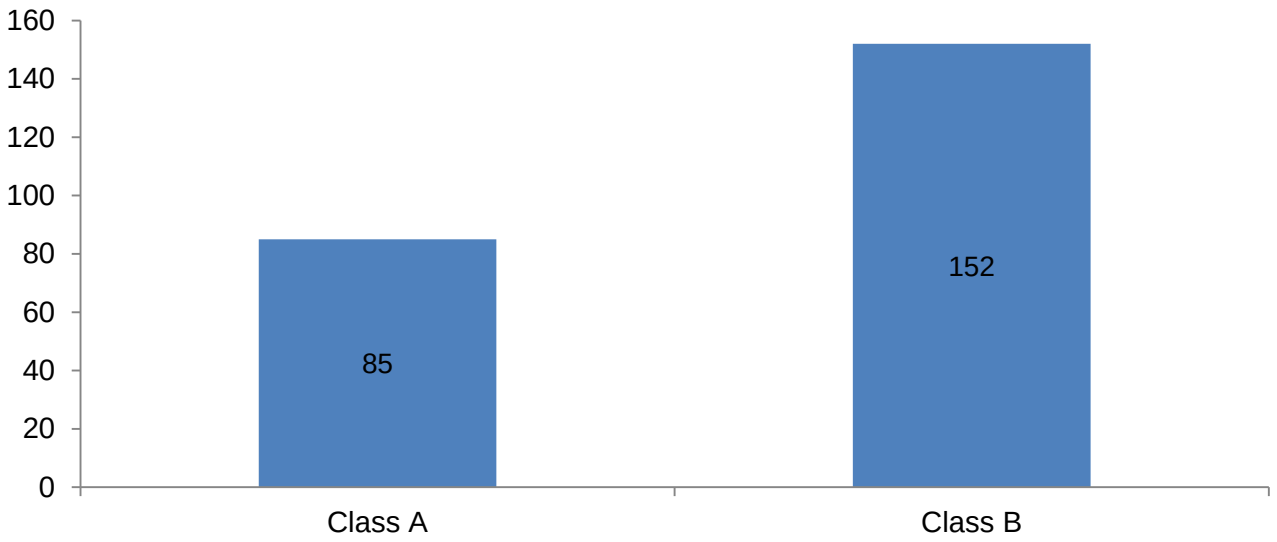



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of $xx [placeholder for OFA] on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $20 to $35 million annual fiscal pressure to the province [TBC by OPG / OFA].

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESB) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.
- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.
- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

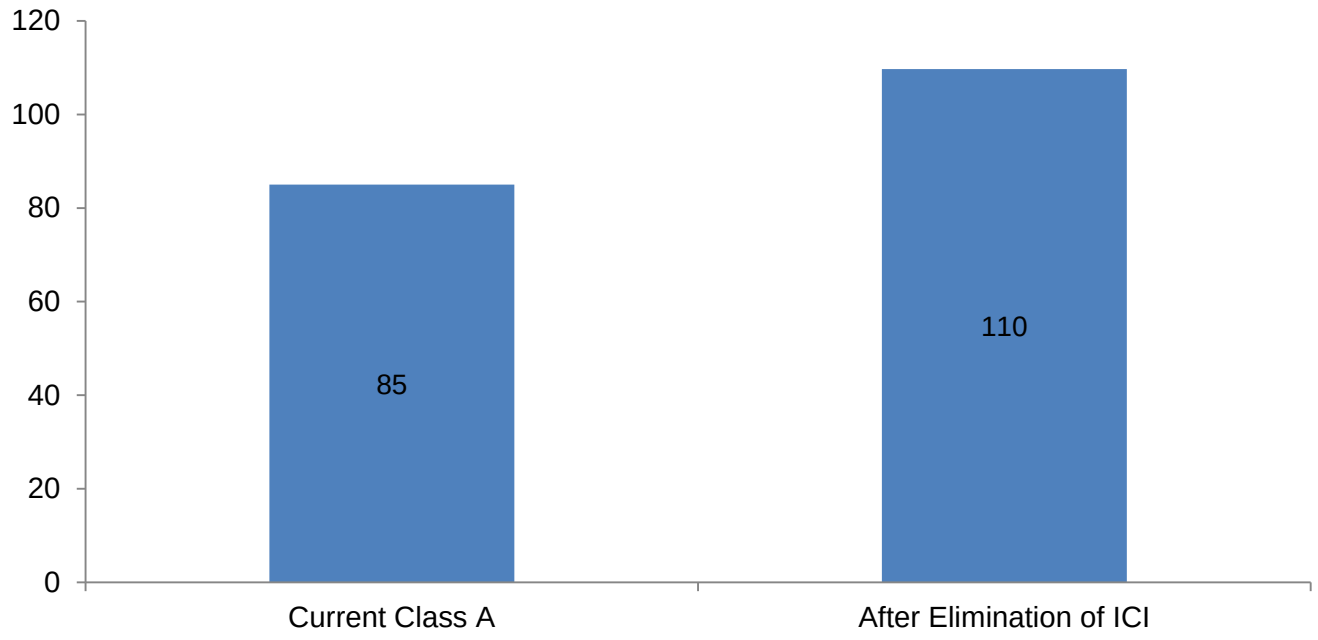
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

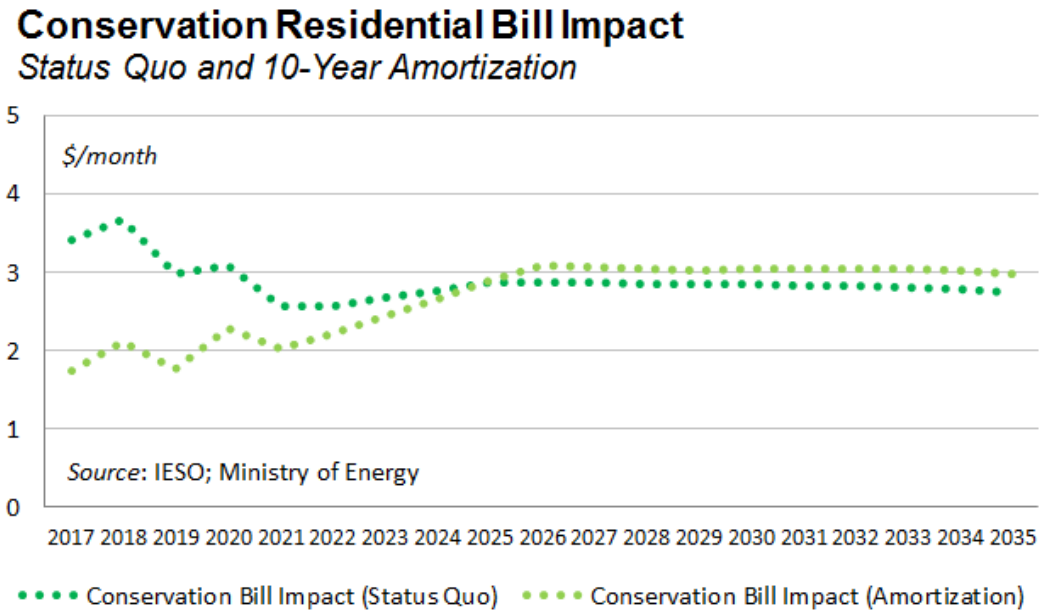
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

# Electricity Consumer Classes

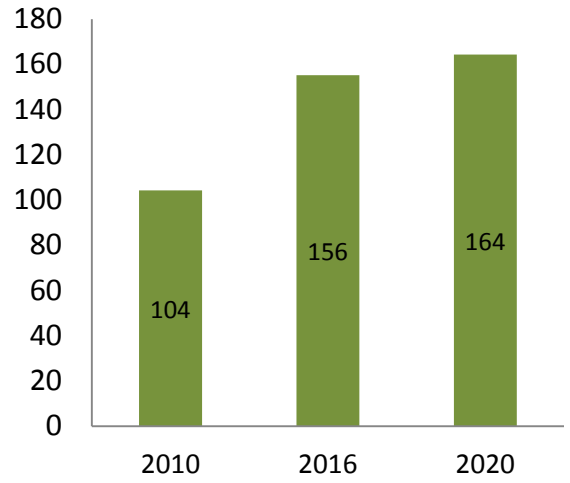
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

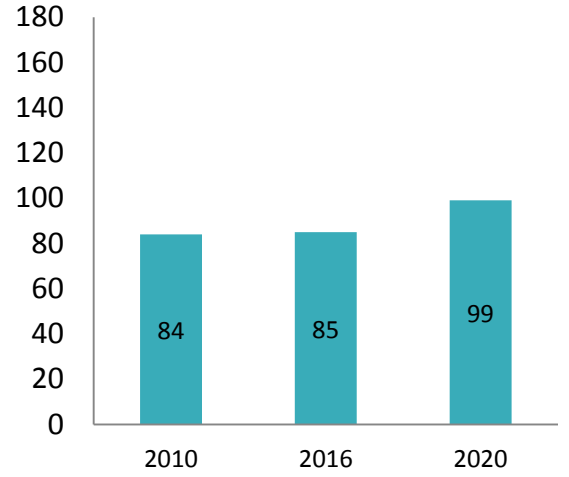
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

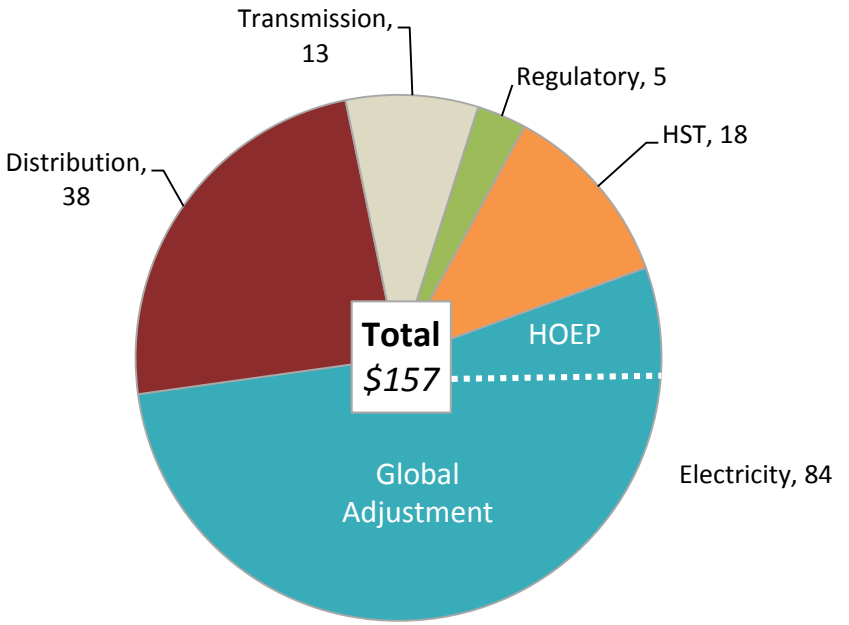
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



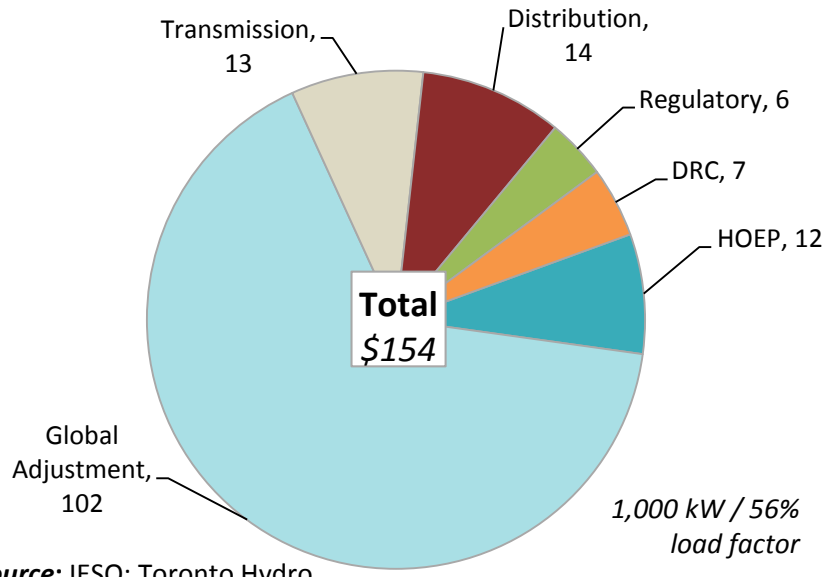

***Source*:** OEB, Toronto Hydro

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

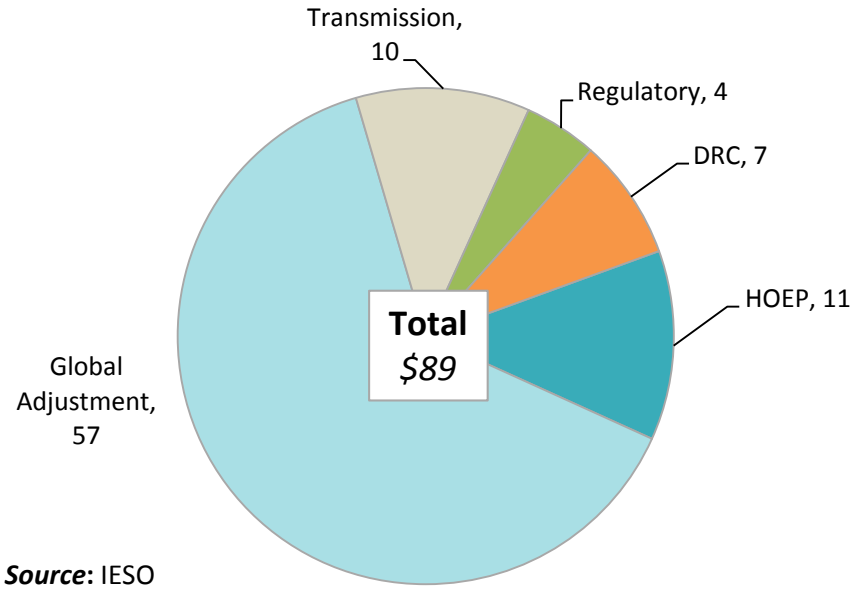
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



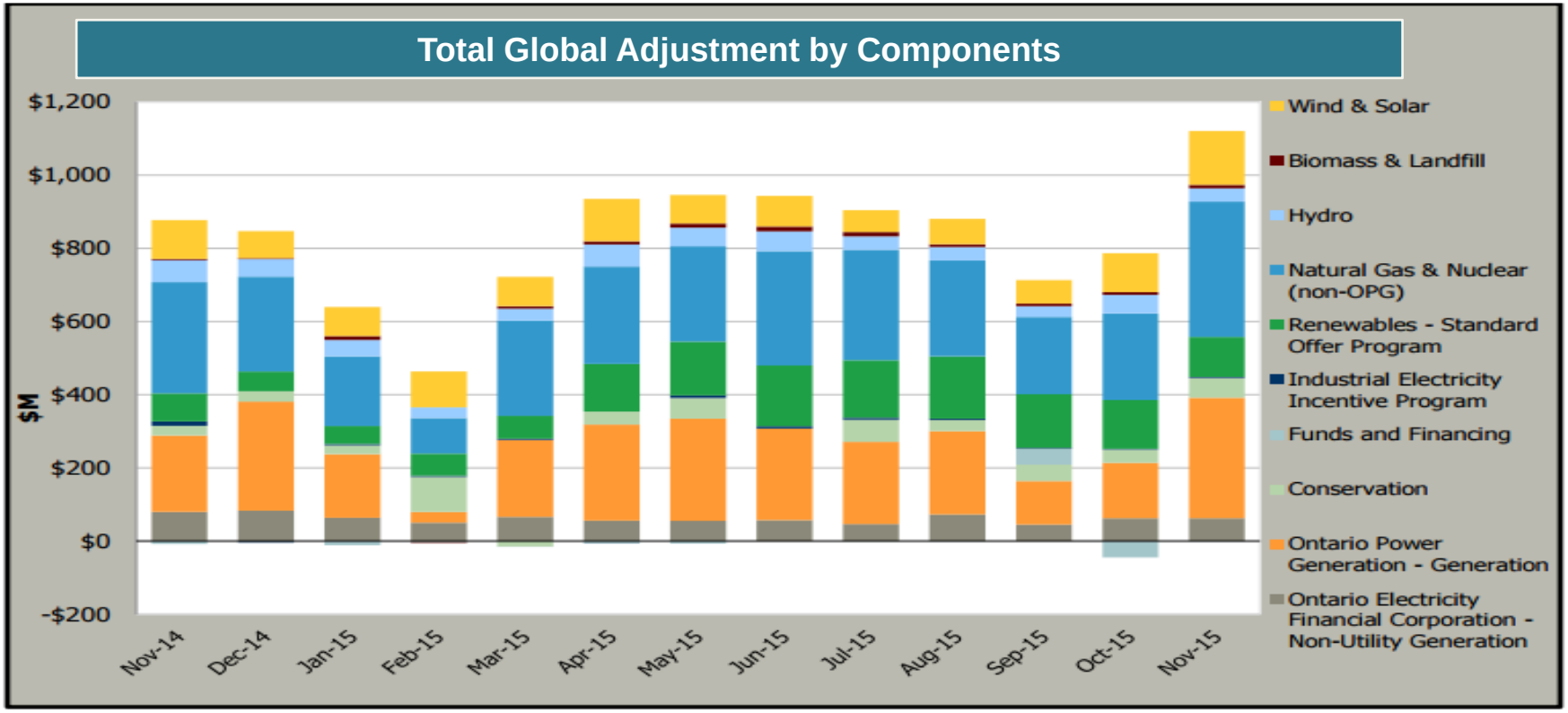

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan |
| **Subject:** | Price Mitigation Proposals_Dec5-16_v11_CEFDmarkup_withSPFBSIFB_v2_markup3.pptx |
| **Date:** | Tuesday, December 06, 2016 3:00:43 PM |
| **Attachments:** | Price Mitigation Proposals_Dec5-16_v11_CEFDmarkup_withSPFBSIFB_v2_markup3.pptx |

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Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement ~~GEIA~~ renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

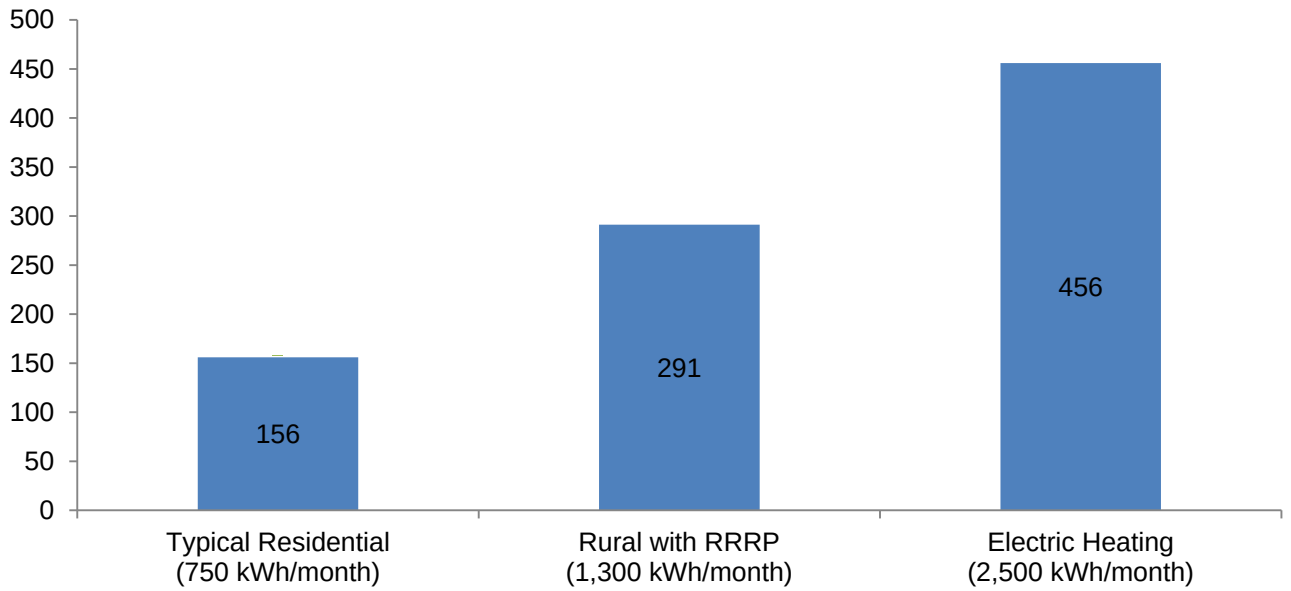
- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate before tax, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II) and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in costs; and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 ~~Long-Term Energy Plan (2013~~ LTEP~~)~~ forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

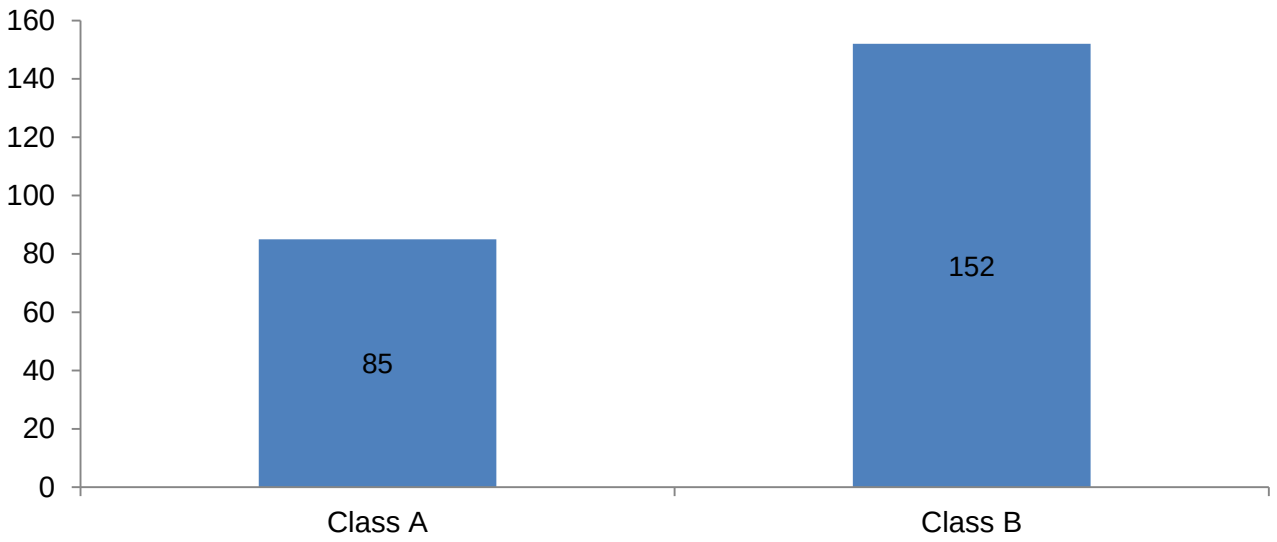



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Current Status on Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,200* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,105** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from November LRC Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion and before considering any additional funding from the tax base.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total decrease on typical monthly bill** | **8.38** | **8.23** | **7.75** | **9.26** | **8.52** | **8.17** | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total increase on industrial bill** | **19.96** | **18.97** | **18.34** | **17.14** | **14.45** | **13.7** | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of about $450 ~~[placeholder for OFA]~~ on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $30 ~~20 to $35~~ million annual fiscal pressure in 2017 to the province ~~[TBC by OPG / OFA]~~ based on new borrowing and increasing based on cumulative borrowing.

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.
- A summary of the annual fiscal impacts of the proposed initiatives is presented in the next slide

SLIDE ADDED BY CEFD

# Proposed Taxpayer Funded Electricity Price Mitigation

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ~~OCEB~~ | – | – | | | |
| OREC | 300 | 1,200* | 1,200* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | 330 | 330 | 330 |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| TOTAL | **1,195** | **2,105** | **2145** | **2156** | **2156** |
| 1. Electricity Market Renewal Initiative | | TBD | TBD | TBD | TBD |
| 2. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 2. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 3. Fund ICI through Tax Base | | 900 | 900 | 900 | 900 |
| TOTAL | **1195** | **3,421** | **3,482** | **3,507** | **3,521** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.5 billion by 2020-21. That is a 67% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESBP) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.

- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.

- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.

- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

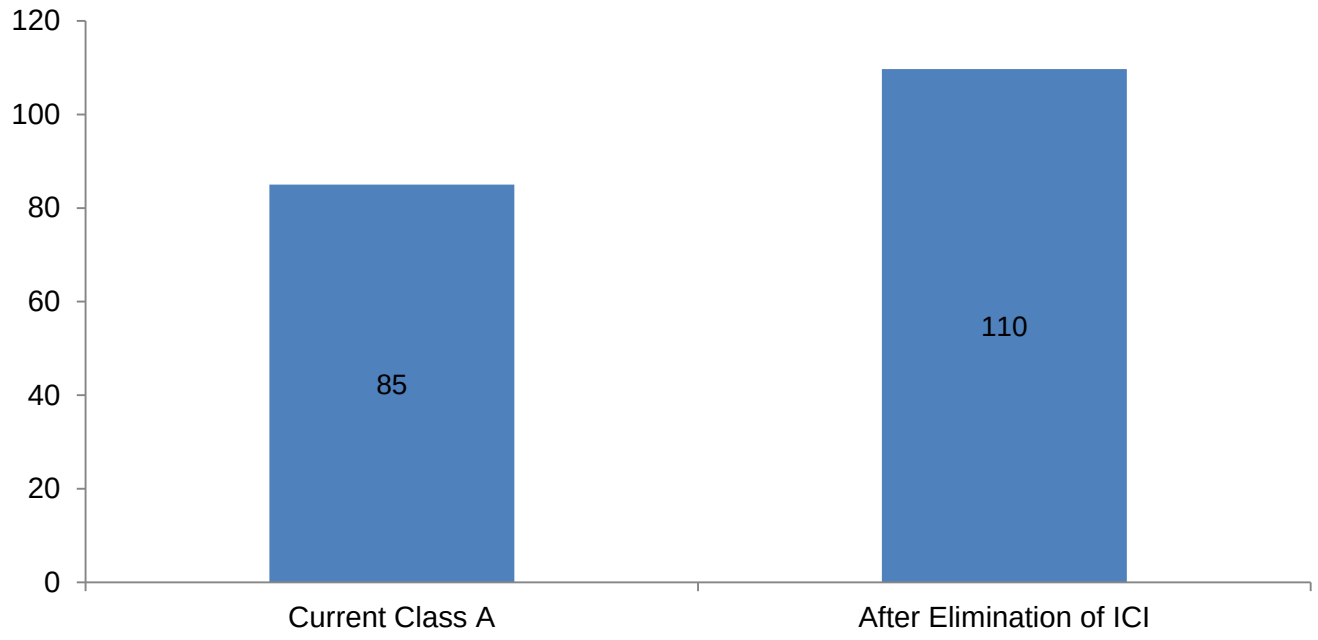
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

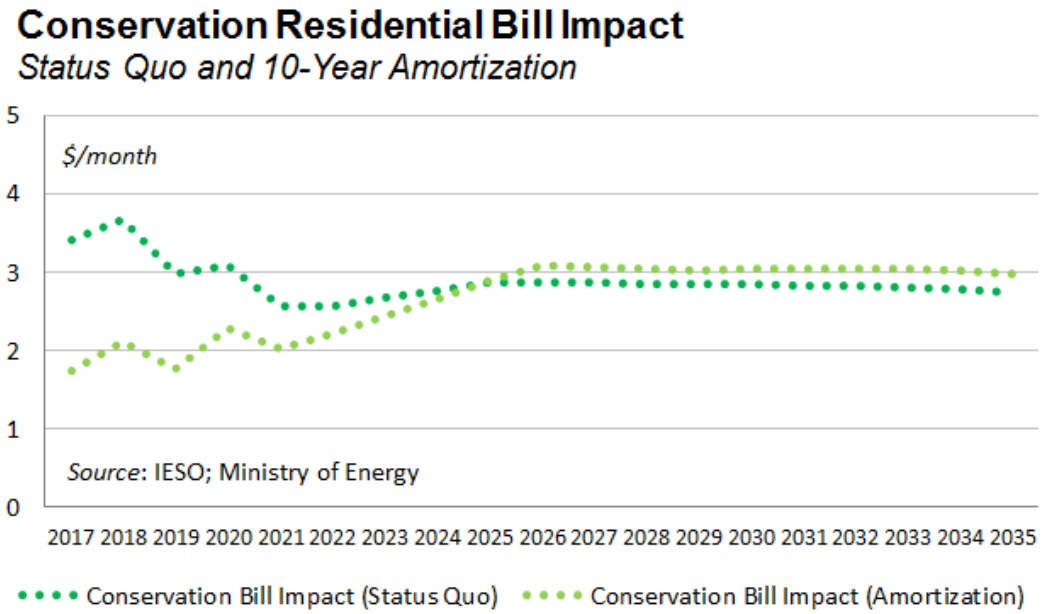
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

- As shown before the positive impact to residential ratepayers is very limited (between $8 and $9 per month) while the impact to the Province's fiscal position would be material (about $1.5 billion a year).

# Appendix

# Electricity Consumer Classes

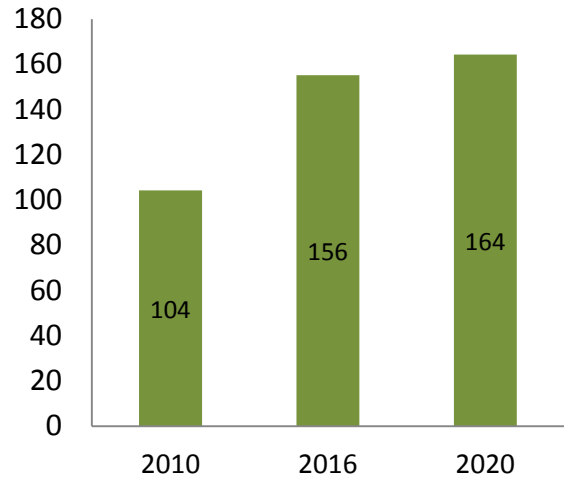
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

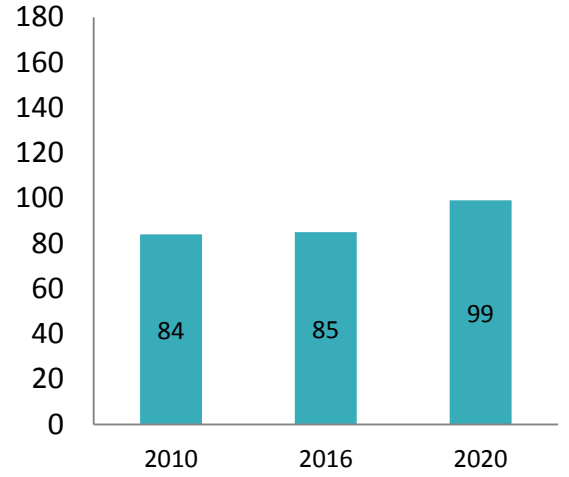
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

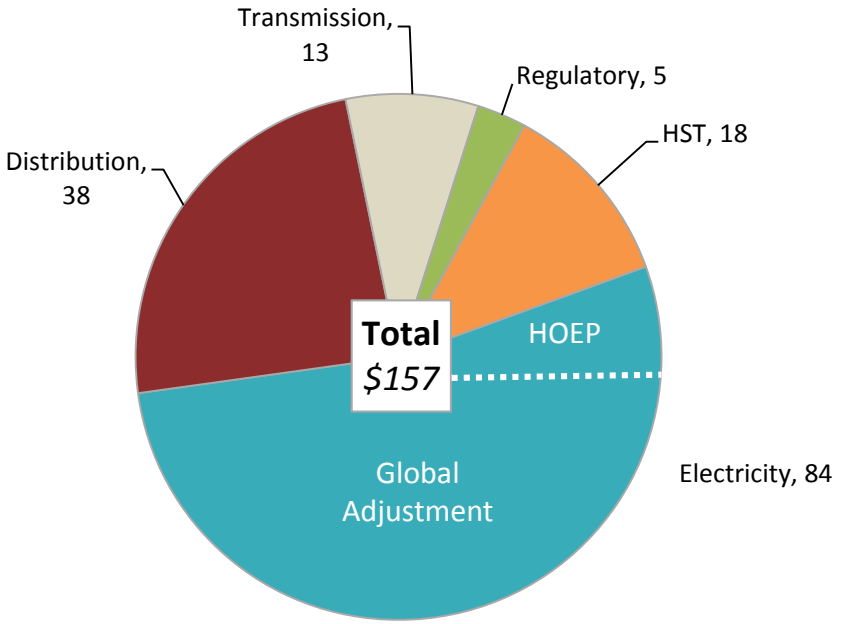
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



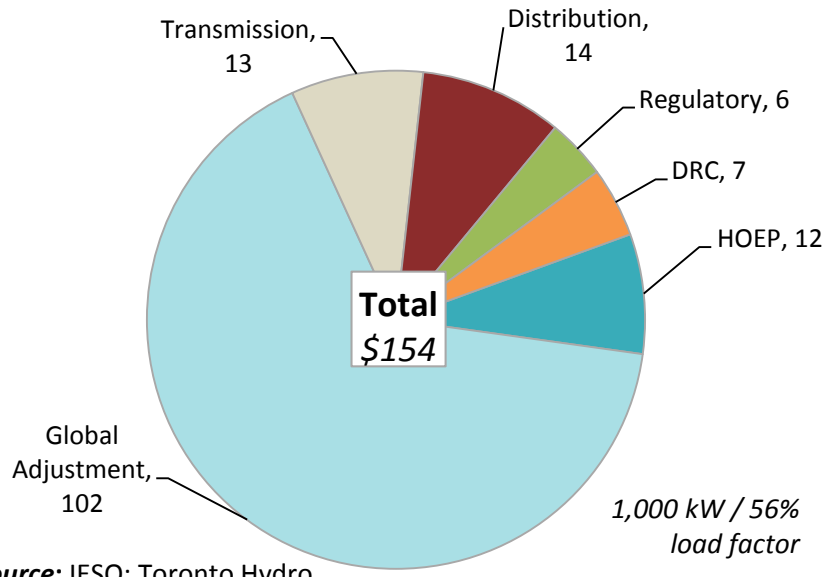

***Source*: OEB, Toronto Hydro**

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

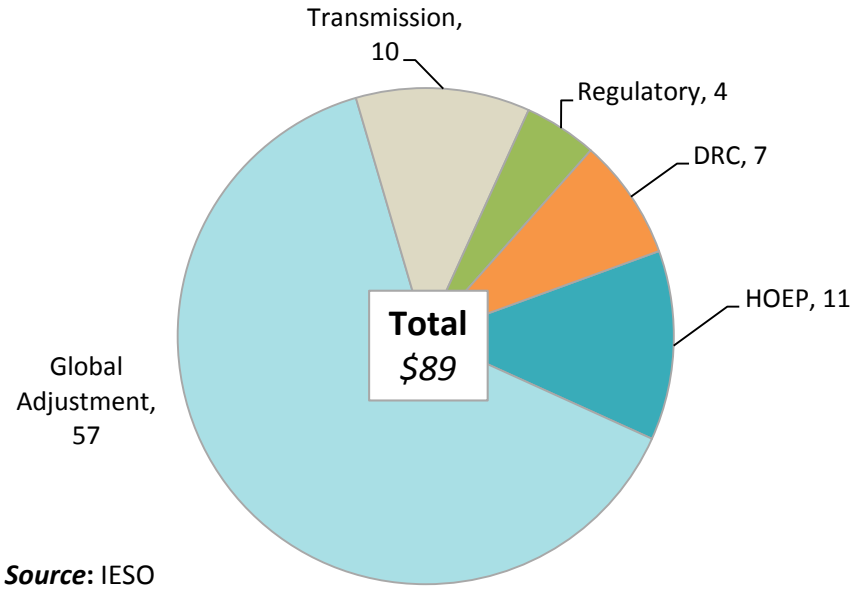
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



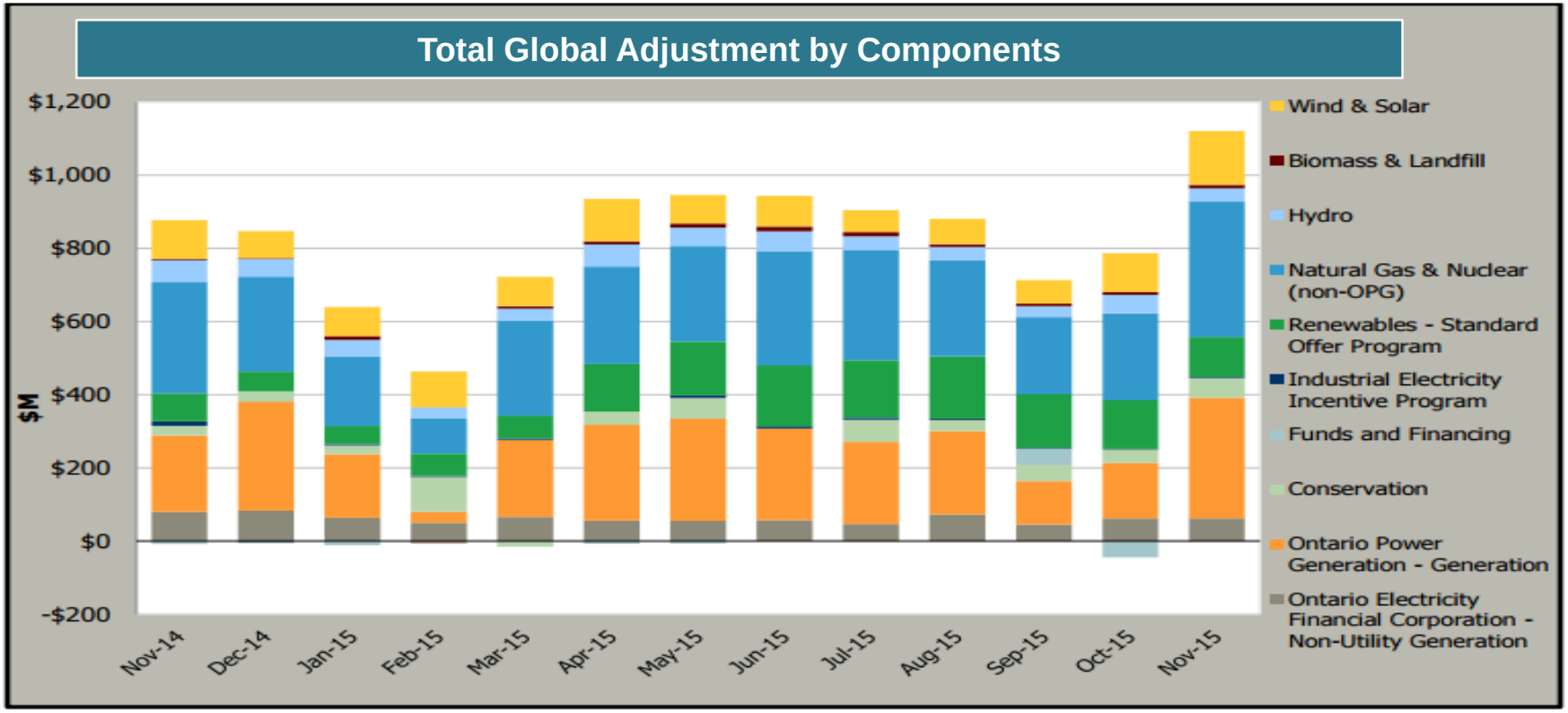

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

**From:** John Kim
**To:** Salman Qadir
**Subject:** Price Mitigation Proposals_Dec5-16_v11_Markup.pptx
**Date:** Tuesday, December 06, 2016 9:40:54 AM
**Attachments:** Price Mitigation Proposals_Dec5-16_v11_Markup.pptx

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Some early comments and an edit….in red.

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II); and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.

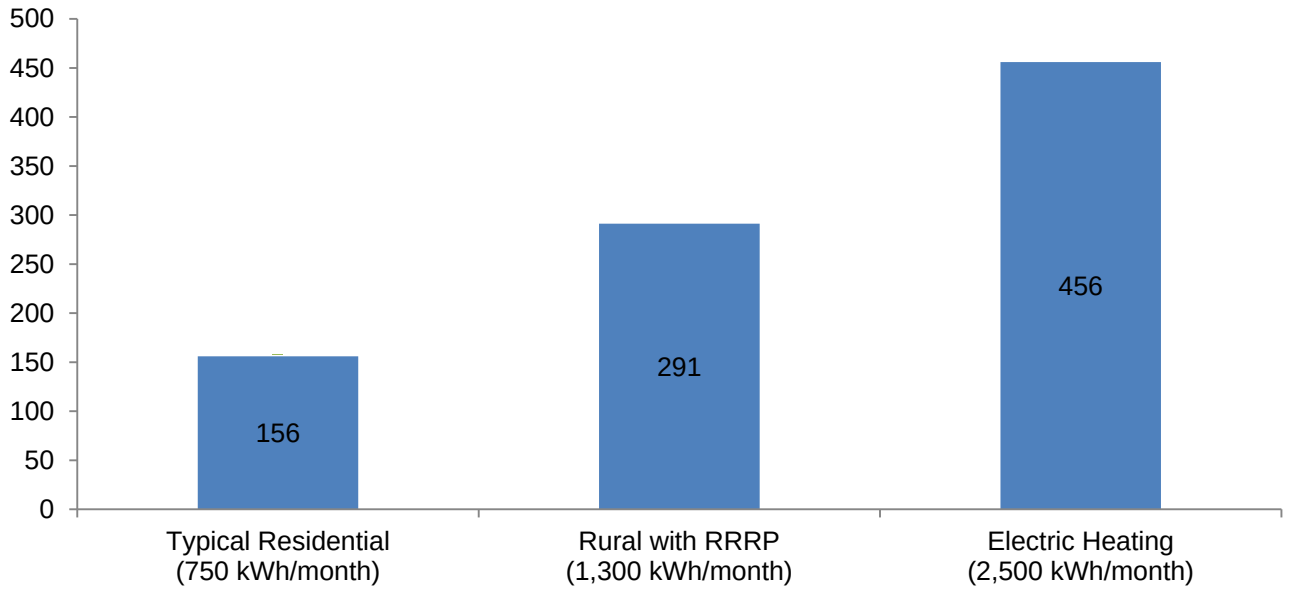
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

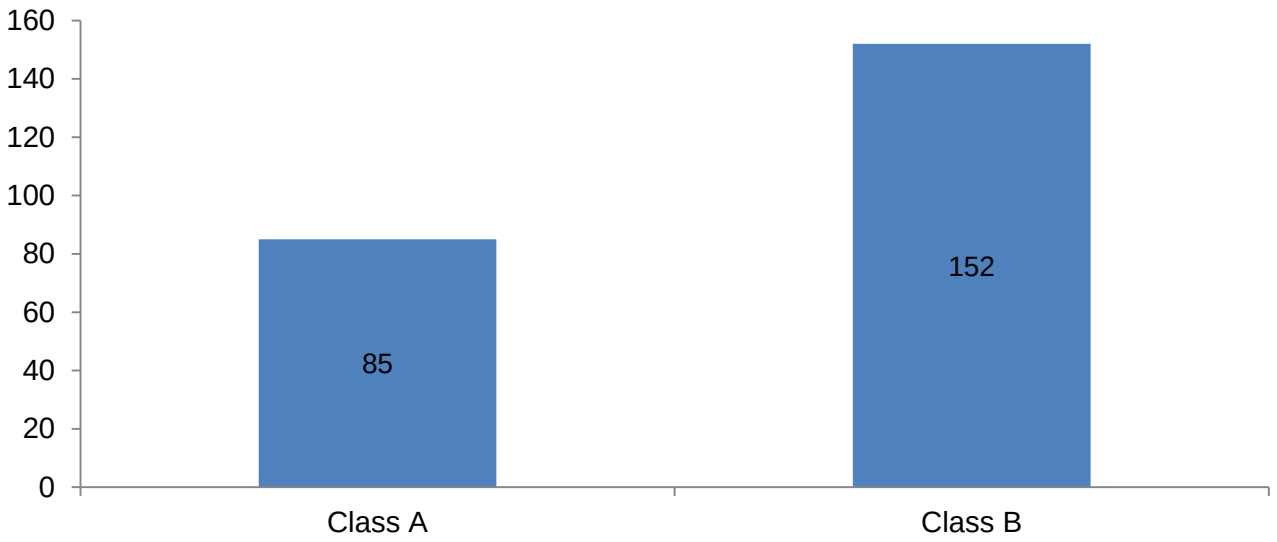



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of $xx [placeholder for OFA] on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $20 to $35 million annual fiscal pressure to the province [TBC by OPG / OFA].

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESB) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.
- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.
- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

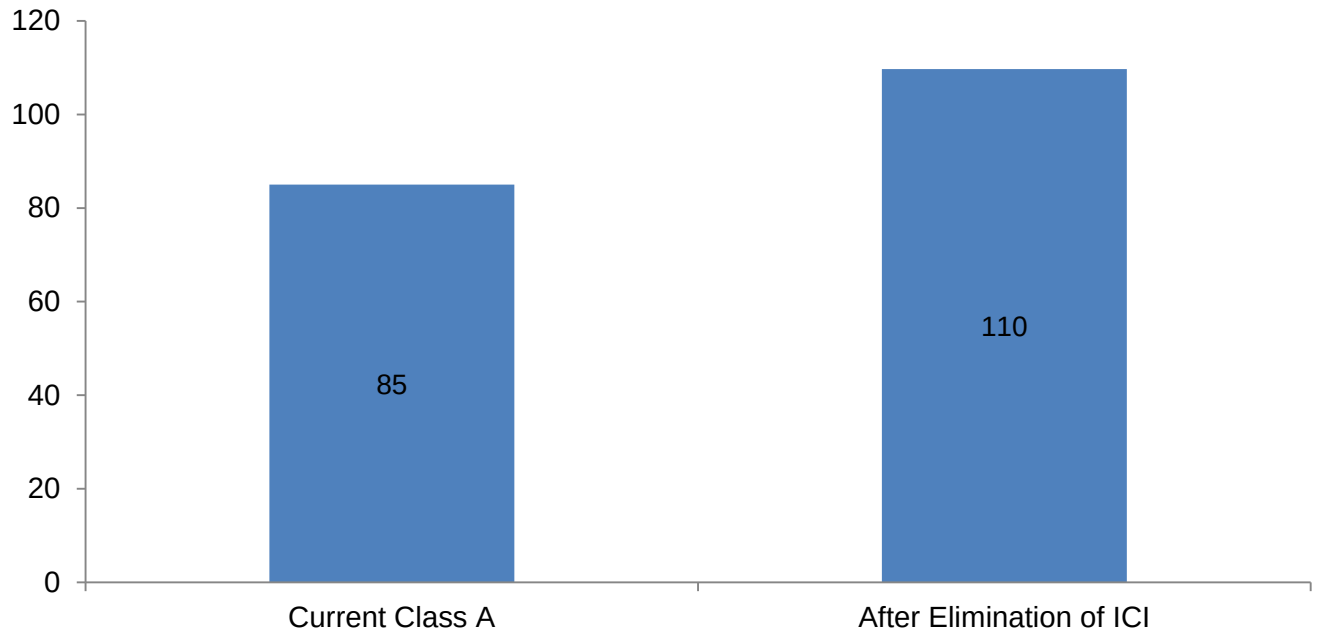
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

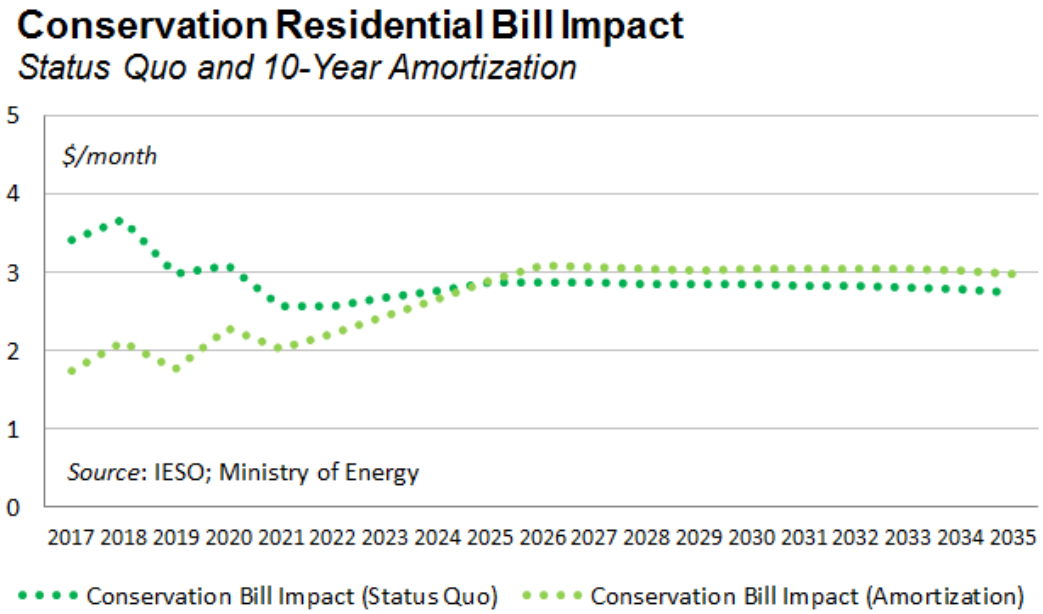
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.007/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

# Electricity Consumer Classes

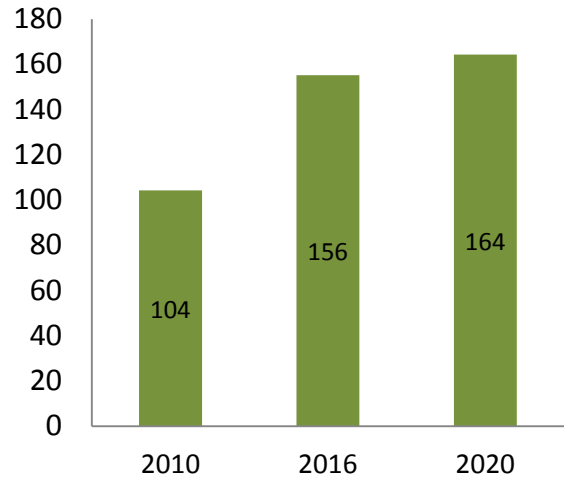
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

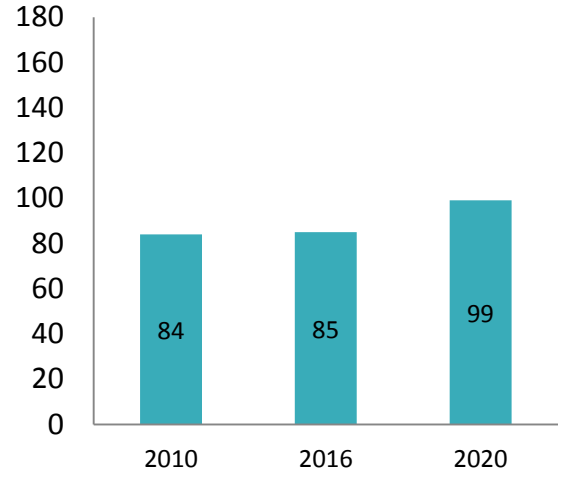
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

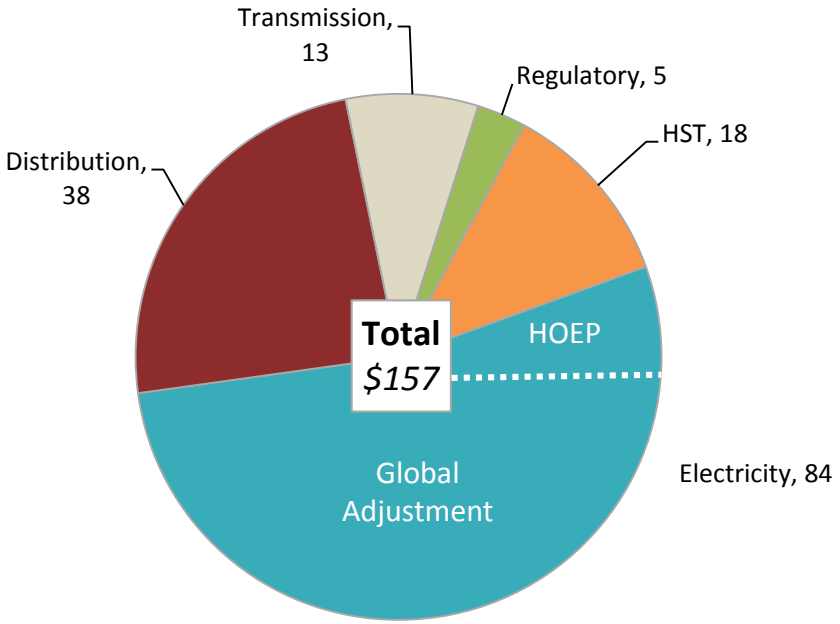
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



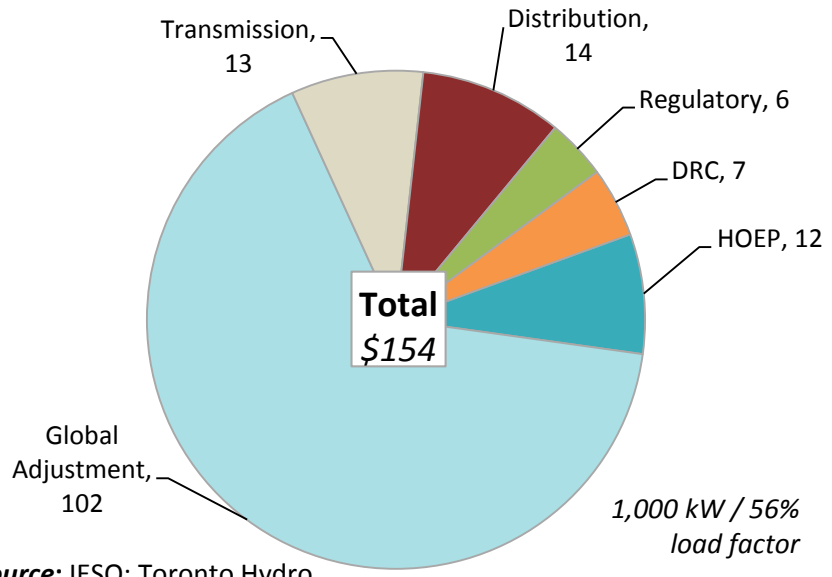

***Source*:** OEB, Toronto Hydro

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

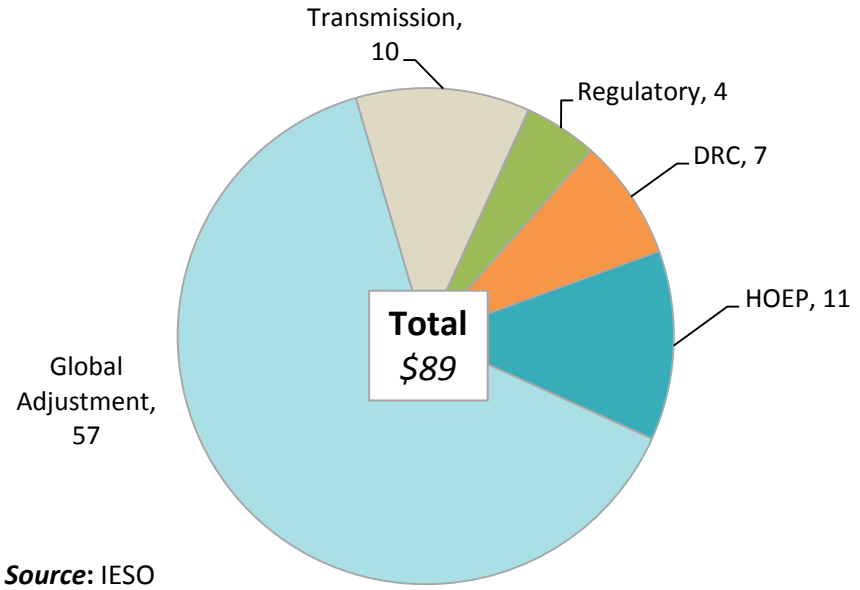
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



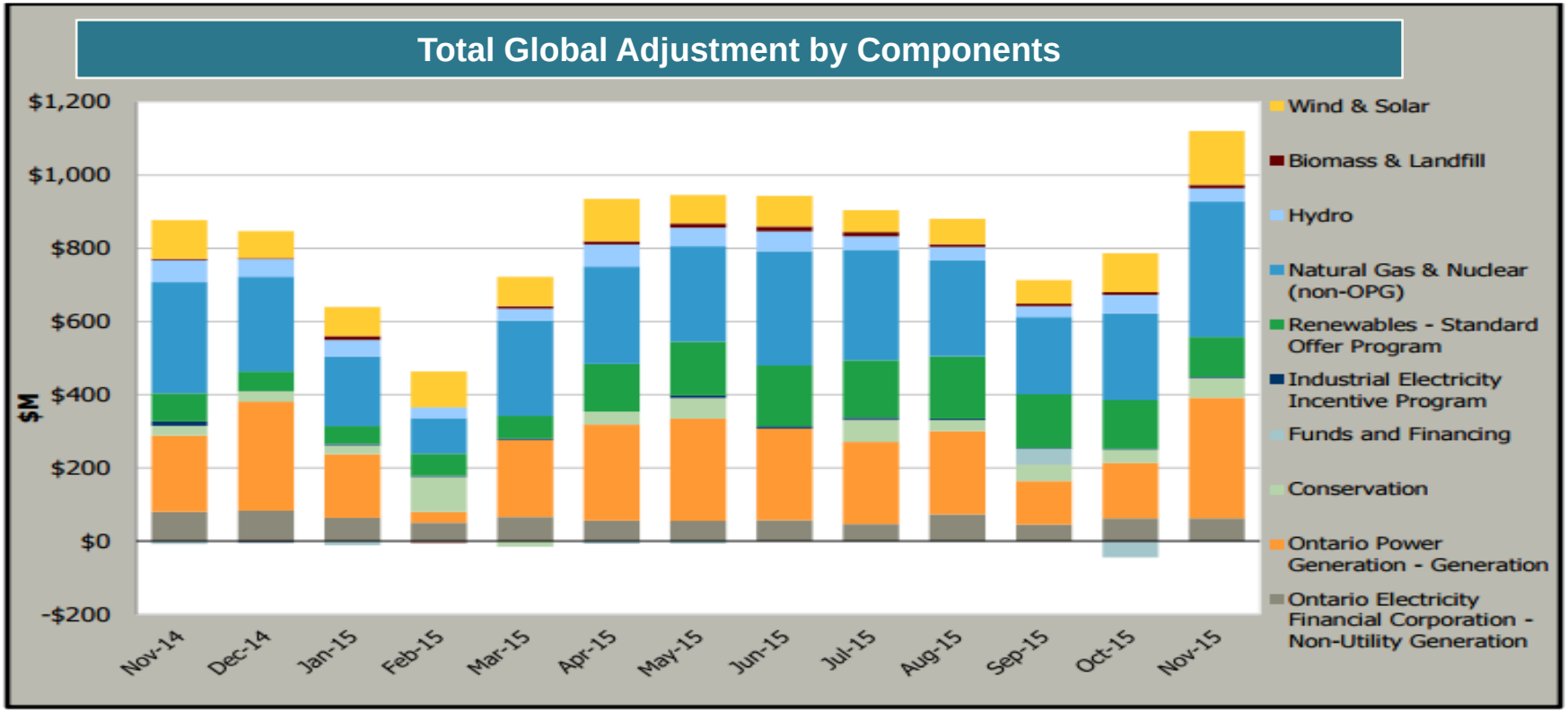

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

**From:** John Kim
**To:** Shajee Kathirgamanathan
**Subject:** Price-Mitigation - CEFD Slides-Dec6-2016_v4.pptx
**Date:** Tuesday, December 06, 2016 3:50:47 PM
**Attachments:** Price-Mitigation - CEFD Slides-Dec6-2016_v4.pptx

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Could you take a quick look?

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# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

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# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost [about $1.5 billion per year in new fiscal costs].
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 billion in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time), with the total tax-based costs rising to about $3.5 billion in 2017-18.
  - These existing mitigation costs are not presented in Energy's deck.
  - Also not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

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# Context: Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* * Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

# Energy's Proposals

Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded. They could be upwards of $2 bn/year, (plus the departure tax), which is not included in the fiscal plan, which would challenge the path to balance.

- OESP & RRRP (Total of about $0.4 Bn/yr): This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI -- About $900+ M/yr): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes the about 30% price increase (from $85/MWH to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
  - As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $100 million).

- Departure Tax: As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.
  - This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
  - Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

- Other fiscal cost risks (Total of about $0.8+ Bn):
  - Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
  - Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
  - Lowering of the debt interest paid by OPG (about $30 – 70 million/yr between 2017 and 2021),

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# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
  - These targeted, low-income measures were introduced after the HST was introduced.
  - The OESP provides a larger, targeted and on-bill relief to qualifying consumers.

- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
  - As with the prior OCEB cap, provides a rough incentive for conservation and correlation to larger homes. A higher cap in winter may help with space-heating issue.
  - May be challenging to implement.

- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | The government removed the DRC from residential electricity users' bills as of January 1, 2016. This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline: Taxpayer-funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

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# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

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# Proposed Taxpayer Funded Electricity Price Mitigation
(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | | | | |
| 7. DRC Ended for Class B | | | | | |
| 8. Other | | | | | |
| **TOTAL** | **1195** | **3,421** | **3,152** | **3,177** | **3,191** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.2 billion, or more, by 2020-21. That is about a 60% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

**From:** John Kim
**To:** Darren Scanlan
**Subject:** Price-Mitigation - CEFD Slides-Dec6-2016_v6.pptx
**Date:** Monday, December 12, 2016 3:49:06 PM
**Attachments:** Price-Mitigation - CEFD Slides-Dec6-2016_v6.pptx

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Latest….asked Shajee to have a look but here it is.

DRAFT

# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

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# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost [about $1.3 – 1.9 plus bn per year in new fiscal costs].
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 billion in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time), with the total tax-based costs rising to about $3.3-3.9 plus billion in 2017-18, if Energy`s proposals are adopted.
  - These existing mitigation costs are not presented in Energy's deck.
  - Not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

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# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

# Energy's Proposals

Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded. They could be upwards of $2 bn/year, (plus the departure tax), which is not included in the fiscal plan, which would challenge the path to balance.

- OESP & RRRP (Total of about $0.4 Bn/yr): This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI -- About $900+ M/yr): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes that about 30% price increase (from $85/MWh to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
  - As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $100 million).

- Departure Tax: As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.
  - This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
  - Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

- Other fiscal cost risks (Total of about $0.8+ Bn):
  - Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
  - Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
  - Lowering of the debt interest paid by OPG (about $30 – 70 million/yr between 2017 and 2021),

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# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
  - These targeted, low-income measures were introduced after the HST was introduced.
  - The OESP provides a larger, targeted and on-bill relief to qualifying consumers.

- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
  - As with the prior OCEB cap, provides a rough incentive for conservation and correlation to larger homes. A higher cap in winter may help with space-heating issue.
  - May be challenging to implement.

- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

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# Proposed Taxpayer Funded Electricity Price Mitigation
(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| CURRENT TOTAL | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | | | |
| 8. Other | | 30 | 45 | 60 | 70 |
| TOTAL | 1,305 | 3,901 | 3,197 | 3,237 | 3,261 |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18..
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | The government removed the DRC from residential electricity users' bills as of January 1, 2016. This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline: Taxpayer-funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

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# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Emily Kerr; Shajee Kathirgamanathan |
| **Cc:** | Darren Scanlan |
| **Subject:** | Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy_SIFBEFBmarkup.pptx |
| **Date:** | Monday, December 12, 2016 4:27:57 PM |
| **Attachments:** | Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy_SIFBEFBmarkup.pptx |

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I've added a couple of edits and a comment…to Darren's version.

Thanks,

John.

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8%  per cent rebate ($11/month savings), updating RRRP ($45/month savings, combined with the 8% rebate), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured,  the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP),  which provides an opportunity to consider a range of policy changes to  how the Ontario energy sector operates.

# Broad Policy Themes / Rationale

- No longer use rate-base to pay for social programs [despite the system benefit rationale] by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.
- Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.
- Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" beyond the Moving Ontario Forward initiative to make certain investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties ~~and expansion of natural gas to rural areas~~, etc. (note that expanding access to natural gas is already included under Moving Ontario Forward.)
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" a single rate plan as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time.
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.16 | 2.31 | 2.41 | 2.49 | 2.54 | 2.58 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.13 | 0.13 | 0.14 | 0.14 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.88 | 3.08 | 3.21 | 3.33 | 3.39 | 3.44 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 2.82 | 3.05 | 2.47 | 2.56 | 2.13 | 2.14 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.10 | 0.10 | 0.11 | 0.11 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Taxpayer Funded Electricity Price Mitigation

| *($M)* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | | 398 | 419 | 433 | 447 |
| 2. Expand the OESP (i.e., 50% increase) | TBD | TBD | TBD | TBD | TBD |
| 3. Fund Conservation Programs Through The Tax-Base | 110 | 450 | 450 | 450 | 450 |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC efficiencies | - | - | - | - | - |
| c. OPG – Borrowing | - | - | - | - | - |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | 110 | 450 | - | - | - |
| 8. Cancel / Adjust FIT | - | - | - | - | - |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| 2. Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy

# Considerations / Outcomes

- The proposed initiatives provide the following opportunities to:
  - Lower the cost of electricity for all consumers;
  - Re-set how electricity programs and energy infrastructure is funded (i.e., shifting costs to the tax-base from rate-base);
  - Provide electricity consumers with greater choices (i.e., signal rate plan);
  - Provide system benefits (e.g., market renewal); and
  - Increase cost effectiveness and improve efficiency.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

**From:** John Kim
**To:** Felix Fung (MOF) (Felix.Fung@ontario.ca)
**Subject:** Question....
**Date:** Tuesday, November 08, 2016 5:50:09 PM

---

Hi Felix….question for you. Do you have any new materials that show the OREC cost estimates? If so, could you share?

Thanks,

John.

Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

| | |
|---|---|
| **From:** | John Kim |
| **To:** | James Strang (MOF) |
| **Subject:** | RE: 3 2016-09-16 RAN OPG Business Plan v1.doc |
| **Date:** | Monday, September 19, 2016 9:59:28 AM |

I'd actually not consider that figure economic comparison, as we're comparing the new BP net income to the Budget one that included a consolidation adjustment of 241 at the time. So the comparison would be against the Public Accounts consolidation adjustment which is 247.

I'd change to positive 27, if doing a true economic comparison.

John.

---

**From:** Strang, James (TBS) [mailto:James.Strang@ontario.ca]
**Sent:** Monday, September 19, 2016 9:57 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: 3 2016-09-16 RAN OPG Business Plan v1.doc

Do you know why the drop in 2015-16 and 2016-17? Is it all related to unrealized gains or losses on the nuclear funds net of bruce variance account.

Is it also lower regulated rates than anticipated in last plan?

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** September 19, 2016 9:40 AM
**To:** Strang, James (TBS)
**Subject:** RE: 3 2016-09-16 RAN OPG Business Plan v1.doc

I was in a meeting…so yeah, they revised the MOA (July 2015) and just left it to Minister of Energy.

---

**From:** Strang, James (TBS) [mailto:James.Strang@ontario.ca]
**Sent:** Monday, September 19, 2016 9:31 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: 3 2016-09-16 RAN OPG Business Plan v1.doc

Yes, the usual place. Are we sure Minister of Finance does not have to concur with OPG plan, was it just Hydro One's plan.

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** September 19, 2016 9:29 AM
**To:** Strang, James (TBS)
**Subject:** RE: 3 2016-09-16 RAN OPG Business Plan v1.doc

Ok….will try to make it. Is it the TB boardroom at 1st floor of Frost?

---

**From:** Strang, James (TBS) [mailto:James.Strang@ontario.ca]
**Sent:** Monday, September 19, 2016 9:25 AM

**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** 3 2016-09-16 RAN OPG Business Plan v1.doc

The item is at 10:35am today.  Keep in mind it could go earlier as there are only 5 items before it.

---

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| | |
|---|---|
| **From:** | John Kim |
| **To:** | James Strang (MOF) |
| **Subject:** | RE: 3 2016-09-16 RAN OPG Business Plan v1.doc |
| **Date:** | Monday, September 19, 2016 10:00:18 AM |

For 2016-17, it's mostly related to rate regulation baked into the plan.

---

**From:** John Kim
**Sent:** Monday, September 19, 2016 9:59 AM
**To:** James Strang (MOF) <James.Strang@ontario.ca>
**Subject:** RE: 3 2016-09-16 RAN OPG Business Plan v1.doc

I'd actually not consider that figure economic comparison, as we're comparing the new BP net income to the Budget one that included a consolidation adjustment of 241 at the time. So the comparison would be against the Public Accounts consolidation adjustment which is 247.

I'd change to positive 27, if doing a true economic comparison.

John.

---

**From:** Strang, James (TBS) [mailto:James.Strang@ontario.ca]
**Sent:** Monday, September 19, 2016 9:57 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: 3 2016-09-16 RAN OPG Business Plan v1.doc

Do you know why the drop in 2015-16 and 2016-17? Is it all related to unrealized gains or losses on the nuclear funds net of bruce variance account.

Is it also lower regulated rates than anticipated in last plan?

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** September 19, 2016 9:40 AM
**To:** Strang, James (TBS)
**Subject:** RE: 3 2016-09-16 RAN OPG Business Plan v1.doc

I was in a meeting…so yeah, they revised the MOA (July 2015) and just left it to Minister of Energy.

---

**From:** Strang, James (TBS) [mailto:James.Strang@ontario.ca]
**Sent:** Monday, September 19, 2016 9:31 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: 3 2016-09-16 RAN OPG Business Plan v1.doc

Yes, the usual place. Are we sure Minister of Finance does not have to concur with OPG plan, was it just Hydro One's plan.

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]

**Sent:** September 19, 2016 9:29 AM
**To:** Strang, James (TBS)
**Subject:** RE: 3 2016-09-16 RAN OPG Business Plan v1.doc

Ok….will try to make it. Is it the TB boardroom at 1st floor of Frost?

---

**From:** Strang, James (TBS) [mailto:James.Strang@ontario.ca]
**Sent:** Monday, September 19, 2016 9:25 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** 3 2016-09-16 RAN OPG Business Plan v1.doc

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**From:** Veinot, Cindy (TBS)
**To:** Ronald Kwan; John Kim
**Subject:** RE: A call from OPCD
**Date:** Friday, January 13, 2017 4:38:17 PM

---

We are providing a briefing note to our Associate DM by EOD today.

Cindy

---

**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** January-13-17 4:28 PM
**To:** Kim, John (OFA)
**Cc:** Veinot, Cindy (TBS)
**Subject:** Re: A call from OPCD

Thanks John. Have a good weekend and recover from your jet lag

Copying Cindy, as neither Gadi nor I, as non-accountants admittedly, could see how this could not have a fiscal impact either, and for the same reasons.

Cindy, are you providing comments directly back to Energy, and, if so, when? Sooner rather than later would seem appropriate to me.

Ron

---

**From:** John Kim
**Sent:** January 13, 2017 4:13 PM
**To:** Ronald Kwan
**Subject:** A call from OPCD

Hi Ron,

Helen Graham and Cindy Veinot gave me a call. Helen called first and then asked me to a call with Cindy.

So DM of Energy appears to have engaged DM of TBS which is how OPCD received the deck. Energy asked for comments from an accounting perspective which is how OPCD seemed to have gotten engaged.

They wanted mostly clarification on Global Adjustment and what it covers. Cindy's comments were to the point that she would not see how this will not lead to a fiscal hit. That you cannot create a receivable/asset , unless there is a counterparty or unless it is a rate regulated entity.

I'm running out of steam so will be heading out shortly but will try to provide you with a note this weekend.

Thanks,

John.

Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

---

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**From:** Ronald Kwan
**To:** "Veinot, Cindy (TBS)"; John Kim
**Subject:** RE: A call from OPCD
**Date:** Friday, January 13, 2017 4:49:13 PM

---

Thanks Cindy.

Ron

---

**From:** Veinot, Cindy (TBS) [mailto:Cindy.Veinot@ontario.ca]
**Sent:** January-13-17 16:38
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: A call from OPCD

We are providing a briefing note to our Associate DM by EOD today.

Cindy

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**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** January-13-17 4:28 PM
**To:** Kim, John (OFA)
**Cc:** Veinot, Cindy (TBS)
**Subject:** Re: A call from OPCD

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Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

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**From:** Gavin He
**To:** "Hunter, Robert A. (ENERGY)"
**Cc:** John Kim; Salman Qadir; Ken Kandeepan; Singh, Inayat (ENERGY); Sunita Chander (ENERGY); Shajee Kathirgamanathan
**Subject:** RE: Benefit Implementation
**Date:** Thursday, December 15, 2016 10:42:04 AM

---

Hi Robert,

Thank you for checking in with us. Could you please update the list with below 3 contacts?

John Kim - John.Kim@ofina.on.ca
Shajee Kathirgamanathan - Shajee.Kathirgamanathan@ofina.on.ca
Gavin He – Gavin.He@ofina.on.ca

Thanks,
Gavin He

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Thursday, December 15, 2016 10:26 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hi all,

FYI – The Ministry is currently creating a new reporting portal for the Rebate program. The following staff from the OFA had access to the Ministry's previous clean energy benefit portal:

Adrian Nalasco - adrian.nalasco@ofina.on.ca
Darren Scanlan - Darren.Scanlan@ofina.on.ca
Ronald Kwan - Ronald.Kwan@ofina.on.ca

Can you confirm whether the OFA would like to carry forward with the same contacts? If not, could you please update this list to provide the 3 contacts you would like to have access?

We are looking for this information by the end of the week and will just use the current 3 contacts if no changes are received.

Thank you,

-Robert
(416) 325-6899

---

**From:** Gavin He [mailto:Gavin.He@ofina.on.ca]
**Sent:** December-14-16 1:42 PM
**To:** Chander, Sunita (ENERGY); Hunter, Robert A. (ENERGY)
**Cc:** Kim, John (OFA); Salman Qadir; Kandeepan, Ken (OFA); Singh, Inayat (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Sunita and Robert,

Please find attached the updated MOU with edits from OFA. I have attached a clean and track-changes versions for your easy reference.

Please let us know if you have any questions.

Thanks,
Gavin He

---

**From:** Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
**Sent:** Monday, December 12, 2016 11:53 AM
**To:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi all, just wanted to remind everybody about timing as we will need to get these MOUs finalized for a Jan 1 implementation date. Can I ask when we can all agree to an MOU that can be signed by ADMs?

On our end we need to send to our DM and MO as well, so I would like to send that mid-week this week.

-Sunita

Sunita Chander
A/Director, Distribution and Agency Policy Branch
Strategic, Network and Agency Policy Division
Ministry of Energy

77 Grenville St., 6th Floor
Toronto ON M7A 2C1
Tel: 416-325-6594
Email: sunita.chander@ontario.ca

---

**From:** Hunter, Robert A. (ENERGY)
**Sent:** December 8, 2016 4:05 PM
**To:** Kim, John (OFA)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Salman Qadir; Gavin He; Chander, Sunita (ENERGY)
**Subject:** RE: Benefit Implementation

Hi John,

In response to your question we have updated the language in the MOU Section 3. b) to be more clear. Please see the below language that we plan to include in this MOU.

"The OFA will keep and maintain all records related to the OREC for a period of seven (7)

years, and will provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time."

Does this language provide the level of clarity that you are looking for? If not, please let me know and we can discuss.

Thank you,

-Robert
(416) 325-6899

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 9:25 AM
**To:** Hunter, Robert A. (ENERGY); Chander, Sunita (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Salman Qadir; Gavin He
**Subject:** RE: Benefit Implementation

Hi Sunita, Robert,

We need some clarity on what you mean by this not most likely.

Thanks,

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Thursday, December 08, 2016 9:03 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hi John,

In regards to records that the OFA must maintain related to the OREC, we do not need to have direct database access to your records, but records should be available upon request of the Ministry. Most likely we would ask for documents to be shared electronically via email if necessary, unless directed otherwise.

Regards,

-Robert
(416) 325-6899

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 8:47 AM
**To:** Hunter, Robert A. (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Chander, Sunita (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Robert,

In the version you sent back, you mention the Ministry having full access to such records. What are your

expectations of how such access to take place?

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Monday, December 05, 2016 10:21 AM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hello,

Following up on Sunita's earlier email; have you had a chance to review the attached MOU? If there are any changes please let us know as soon as possible. We are aiming to have this finalized by the end of this week.

Thank you,

-Robert
(416) 325-6899

---

**From:** Chander, Sunita (ENERGY)
**Sent:** November-27-16 2:15 PM
**To:** Kandeepan, Ken (OFA); Kim, John (OFA)
**Cc:** Hunter, Robert A. (ENERGY); Singh, Inayat (ENERGY); An, Tai (ENERGY/MEDEI/MRI)
**Subject:** RE: Benefit Implementation

Hi, attached is the ENERGY-OFA MOU, one or two adjustments in the attached.

If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.

Thanks,

<< File: MOU - MoE OFA- DAP Nov 25.doc >>

---

**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Michael,

Attached is a working draft of the MOU. OFA Legal had based it on the OCEB one, slightly updated for the proposed new rebate. I'm sure Energy will have some updates to suggest on it too.

Ron << File: MOU - MoE OFA re OREC(v3)_Clean.doc >>

-----Original Appointment-----
**From:** Reid, Michael (ENERGY) [mailto:Michael.Reid@ontario.ca]
**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

---

Location: 77 Grenville Street, 6th Floor, Boardroom 6B

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| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Gavin He |
| **Cc:** | John Kim; Salman Qadir |
| **Subject:** | RE: Benefit Implementation |
| **Date:** | Wednesday, December 14, 2016 9:52:02 AM |

Hi,

We should put John as the OFA contact, and me as the person signing.

Thanks,
Ron

---

**From:** Gavin He
**Sent:** December-12-16 17:01
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi Ron,

Ken Kandeepan just made an edit on 4 (b) on page 3:

He just changed "The Ministry will provide to *the Corporate and Electricity Finance Division of* the OFA all IESO invoices and settlement statements…" to "The Ministry will provide to the OFA all IESO invoices and settlement statements…", for consistency purpose.

Please let us know if you are okay with the edits. If so, I will provide this back to Energy.

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, December 09, 2016 5:14 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi,

How about this?

Ron

---

**From:** Gavin He
**Sent:** December-09-16 17:04
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi Ron,

Please find attached the draft MOU between OFA and Ministry of Energy regarding the OREC.

The MOU was reviewed by OFA Legal and Energy. Please note that Ken had a comment under 4(e), which was the proposed edits from Energy. We have reviewed the language and we are of the view that there's some strategic interest in keeping that bullet in.

Please let me know if you have any questions.

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, November 27, 2016 3:49 PM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Benefit Implementation

Hi Salman,

Could you review when you return on Tuesday.

Thanks,

John.

---

**From:** Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
**Sent:** Sunday, November 27, 2016 2:15 PM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Tai An (ENERGY) <Tai.An@ontario.ca>
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**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

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**From:** Reid, Michael (ENERGY) [mailto:Michael.Reid@ontario.ca]
**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
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**From:** Gavin He
**To:** Ronald Kwan
**Cc:** John Kim; Salman Qadir
**Subject:** RE: Benefit Implementation
**Date:** Monday, December 12, 2016 5:01:21 PM
**Attachments:** MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v4 (002).docx

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**Sent:** September 30, 2016 10:21 AM
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**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

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**Sent:** September-27-16 09:14

**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
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**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the ~~[~~*Ontario Rebate for Electricity Consumers Act, 2016*~~] – NTD, pending the legislature considering the Bill], including~~ and the regulations thereunder (the "Act"), certain consumers will be entitled to receive ~~a credit, known as the~~ financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers ("~~" or "~~OREC"), against~~", in respect of~~ the cost of electricity consumed by them ~~during the period~~ commencing January 1, 2017;

2. ~~Funds in respect of the~~ Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to ~~most~~specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act~~, its regulations and the Market Rules~~;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the OREC Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f) of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

1. **Payment Authorization**

   (i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

   (ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

   (iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

      i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

      ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

2. **Payment Process**

   ~~a) The Ministry is registered with the IESO as an IESO Program Participant.~~

   a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

   ~~c)~~b) The Ministry will take all necessary steps to provide the OFA with access to the ~~Ministry's~~ IESO ~~account and will arrange for~~Portal so that the OFA ~~to~~will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

   ~~d)~~c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

   ~~e)~~d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

   ~~f)~~e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

3. **Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ~~ensure that~~provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of ~~has full access to~~ such of those records as the Ministry may request from time to time.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

~~e)~~

## 4. OREC Cost Forecasting

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the ~~Corporate and Electricity Finance Division of~~ the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies, retailers, and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to ~~complete and accurate~~ data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process~~.~~.

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

~~d)a) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.~~

d) ~~e)~~ The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement ~~of~~on the forecasts.

e) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for the appropriated amount or for a change in the appropriated amount for OREC.

## 5. Limited Role of the OFA

**Commented [KK2]:** Throughout the MOU we have used "OFA" to stand in for all divsions, referring to the OFA here as well keeps it consistent.

**Formatted:** Indent: Left: 0.25", Numbered + Level: 1 + Numbering Style: a, b, c, … + Start at: 1 + Alignment: Left + Aligned at: 0.75" + Indent at: 1"

**Commented [SQ23]:** The only change outlined in the latest version.

**Commented [KR4]:** Does the OFA agree that there should be a provision contemplating agreement on the forecasts? Would it be sufficient to simply reqire tht senior management be briefed?

**Commented [RK5]:** How about dealing with it by switching the order and slightly amending the new "e)"?

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:
email:

c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy
880 Bay Street, 5th Floor
Attention:
email:

**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

| | |
|---|---|
| **From:** | Gavin He |
| **To:** | John Kim |
| **Cc:** | Salman Qadir |
| **Subject:** | RE: Benefit Implementation |
| **Date:** | Monday, December 12, 2016 12:34:57 PM |

Hi John,

Sure, will do.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Monday, December 12, 2016 12:30 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: Benefit Implementation

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Let's give it time and send back around 2pm. Pls. check with me first before doing so.

John.

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John.

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**Sent:** Monday, December 12, 2016 11:53 AM
**To:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
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On our end we need to send to our DM and MO as well, so I would like to send that mid-week this week.

-Sunita

Sunita Chander
A/Director, Distribution and Agency Policy Branch
Strategic, Network and Agency Policy Division
Ministry of Energy

77 Grenville St., 6th Floor
Toronto ON M7A 2C1
Tel: 416-325-6594
Email: sunita.chander@ontario.ca

---

**From:** Hunter, Robert A. (ENERGY)
**Sent:** December 8, 2016 4:05 PM
**To:** Kim, John (OFA)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Salman Qadir; Gavin He; Chander, Sunita (ENERGY)
**Subject:** RE: Benefit Implementation

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In response to your question we have updated the language in the MOU Section 3. b) to be more clear. Please

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> "The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time."

Does this language provide the level of clarity that you are looking for? If not, please let me know and we can discuss.

Thank you,

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(416) 325-6899

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**To:** Hunter, Robert A. (ENERGY); Chander, Sunita (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Salman Qadir; Gavin He
**Subject:** RE: Benefit Implementation

Hi Sunita, Robert,

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John.

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**Sent:** Thursday, December 08, 2016 9:03 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
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**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Monday, December 05, 2016 10:21 AM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
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Thanks,

<< File: MOU - MoE OFA- DAP Nov 25.doc >>

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**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
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**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

---

Location: 77 Grenville Street, 6th Floor, Boardroom 6B

Upon arriving on the 6th floor, please call Betty at 5-6559 on the lobby phone.

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**From:** John Kim
**To:** Gavin He
**Cc:** Salman Qadir
**Subject:** RE: Benefit Implementation
**Date:** Monday, December 12, 2016 12:30:24 PM

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**To:** John Kim
**Cc:** Salman Qadir
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**Date:** Monday, December 12, 2016 12:27:54 PM

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Does this language provide the level of clarity that you are looking for? If not, please let me know and we can discuss.

Thank you,

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(416) 325-6899

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**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 9:25 AM
**To:** Hunter, Robert A. (ENERGY); Chander, Sunita (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Salman Qadir; Gavin He
**Subject:** RE: Benefit Implementation

Hi Sunita, Robert,

We need some clarity on what you mean by this not most likely.

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**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
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**Cc:** Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

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Thanks,

<< File: MOU - MoE OFA- DAP Nov 25.doc >>

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**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

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**Subject:** Benefit Implementation
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Update: Ken to call in.

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**From:** John Kim
**To:** Gavin He
**Cc:** Salman Qadir
**Subject:** RE: Benefit Implementation
**Date:** Monday, December 12, 2016 12:27:24 PM

---

Give it an hour and after lunch, pls. send it back to Sunita.

John.

---

**From:** Gavin He
**Sent:** Monday, December 12, 2016 12:00 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: Benefit Implementation

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**To:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
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-Sunita

Sunita Chander
A/Director, Distribution and Agency Policy Branch
Strategic, Network and Agency Policy Division
Ministry of Energy

77 Grenville St., 6th Floor
Toronto ON M7A 2C1
Tel: 416-325-6594
Email: sunita.chander@ontario.ca

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**To:** Kim, John (OFA)
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**Cc:** Hunter, Robert A. (ENERGY); Singh, Inayat (ENERGY); An, Tai (ENERGY/MEDEI/MRI)
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Thanks,

<< File: MOU - MoE OFA- DAP Nov 25.doc >>

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**From:** John Kim
**To:** Ronald Kwan; Salman Qadir
**Cc:** Gavin He
**Subject:** RE: Benefit Implementation
**Date:** Monday, December 12, 2016 12:26:35 PM

---

Hi Ron,

Looks good to us.

We will send it back.

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** Friday, December 09, 2016 5:14 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi,

How about this?

Ron

---

**From:** Gavin He
**Sent:** December-09-16 17:04
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi Ron,

Please find attached the draft MOU between OFA and Ministry of Energy regarding the OREC.

The MOU was reviewed by OFA Legal and Energy. Please note that Ken had a comment under 4(e), which was the proposed edits from Energy. We have reviewed the language and we are of the view that there's some strategic interest in keeping that bullet in.

Please let me know if you have any questions.

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, November 27, 2016 3:49 PM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>

**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Benefit Implementation

Hi Salman,

Could you review when you return on Tuesday.

Thanks,

John.

---

**From:** Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
**Sent:** Sunday, November 27, 2016 2:15 PM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Tai An (ENERGY) <Tai.An@ontario.ca>
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**From:** Gavin He
**To:** John Kim
**Cc:** Salman Qadir
**Subject:** RE: Benefit Implementation
**Date:** Monday, December 12, 2016 11:59:41 AM

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Tel: 416-325-6594
Email: sunita.chander@ontario.ca

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---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Monday, December 05, 2016 10:21 AM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hello,

Following up on Sunita's earlier email; have you had a chance to review the attached MOU? If there are any changes please let us know as soon as possible. We are aiming to have this finalized by the end of this week.

Thank you,

-Robert
(416) 325-6899

---

**From:** Chander, Sunita (ENERGY)
**Sent:** November-27-16 2:15 PM
**To:** Kandeepan, Ken (OFA); Kim, John (OFA)
**Cc:** Hunter, Robert A. (ENERGY); Singh, Inayat (ENERGY); An, Tai (ENERGY/MEDEI/MRI)
**Subject:** RE: Benefit Implementation

Hi, attached is the ENERGY-OFA MOU, one or two adjustments in the attached.

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Thanks,

<< File: MOU - MoE OFA- DAP Nov 25.doc >>

---

**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Michael,

Attached is a working draft of the MOU. OFA Legal had based it on the OCEB one, slightly updated for the proposed new rebate. I'm sure Energy will have some updates to suggest on it too.

Ron << File: MOU - MoE OFA re OREC(v3)_Clean.doc >>

-----Original Appointment-----
**From:** Reid, Michael (ENERGY) [mailto:Michael.Reid@ontario.ca]
**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update:  Ken to call in.

---

Location:  77 Grenville Street, 6th Floor, Boardroom 6B

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| | |
|---|---|
| **From:** | Gavin He |
| **To:** | John Kim |
| **Subject:** | RE: Benefit Implementation |
| **Date:** | Friday, December 09, 2016 6:42:21 PM |

Sure.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Friday, December 09, 2016 6:42 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Me too. Could you run it by Ken R?

---

**From:** Gavin He
**Sent:** Friday, December 09, 2016 6:40 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi John,

I am good with Ron's edits.

Regards,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, December 09, 2016 5:14 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi,

How about this?

Ron

---

**From:** Gavin He
**Sent:** December-09-16 17:04
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi Ron,

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The MOU was reviewed by OFA Legal and Energy. Please note that Ken had a comment under 4(e), which was the proposed edits from Energy. We have reviewed the language and we are of the view that there's some strategic interest in keeping that bullet in.

Please let me know if you have any questions.

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, November 27, 2016 3:49 PM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Benefit Implementation

Hi Salman,

Could you review when you return on Tuesday.

Thanks,

John.

---

**From:** Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
**Sent:** Sunday, November 27, 2016 2:15 PM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Tai An (ENERGY) <Tai.An@ontario.ca>
**Subject:** RE: Benefit Implementation

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Thanks,

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**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Michael,

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Ron << File: MOU - MoE OFA re OREC(v3)_Clean.doc >>

-----Original Appointment-----
**From:** Reid, Michael (ENERGY) [mailto:Michael.Reid@ontario.ca]
**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

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**From:** Hunter, Robert A. (ENERGY)
**To:** Gavin He
**Cc:** John Kim; Salman Qadir; Ken Kandeepan; Singh, Inayat (ENERGY); Sunita Chander (ENERGY)
**Subject:** RE: Benefit Implementation
**Date:** Thursday, December 15, 2016 10:26:34 AM

---

Hi all,

FYI – The Ministry is currently creating a new reporting portal for the Rebate program. The following staff from the OFA had access to the Ministry's previous clean energy benefit portal:

Adrian Nalasco - adrian.nalasco@ofina.on.ca
Darren Scanlan - Darren.Scanlan@ofina.on.ca
Ronald Kwan - Ronald.Kwan@ofina.on.ca

Can you confirm whether the OFA would like to carry forward with the same contacts? If not, could you please update this list to provide the 3 contacts you would like to have access?

We are looking for this information by the end of the week and will just use the current 3 contacts if no changes are received.

Thank you,

-Robert
(416) 325-6899

---

**From:** Gavin He [mailto:Gavin.He@ofina.on.ca]
**Sent:** December-14-16 1:42 PM
**To:** Chander, Sunita (ENERGY); Hunter, Robert A. (ENERGY)
**Cc:** Kim, John (OFA); Salman Qadir; Kandeepan, Ken (OFA); Singh, Inayat (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Sunita and Robert,

Please find attached the updated MOU with edits from OFA. I have attached a clean and track-changes versions for your easy reference.

Please let us know if you have any questions.

Thanks,
Gavin He

---

**From:** Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
**Sent:** Monday, December 12, 2016 11:53 AM
**To:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi all, just wanted to remind everybody about timing as we will need to get these MOUs finalized for a Jan 1 implementation date. Can I ask when we can all agree to an MOU that can

be signed by ADMs?

On our end we need to send to our DM and MO as well, so I would like to send that mid-week this week.

-Sunita

Sunita Chander
A/Director, Distribution and Agency Policy Branch
Strategic, Network and Agency Policy Division
Ministry of Energy

77 Grenville St., 6th Floor
Toronto ON M7A 2C1
Tel: 416-325-6594
Email: sunita.chander@ontario.ca

---

**From:** Hunter, Robert A. (ENERGY)
**Sent:** December 8, 2016 4:05 PM
**To:** Kim, John (OFA)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Salman Qadir; Gavin He; Chander, Sunita (ENERGY)
**Subject:** RE: Benefit Implementation

Hi John,

In response to your question we have updated the language in the MOU Section 3. b) to be more clear. Please see the below language that we plan to include in this MOU.

> "The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time."

Does this language provide the level of clarity that you are looking for? If not, please let me know and we can discuss.

Thank you,

-Robert
(416) 325-6899

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 9:25 AM
**To:** Hunter, Robert A. (ENERGY); Chander, Sunita (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Salman Qadir; Gavin He
**Subject:** RE: Benefit Implementation

Hi Sunita, Robert,

We need some clarity on what you mean by this not most likely.

Thanks,

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Thursday, December 08, 2016 9:03 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hi John,

In regards to records that the OFA must maintain related to the OREC, we do not need to have direct database access to your records, but records should be available upon request of the Ministry. Most likely we would ask for documents to be shared electronically via email if necessary, unless directed otherwise.

Regards,

-Robert
(416) 325-6899

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 8:47 AM
**To:** Hunter, Robert A. (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Chander, Sunita (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Robert,

In the version you sent back, you mention the Ministry having full access to such records. What are your expectations of how such access to take place?

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Monday, December 05, 2016 10:21 AM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hello,

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Thank you,

-Robert
(416) 325-6899

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**Sent:** November-27-16 2:15 PM
**To:** Kandeepan, Ken (OFA); Kim, John (OFA)
**Cc:** Hunter, Robert A. (ENERGY); Singh, Inayat (ENERGY); An, Tai (ENERGY/MEDEI/MRI)
**Subject:** RE: Benefit Implementation

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Thanks,

<< File: MOU - MoE OFA- DAP Nov 25.doc >>

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**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

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**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
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Update: Ken to call in.

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**From:** Gavin He
**To:** John Kim
**Subject:** RE: Benefit Implementation
**Date:** Friday, December 09, 2016 6:40:02 PM

---

Hi John,

I am good with Ron's edits.

Regards,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, December 09, 2016 5:14 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi,

How about this?

Ron

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**From:** Gavin He
**Sent:** December-09-16 17:04
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: Benefit Implementation

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**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Benefit Implementation

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Could you review when you return on Tuesday.

Thanks,

John.

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**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
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**Cc:** Gavin He
**Subject:** RE: Benefit Implementation
**Date:** Friday, December 09, 2016 5:14:02 PM
**Attachments:** MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v4.docx

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<Inayat.Singh2@ontario.ca>; Tai An (ENERGY) <Tai.An@ontario.ca>
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and destroy all copies. Thank you.

**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the ~~[~~*Ontario Rebate for Electricity Consumers Act, 2016*~~] – NTD, pending the legislature considering the Bill], including~~ and the regulations thereunder (the "Act"), certain consumers will be entitled to receive ~~a credit, known as the~~ financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers ("" or "OREC"), against", in respect of the cost of electricity consumed by them ~~during the period~~ commencing January 1, 2017;

2. ~~Funds in respect of the~~ Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to ~~most~~specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act~~, its regulations and the Market Rules~~;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the OREC Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f) of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

**1. Payment Authorization**

(i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

(ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

(iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

**2. Payment Process**

~~a) The Ministry is registered with the IESO as an IESO Program Participant.~~

a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

~~c)~~b) The Ministry will take all necessary steps to provide the OFA with access to the ~~Ministry's~~ IESO ~~account and will arrange for~~Portal so that the OFA ~~to~~will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

~~d)~~c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

~~e)~~d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

~~f)~~e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

**3. Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ~~ensure that~~provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of ~~has full access to~~ such of those records as the Ministry may request from time to time.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

~~e)~~

**4. OREC Cost Forecasting**

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies, retailers, and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to ~~complete and accurate~~ data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process~~.~~.

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

~~d)a) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.~~

d) ~~e)~~ The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement ~~of~~on the forecasts.

e) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for the appropriated amount or for a change in the appropriated amount for OREC.

**5. Limited Role of the OFA**

**Formatted:** Indent: Left: 0.25", Numbered + Level: 1 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 0.75" + Indent at: 1"

**Commented [SQ22]:** The only change outlined in the latest version.

**Commented [KR3]:** Does the OFA agree that there should be a provision contemplating agreement on the forecasts? Would it be sufficient to simply reqire tht senior management be briefed?

**Commented [RK4R3]:** How about dealing with it by switching the order and slightly amending the new "e)"?

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

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d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:
email:

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Ministry of Energy
880 Bay Street, 5th Floor
Attention:
email:

**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

**From:** Gavin He
**To:** Ronald Kwan
**Cc:** John Kim; Salman Qadir
**Subject:** RE: Benefit Implementation
**Date:** Friday, December 09, 2016 5:03:33 PM
**Attachments:** MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v3.docx

---

Hi Ron,

Please find attached the draft MOU between OFA and Ministry of Energy regarding the OREC.

The MOU was reviewed by OFA Legal and Energy. Please note that Ken had a comment under 4(e), which was the proposed edits from Energy. We have reviewed the language and we are of the view that there's some strategic interest in keeping that bullet in.

Please let me know if you have any questions.

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, November 27, 2016 3:49 PM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Benefit Implementation

Hi Salman,

Could you review when you return on Tuesday.

Thanks,

John.

---

**From:** Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
**Sent:** Sunday, November 27, 2016 2:15 PM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Tai An (ENERGY) <Tai.An@ontario.ca>
**Subject:** RE: Benefit Implementation

Hi, attached is the ENERGY-OFA MOU, one or two adjustments in the attached.

If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.

Thanks,

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**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Michael,

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Ron << File: MOU - MoE OFA re OREC(v3)_Clean.doc >>

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**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

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Location: 77 Grenville Street, 6th Floor, Boardroom 6B

Upon arriving on the 6th floor, please call Betty at 5-6559 on the lobby phone.

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**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the ~~[~~*Ontario Rebate for Electricity Consumers Act, 2016*~~] – NTD, pending the legislature considering the Bill], including~~ and the regulations thereunder (the "Act"), certain consumers will be entitled to receive ~~a credit, known as the~~ financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers ("~~" or "~~OREC"), against~~", in respect of~~ the cost of electricity consumed by them ~~during the period~~ commencing January 1, 2017;

2. ~~Funds in respect of the~~ Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to ~~most~~specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act~~, its regulations and the Market Rules~~;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the OREC Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f) of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

1. **Payment Authorization**

   (i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

   (ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

   (iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

      i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

      ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

2. **Payment Process**

   ~~a) The Ministry is registered with the IESO as an IESO Program Participant.~~

   a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

   ~~c)~~b) The Ministry will take all necessary steps to provide the OFA with access to the ~~Ministry's~~ IESO ~~account and will arrange for~~Portal so that the OFA ~~to~~will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

   ~~d)~~c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

   ~~e)~~d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

   ~~f)~~e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

3. **Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ~~ensure that~~provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of ~~has full access to~~ such of those records as the Ministry may request from time to time.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

~~e)~~

**4. OREC Cost Forecasting**

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies, retailers, and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to ~~complete and accurate~~ data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process~~.~~.

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.

e) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement ~~of~~on the forecasts.

**Commented [SQ22]:** The only change outlined in the latest version.

**Commented [KR3]:** Does the OFA agree that there should be a provision contemplating agreement on the forecasts? Would it be sufficient to simply reqire tht senior management be briefed?

**5. Limited Role of the OFA**

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.

Attention:
email:

c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy
880 Bay Street, 5th Floor
Attention:
email:

**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

| | |
|---|---|
| **From:** | Hunter, Robert A. (ENERGY) |
| **To:** | John Kim |
| **Cc:** | Ken Kandeepan; Singh, Inayat (ENERGY); Salman Qadir; Gavin He; Sunita Chander (ENERGY) |
| **Subject:** | RE: Benefit Implementation |
| **Date:** | Thursday, December 08, 2016 4:05:08 PM |

Hi John,

In response to your question we have updated the language in the MOU Section 3. b) to be more clear. Please see the below language that we plan to include in this MOU.

> "The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time."

Does this language provide the level of clarity that you are looking for? If not, please let me know and we can discuss.

Thank you,

-Robert
(416) 325-6899

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 9:25 AM
**To:** Hunter, Robert A. (ENERGY); Chander, Sunita (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Salman Qadir; Gavin He
**Subject:** RE: Benefit Implementation

Hi Sunita, Robert,

We need some clarity on what you mean by this not most likely.

Thanks,

John.

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**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Thursday, December 08, 2016 9:03 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
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Hi John,

In regards to records that the OFA must maintain related to the OREC, we do not need to have direct database access to your records, but records should be available upon request of the Ministry. Most likely we would ask for documents to be shared electronically via email if necessary, unless directed otherwise.

Regards,

-Robert
(416) 325-6899

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 8:47 AM
**To:** Hunter, Robert A. (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Chander, Sunita (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Robert,

In the version you sent back, you mention the Ministry having full access to such records. What are your expectations of how such access to take place?

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Monday, December 05, 2016 10:21 AM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hello,

Following up on Sunita's earlier email; have you had a chance to review the attached MOU? If there are any changes please let us know as soon as possible. We are aiming to have this finalized by the end of this week.

Thank you,

-Robert
(416) 325-6899

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**From:** Chander, Sunita (ENERGY)
**Sent:** November-27-16 2:15 PM
**To:** Kandeepan, Ken (OFA); Kim, John (OFA)
**Cc:** Hunter, Robert A. (ENERGY); Singh, Inayat (ENERGY); An, Tai (ENERGY/MEDEI/MRI)
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If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.

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<< File: MOU - MoE OFA- DAP Nov 25.doc >>

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**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
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**Subject:** Benefit Implementation
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Update: Ken to call in.

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Location: 77 Grenville Street, 6th Floor, Boardroom 6B

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**To:** "Hunter, Robert A. (ENERGY)"; Sunita Chander (ENERGY)
**Cc:** Ken Kandeepan; Singh, Inayat (ENERGY); Salman Qadir; Gavin He
**Subject:** RE: Benefit Implementation
**Date:** Thursday, December 08, 2016 9:25:20 AM

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| **To:** | John Kim |
| **Cc:** | Ken Kandeepan; Singh, Inayat (ENERGY); Sunita Chander (ENERGY) |
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---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 8:47 AM
**To:** Hunter, Robert A. (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Chander, Sunita (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Robert,

In the version you sent back, you mention the Ministry having full access to such records. What are your expectations of how such access to take place?

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Monday, December 05, 2016 10:21 AM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hello,

Following up on Sunita's earlier email; have you had a chance to review the attached MOU? If there are any changes please let us know as soon as possible. We are aiming to have this finalized by the end of this week.

Thank you,

-Robert
(416) 325-6899

---

**From:** Chander, Sunita (ENERGY)
**Sent:** November-27-16 2:15 PM
**To:** Kandeepan, Ken (OFA); Kim, John (OFA)
**Cc:** Hunter, Robert A. (ENERGY); Singh, Inayat (ENERGY); An, Tai (ENERGY/MEDEI/MRI)

**Subject:** RE: Benefit Implementation

Hi, attached is the ENERGY-OFA MOU, one or two adjustments in the attached.

If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.

Thanks,

<< File: MOU - MoE OFA- DAP Nov 25.doc >>

---

**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Michael,

Attached is a working draft of the MOU. OFA Legal had based it on the OCEB one, slightly updated for the proposed new rebate. I'm sure Energy will have some updates to suggest on it too.

Ron << File: MOU - MoE OFA re OREC(v3)_Clean.doc >>

-----Original Appointment-----
**From:** Reid, Michael (ENERGY) [mailto:Michael.Reid@ontario.ca]
**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

---

Location: 77 Grenville Street, 6th Floor, Boardroom 6B

Upon arriving on the 6th floor, please call Betty at 5-6559 on the lobby phone.

---

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privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | "Hunter, Robert A. (ENERGY)" |
| **Cc:** | Ken Kandeepan; Singh, Inayat (ENERGY); Sunita Chander (ENERGY) |
| **Subject:** | RE: Benefit Implementation |
| **Date:** | Thursday, December 08, 2016 8:46:32 AM |

Hi Robert,

In the version you sent back, you mention the Ministry having full access to such records. What are your expectations of how such access to take place?

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Monday, December 05, 2016 10:21 AM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

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-Robert
(416) 325-6899

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**Sent:** November-27-16 2:15 PM
**To:** Kandeepan, Ken (OFA); Kim, John (OFA)
**Cc:** Hunter, Robert A. (ENERGY); Singh, Inayat (ENERGY); An, Tai (ENERGY/MEDEI/MRI)
**Subject:** RE: Benefit Implementation

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If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.

Thanks,

<< File: MOU - MoE OFA- DAP Nov 25.doc >>

---

**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)

**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

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**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

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Location: 77 Grenville Street, 6th Floor, Boardroom 6B

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**From:** John Kim
**To:** Ken Kandeepan
**Subject:** RE: Benefit Implementation
**Date:** Monday, December 05, 2016 10:43:11 AM

---

Hi Ken,

I have staff reviewing and we will go to Legal to get a sense of their comfort. We blacklined against the version we sent and there were other changes than the one change tracked.

Will get back to you once Legal provides their comments.

Thanks,

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Monday, December 05, 2016 10:21 AM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

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Thank you,

-Robert
(416) 325-6899

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**Sent:** November-27-16 2:15 PM
**To:** Kandeepan, Ken (OFA); Kim, John (OFA)
**Cc:** Hunter, Robert A. (ENERGY); Singh, Inayat (ENERGY); An, Tai (ENERGY/MEDEI/MRI)
**Subject:** RE: Benefit Implementation

Hi, attached is the ENERGY-OFA MOU, one or two adjustments in the attached.

If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.

Thanks,

<< File: MOU - MoE OFA- DAP Nov 25.doc >>

---

**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

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**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

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Location: 77 Grenville Street, 6th Floor, Boardroom 6B

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|---|---|
| **From:** | Hunter, Robert A. (ENERGY) |
| **To:** | Ken Kandeepan; John Kim |
| **Cc:** | Singh, Inayat (ENERGY); Sunita Chander (ENERGY) |
| **Subject:** | RE: Benefit Implementation |
| **Date:** | Monday, December 05, 2016 10:20:40 AM |
| **Attachments:** | MOU - MoE OFA- DAP Nov 25.doc |

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Thank you,

-Robert
(416) 325-6899

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**Sent:** November-27-16 2:15 PM
**To:** Kandeepan, Ken (OFA); Kim, John (OFA)
**Cc:** Hunter, Robert A. (ENERGY); Singh, Inayat (ENERGY); An, Tai (ENERGY/MEDEI/MRI)
**Subject:** RE: Benefit Implementation

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Thanks,

<< File: MOU - MoE OFA- DAP Nov 25.doc >>

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**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

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**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
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**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
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Update: Ken to call in.

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**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the *Ontario Rebate for Electricity Consumers Act, 2016* and the regulations thereunder (the "Act"), certain consumers will be entitled to receive financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers" or "OREC", in respect of the cost of electricity consumed by them commencing January 1, 2017;

2. Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f)of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

**1. Payment Authorization**

(i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

(ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

(iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

**2. Payment Process**

a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

b) The Ministry will take all necessary steps to provide the OFA with access to the IESO Portal so that the OFA will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

**3. Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ensure that the Ministry has full access to such records.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

e)

**4. OREC Cost Forecasting**

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process .

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.

~~d)~~ e) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement of the forecasts.

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**5. Limited Role of the OFA**

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

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c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

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d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:
email:

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c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy

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880 Bay Street, 5th Floor
Attention:
email:

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**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

**From:** Salman Qadir
**To:** John Kim
**Cc:** Gavin He
**Subject:** RE: Benefit Implementation
**Date:** Friday, December 02, 2016 10:31:53 AM
**Attachments:** RE Benefit implementation.msg

---

Hi John,

Just to add to this, Gavin looked at this and brought up two good points:

- How about any late payments? Any interest/penalty? Who will be responsible for any late charges?
- Payment turnaround time? Within how many days after the invoice is received?

I don't think the first bullet applies here, as we'll be provided appropriate instructions. We could suggest that OFA Accounting attach an appendix to this on the form of instructions they expect to receive, if it helps them.

The second bullet isn't obvious in the MOU and could be better clarified in here. The instructions will provide the date for OFA to process towards, but does Accounting a perquisite number of days? I think Ken K's group has reviewed this the last time, so its likely not a concern.

Salman

---

**From:** Salman Qadir
**Sent:** Tuesday, November 29, 2016 5:47 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi John,

There were a few other changes, most of which are just clarifying the program definitions. One thing they did add that they did not track in their changes provided to us was:

The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ensure that the Ministry has full access to such records.

Only comment here is that we should clarify what they mean by access. In the MOU, when the OFA says we need access to documents etc, we refer to a portal. Is this what they expect from us? Just need to make sure we have expectations lined up.

Saved here.

Salman

---

**From:** Ronald Kwan
**Sent:** Monday, November 28, 2016 10:40 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Benefit Implementation

Hi John,

I understand that Tim Christie's group is doing the modelling on cost estimates.

Has he been looped in on the MOU? Please check with Sunita.

Thanks,
Ron

On Nov 27, 2016, at 3:48 PM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Salman,
>
> Could you review when you return on Tuesday.
>
> Thanks,
>
> John.
>
> ---
>
> **From:** Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
> **Sent:** Sunday, November 27, 2016 2:15 PM
> **To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Cc:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Tai An (ENERGY) <Tai.An@ontario.ca>
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> If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.
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>
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> **Sent:** September 30, 2016 10:21 AM
> **To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
> **Cc:** Latto-Hall, Arla (ENERGY)
> **Subject:** RE: Benefit Implementation
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> **To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
> **Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
> **Subject:** Benefit Implementation

**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

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<MOU - MoE OFA- DAP Nov 25.doc>

**From:** Ken Kandeepan []
**To:** Ronald Kwan [Ronald.Kwan@ofina.on.ca]; John Kim [John.Kim@ofina.on.ca]
**CC:** Sandy Roberts [Sandy.Roberts@ofina.on.ca]; Salman Qadir [Salman.Qadir@ofina.on.ca]; Shajee Kathirgamanathan [Shajee.Kathirgamanathan@ofina.on.ca]
**Subject:** RE: Benefit implementation
**Date:** Friday, September 30, 2016 09:39:37

---

I am ok as well Ron, Ken R and I had discussions as he developed the draft so I am familiar with sections of accounting and payments.

George is taking one last look but any changes that he may come up with will be minor and related to procedure. If George has any suggestions, I can outline them at the meeting itself, BTW I will be calling is since as you may heard PA is really heating up so I want to be at the office.

Thanks

Ken k

**From:** Ronald Kwan
**Sent:** Friday, September 30, 2016 9:34 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
**Cc:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Benefit implementation

Hi John,

Thanks. Ken, have you had a chance to review? I'd like to send a copy to Energy, if

possible.

Ron

**From:** John Kim
**Sent:** September-30-16 09:14
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Benefit implementation

Looks fine to me. Ken Kandeepan asked for a draft so I shared with him just now. I indicated to him it was the latest draft.

**From:** Ronald Kwan
**Sent:** Friday, September 30, 2016 9:11 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Benefit implementation

Hi John,

I'd like to get a draft to FTD for comment too. Any further edits?

Ron

On Sep 29, 2016, at 5:17 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

Thanks John.

How about the attached?

Ron

**From:** John Kim
**Sent:** September-29-16 16:33
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Benefit implementation

Hi Ron,

Pls. see attached. This ties into the data request note that was done a couple of weeks ago. The proposed data request is up for discussion so not meant to be included other than for discussion purposes.

\\ofina.on.ca\ofadfs\Users\CEF\Hydro 2016\Electricity Prices\Mitigation -- Energy\MOU - OFA-MOE

Thanks,

John.

**From:** John Kim

**Sent:** Thursday, September 29, 2016 3:44 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; Kenneth Russell <Kenneth.Russell@ofina.on.ca>; Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>
**Subject:** Re: Benefit implementation

We have a draft...with our minor additions.

On Sep 29, 2016, at 2:53 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi,
>
> We are meeting with Energy tomorrow. Where are we on a draft MOU?
>
> Thanks,
>
> Ron
>
> **From:** John Kim
> **Sent:** September-26-16 16:51
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>
> **Cc:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>; Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>
> **Subject:** RE: Benefit implementation
>
> I believe Shajee's been in touch with Caroline.  We will follow up on the item.
>
> Thanks,

John.

**From:** Ronald Kwan
**Sent:** Monday, September 26, 2016 4:49 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>
**Cc:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>; Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>
**Subject:** Fwd: Benefit implementation

Hi,

I may have missed it, but has a draft of an MOU been worked on and circulated?

Ron

Begin forwarded message:

> **From:** "Reid, Michael (ENERGY)" <Michael.Reid@ontario.ca>
> **Date:** September 26, 2016 at 4:31:57 PM EDT
> **To:** "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Kandeepan, Ken (OFA)" <Ken.Kandeepan@ofina.on.ca>
> **Cc:** "Latto-Hall, Arla (ENERGY)" <Arla.Latto-Hall@ontario.ca>
> **Subject: Benefit implementation**
>
> Ken and Ron,
>
> As per the Ontario Rebate for Electricity Consumers Act that was introduced September 15, the Ministry is moving forward in ensuring that these initiatives are implemented by January 1, 2017. We were hoping to have a discussion with you both, as there was involvement from the OFA in this legislation as well as the delivery of the Ontario Clean Energy Benefit rebate. We hope to leverage existing systems that are in place with OFA, IESO, LDCs and the Ministry to deliver the 8% rebate and discuss if there are other elements in the delivery of this rebate that need to be adjusted or re-evaluated. I think our Deputies have already chatted avout this and I was hoping that once we've had some preliminary discussions, we can discuss any updates to the MOU

as well.

Are you available this week or early next week to have a preliminary chat?

Thanks,

Michael

<MOU - MoE OFA re OREC(v2)_Markup.doc>

| | |
|---|---|
| **From:** | Gavin He |
| **To:** | Sunita Chander (ENERGY); Hunter, Robert A. (ENERGY) |
| **Cc:** | John Kim; Salman Qadir; Ken Kandeepan; Singh, Inayat (ENERGY) |
| **Subject:** | RE: Benefit Implementation |
| **Date:** | Wednesday, December 14, 2016 1:42:04 PM |
| **Attachments:** | MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v6_markup.docx<br>MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v6_clean.docx |

Hi Sunita and Robert,

Please find attached the updated MOU with edits from OFA. I have attached a clean and track-changes versions for your easy reference.

Please let us know if you have any questions.

Thanks,
Gavin He

**From:** Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
**Sent:** Monday, December 12, 2016 11:53 AM
**To:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi all, just wanted to remind everybody about timing as we will need to get these MOUs finalized for a Jan 1 implementation date. Can I ask when we can all agree to an MOU that can be signed by ADMs?

On our end we need to send to our DM and MO as well, so I would like to send that mid-week this week.

-Sunita

Sunita Chander
A/Director, Distribution and Agency Policy Branch
Strategic, Network and Agency Policy Division
Ministry of Energy

77 Grenville St., 6th Floor
Toronto ON M7A 2C1
Tel: 416-325-6594
Email: sunita.chander@ontario.ca

**From:** Hunter, Robert A. (ENERGY)
**Sent:** December 8, 2016 4:05 PM
**To:** Kim, John (OFA)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Salman Qadir; Gavin He; Chander, Sunita (ENERGY)
**Subject:** RE: Benefit Implementation

Hi John,

In response to your question we have updated the language in the MOU Section 3. b) to be more clear. Please see the below language that we plan to include in this MOU.

> "The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time."

Does this language provide the level of clarity that you are looking for? If not, please let me know and we can discuss.

Thank you,

-Robert
(416) 325-6899

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 9:25 AM
**To:** Hunter, Robert A. (ENERGY); Chander, Sunita (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Salman Qadir; Gavin He
**Subject:** RE: Benefit Implementation

Hi Sunita, Robert,

We need some clarity on what you mean by this not most likely.

Thanks,

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Thursday, December 08, 2016 9:03 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hi John,

In regards to records that the OFA must maintain related to the OREC, we do not need to have direct database access to your records, but records should be available upon request of the Ministry. Most likely we would ask for documents to be shared electronically via email if necessary, unless directed otherwise.

Regards,

-Robert
(416) 325-6899

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 8:47 AM
**To:** Hunter, Robert A. (ENERGY)

**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Chander, Sunita (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Robert,

In the version you sent back, you mention the Ministry having full access to such records. What are your expectations of how such access to take place?

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Monday, December 05, 2016 10:21 AM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hello,

Following up on Sunita's earlier email; have you had a chance to review the attached MOU? If there are any changes please let us know as soon as possible. We are aiming to have this finalized by the end of this week.

Thank you,

-Robert
(416) 325-6899

---

**From:** Chander, Sunita (ENERGY)
**Sent:** November-27-16 2:15 PM
**To:** Kandeepan, Ken (OFA); Kim, John (OFA)
**Cc:** Hunter, Robert A. (ENERGY); Singh, Inayat (ENERGY); An, Tai (ENERGY/MEDEI/MRI)
**Subject:** RE: Benefit Implementation

Hi, attached is the ENERGY-OFA MOU, one or two adjustments in the attached.

If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.

Thanks,

<< File: MOU - MoE OFA- DAP Nov 25.doc >>

---

**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Michael,

Attached is a working draft of the MOU. OFA Legal had based it on the OCEB one, slightly updated for the proposed new rebate. I'm sure Energy will have some updates to suggest on it too.

Ron << File: MOU - MoE OFA re OREC(v3)_Clean.doc >>

-----Original Appointment-----
**From:** Reid, Michael (ENERGY) [mailto:Michael.Reid@ontario.ca]
**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

---

Location: 77 Grenville Street, 6th Floor, Boardroom 6B

Upon arriving on the 6th floor, please call Betty at 5-6559 on the lobby phone.

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the *Ontario Rebate for Electricity Consumers Act, 2016* and the regulations thereunder (the "Act"), certain consumers will be entitled to receive financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers" or "OREC", in respect of the cost of electricity consumed by them commencing January 1, 2017;

2. Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f) of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

**1. Payment Authorization**

(i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

(ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

(iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

**2. Payment Process**

a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

b) The Ministry will take all necessary steps to provide the OFA with access to the IESO Portal so that the OFA will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

**3. Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ~~ensure that~~provide the Ministry ~~has full access to~~ with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

~~e)~~

**4. OREC Cost Forecasting**

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the ~~Corporate and Electricity Finance Division of the~~ OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies, retailers, and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process~~.~~.

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement on the forecasts.

~~d)~~e) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for the appropriated amount or for a change in the appropriated amount for OREC.

~~e) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement of the forecasts.~~

**5. Limited Role of the OFA**

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

John Kim
Tel: (416) 212-6996
email: john.kim@ofina.on.ca

c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.

Toronto, ON M7A 1Y7
Attention: John Kim
email: john.kim@ofina.on.ca

c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy
~~880 Bay Street, 5th~~77 Grenville St.
7th Floor
Toronto, ON M7A 2C1
Attention:
email:

Commented [SQ22]: Please confirm.

**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

~~name:~~

~~title~~Name:

Title:

**Ontario Financing Authority**

by:_____

~~name:~~

~~title:~~Name: Ronald Kwan

Title: Assistant Deputy Minister
Corporate and Electricity Finance Division
Ontario Financing Authority

Formatted: Indent: First line: 0.22"

**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the *Ontario Rebate for Electricity Consumers Act, 2016* and the regulations thereunder (the "Act"), certain consumers will be entitled to receive financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers ("" or "OREC"), against", in respect of the cost of electricity consumed by them commencing January 1, 2017;

2. Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the OREC Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f) of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

**1. Payment Authorization**

(i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

(ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

(iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

**2. Payment Process**

a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

b) The Ministry will take all necessary steps to provide the OFA with access to the IESO Portal so that the OFA will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

**3. Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

**4. OREC Cost Forecasting**

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b) The Ministry will provide to the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies, retailers, and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process.

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement on the forecasts.

e) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for the appropriated amount or for a change in the appropriated amount for OREC.

**5. Limited Role of the OFA**

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

John Kim
Tel: (416) 212-6996
email: john.kim@ofina.on.ca

c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Toronto, ON M7A 1Y7
Attention: John Kim
email: john.kim@ofina.on.ca

c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy

77 Grenville St.
7th Floor
Toronto, ON M7A 2C1
Attention:
email:

Commented [SQ22]: Please confirm.

**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

Name:

Title:

**Ontario Financing Authority**

by:_____

Name: Ronald Kwan

Title: Assistant Deputy Minister
Corporate and Electricity Finance Division
Ontario Financing Authority

**From:** John Kim
**To:** Salman Qadir
**Subject:** RE: Benefit Implementation
**Date:** Friday, December 02, 2016 10:31:35 AM

Thanks Salman….I emailed the director Sunita, was mostly trying to do Ron's request without causing too much trouble.

---

**From:** Salman Qadir
**Sent:** Friday, December 02, 2016 10:16 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi John,

Gavin was looking for this – let me know if you want me to reach out to this Tim Christie individual?

Salman

---

**From:** Salman Qadir
**Sent:** Tuesday, November 29, 2016 5:47 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi John,

There were a few other changes, most of which are just clarifying the program definitions. One thing they did add that they did not track in their changes provided to us was:

The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ensure that the Ministry has full access to such records.

Only comment here is that we should clarify what they mean by access. In the MOU, when the OFA says we need access to documents etc, we refer to a portal. Is this what they expect from us? Just need to make sure we have expectations lined up.

Saved here.

Salman

---

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**Sent:** Monday, November 28, 2016 10:40 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Benefit Implementation

Hi John,

I understand that Tim Christie's group is doing the modelling on cost estimates.

Has he been looped in on the MOU? Please check with Sunita.

Thanks,

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On Nov 27, 2016, at 3:48 PM, John Kim <John.Kim@ofina.on.ca> wrote:

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> Could you review when you return on Tuesday.
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> Thanks,
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> John.
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> **Sent:** Sunday, November 27, 2016 2:15 PM
> **To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Cc:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Tai An (ENERGY) <Tai.An@ontario.ca>
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> If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.
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> **Sent:** September 30, 2016 10:21 AM
> **To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
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> **Sent:** September-27-16 09:14
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> **Subject:** Benefit Implementation
> **When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
> **Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#
>
> Update: Ken to call in.

Location:  77 Grenville Street, 6th Floor, Boardroom 6B

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<MOU - MoE OFA- DAP Nov 25.doc>

**From:** Salman Qadir
**To:** John Kim
**Subject:** RE: Benefit Implementation
**Date:** Friday, December 02, 2016 10:15:53 AM

Hi John,

Gavin was looking for this – let me know if you want me to reach out to this Tim Christie individual?

Salman

---

**From:** Salman Qadir
**Sent:** Tuesday, November 29, 2016 5:47 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Benefit Implementation

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<MOU - MoE OFA- DAP Nov 25.doc>

**From:** Salman Qadir
**To:** John Kim
**Subject:** RE: Benefit Implementation
**Date:** Tuesday, November 29, 2016 5:46:51 PM
**Attachments:** MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean.docx

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<MOU - MoE OFA- DAP Nov 25.doc>

**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the ~~[~~*Ontario Rebate for Electricity Consumers Act, 2016*~~] – NTD, pending the legislature considering the Bill], including~~ and the regulations thereunder (the "Act"), certain consumers will be entitled to receive ~~a credit, known as the~~ financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers ~~("~~" or "OREC~~"), against~~", in respect of the cost of electricity consumed by them ~~during the period~~ commencing January 1, 2017;

2. ~~Funds in respect of the~~ Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to ~~most~~specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act~~, its regulations and the Market Rules~~;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the ~~OREC~~Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f)of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

1. **Payment Authorization**

   (i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

   (ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

   (iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

      i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

      ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

2. **Payment Process**

   ~~a) The Ministry is registered with the IESO as an IESO Program Participant.~~

   a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

   ~~c)~~b) The Ministry will take all necessary steps to provide the OFA with access to the ~~Ministry's~~ IESO ~~account and will arrange for~~Portal so that the OFA ~~to~~will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

   ~~d)~~c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

   ~~e)~~d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

   ~~f)~~e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

3. **Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ensure that the Ministry has full access to such records.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

e)

**Commented [SQ22]:** What would this access look like? Are they expecting us to set up up an external site with all of our files/modeling as well?

Just need to clarify expectations.

## 4. OREC Cost Forecasting

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to ~~complete and accurate~~ data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process .

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.

e) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement of the forecasts.

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**Commented [SQ23]:** The only change outlined in the latest version.

## 5. Limited Role of the OFA

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

## 6. Review and Termination

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

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c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

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d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:
email:

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c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy
880 Bay Street, 5th Floor
Attention:
email:

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**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

**From:** John Kim
**To:** Sunita Chander (ENERGY)
**Subject:** RE: Benefit Implementation
**Date:** Tuesday, November 29, 2016 12:51:11 PM

---

Hi Sunita,

Has Tim Christie's area looped in on the MOU?

Thanks,

John.

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**From:** Gavin He
**To:** John Kim
**Subject:** RE: Benefit Implementation
**Date:** Tuesday, November 29, 2016 10:18:41 AM

Hi John,

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Regards,
Gavin He

---

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Location: 77 Grenville Street, 6th Floor, Boardroom 6B

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**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the *Ontario Rebate for Electricity Consumers Act, 2016* and the regulations thereunder (the "Act"), certain consumers will be entitled to receive financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers" or "OREC", in respect of the cost of electricity consumed by them commencing January 1, 2017;

2. Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f)of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

**1. Payment Authorization**

(i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

(ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

(iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

**2. Payment Process**

a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

b) The Ministry will take all necessary steps to provide the OFA with access to the IESO Portal so that the OFA will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

**3. Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ensure that the Ministry has full access to such records.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

e)

**4. OREC Cost Forecasting**

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process .

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.

~~d)~~ e) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement of the forecasts.

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**5. Limited Role of the OFA**

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

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c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

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d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:
email:

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c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy

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880 Bay Street, 5th Floor
Attention:
email:

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**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

**From:** Gavin He
**To:** Ronald Kwan; Salman Qadir
**Cc:** John Kim
**Subject:** RE: Benefit Implementation
**Date:** Wednesday, December 14, 2016 1:34:02 PM

---

Thank you all! I will send this back to Energy now.

Regards,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Wednesday, December 14, 2016 1:30 PM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Thanks Salman. Looks good. Let's get it back to Energy.

Ron

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**Sent:** December-14-16 13:11
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
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How about this?

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**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Tai An (ENERGY) <Tai.An@ontario.ca>
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**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

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**Subject:** RE: Benefit Implementation
**Date:** Wednesday, December 14, 2016 1:30:19 PM

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| **Subject:** | RE: Benefit Implementation |
| **Date:** | Wednesday, December 14, 2016 1:10:49 PM |
| **Attachments:** | MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v6_markup.docx<br>MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v6_clean.docx |

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**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

---

Location: 77 Grenville Street, 6th Floor, Boardroom 6B

Upon arriving on the 6th floor, please call Betty at 5-6559 on the lobby phone.

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the *Ontario Rebate for Electricity Consumers Act, 2016* and the regulations thereunder (the "Act"), certain consumers will be entitled to receive financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers" or "OREC", in respect of the cost of electricity consumed by them commencing January 1, 2017;

2. Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f) of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

**1. Payment Authorization**

(i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

(ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

(iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

**2. Payment Process**

a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

b) The Ministry will take all necessary steps to provide the OFA with access to the IESO Portal so that the OFA will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

**3. Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ~~ensure that~~provide the Ministry ~~has full access to~~ with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

~~e)~~

**4. OREC Cost Forecasting**

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the ~~Corporate and Electricity Finance Division of the~~ OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies, retailers, and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process~~.~~.

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement on the forecasts.

~~d)~~e) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for the appropriated amount or for a change in the appropriated amount for OREC.

~~e) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement of the forecasts.~~

**5. Limited Role of the OFA**

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

John Kim
Tel: (416) 212-6996
email: john.kim@ofina.on.ca

c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.

Toronto, ON M7A 1Y7
Attention: John Kim
email: john.kim@ofina.on.ca

c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy
~~880 Bay Street, 5th~~77 Grenville St.
7th Floor
Toronto, ON M7A 2C1
Attention:
email:

Commented [SQ22]: Please confirm.

**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

~~name:~~

~~title~~Name:

Title:

**Ontario Financing Authority**

by:_____

~~name:~~

~~title:~~Name: Ronald Kwan

Title: Assistant Deputy Minister
Corporate and Electricity Finance Division
Ontario Financing Authority

Formatted: Indent: First line: 0.22"

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2. Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act;

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Attention: John Kim
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Hand Delivery:
Ministry of Energy

77 Grenville St.
7th Floor
Toronto, ON M7A 2C1
Attention:
email:

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**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

Name:

Title:

**Ontario Financing Authority**

by:_____

Name: Ronald Kwan

Title: Assistant Deputy Minister
Corporate and Electricity Finance Division
Ontario Financing Authority

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Salman Qadir |
| **Cc:** | Gavin He; John Kim |
| **Subject:** | RE: Benefit Implementation |
| **Date:** | Wednesday, December 14, 2016 12:38:26 PM |

And please do a simple track-changes version to what Energy saw last, without all the edits on edits and multiple contributors.

Thanks,
Ron

---

**From:** Salman Qadir
**Sent:** December-14-16 10:33
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi all,

I've added the contact details as per Ron below. I have attached the clean version and a markup (but no comments) version for sending back to Energy. Markup with comments version is saved in the folder for reference.

Saved here

Salman

---

**From:** Ronald Kwan
**Sent:** Wednesday, December 14, 2016 9:52 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi,

We should put John as the OFA contact, and me as the person signing.

Thanks,
Ron

---

**From:** Gavin He
**Sent:** December-12-16 17:01
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi Ron,

Ken Kandeepan just made an edit on 4 (b) on page 3:

He just changed "The Ministry will provide to *the Corporate and Electricity Finance Division of* the OFA all IESO invoices and settlement statements…" to "The Ministry will provide to the OFA all IESO invoices and settlement statements…", for consistency purpose.

Please let us know if you are okay with the edits. If so, I will provide this back to Energy.

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, December 09, 2016 5:14 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi,

How about this?

Ron

---

**From:** Gavin He
**Sent:** December-09-16 17:04
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi Ron,

Please find attached the draft MOU between OFA and Ministry of Energy regarding the OREC.

The MOU was reviewed by OFA Legal and Energy. Please note that Ken had a comment under 4(e), which was the proposed edits from Energy. We have reviewed the language and we are of the view that there's some strategic interest in keeping that bullet in.

Please let me know if you have any questions.

Thanks,
Gavin He

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**From:** John Kim
**Sent:** Sunday, November 27, 2016 3:49 PM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Benefit Implementation

Hi Salman,

Could you review when you return on Tuesday.

Thanks,

John.

---

**From:** Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
**Sent:** Sunday, November 27, 2016 2:15 PM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Tai An (ENERGY) <Tai.An@ontario.ca>
**Subject:** RE: Benefit Implementation

Hi, attached is the ENERGY-OFA MOU, one or two adjustments in the attached.

If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.

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**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
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Hi Michael,

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Ron << File: MOU - MoE OFA re OREC(v3)_Clean.doc >>

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**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
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Location:  77 Grenville Street, 6th Floor, Boardroom 6B

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**From:** Ronald Kwan
**To:** Salman Qadir; Gavin He
**Cc:** John Kim
**Subject:** RE: Benefit Implementation
**Date:** Wednesday, December 14, 2016 12:36:45 PM

---

Hi,

We should put in the contact info in 8 too. And fix the address at Energy, from 880 Bay to 77 Grenville.

Ron

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| **Cc:** | John Kim |
| **Subject:** | RE: Benefit Implementation |
| **Date:** | Wednesday, December 14, 2016 10:32:51 AM |
| **Attachments:** | MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v5_markup-nocomments.docx<br>MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v5_clean.docx |

Hi all,

I've added the contact details as per Ron below. I have attached the clean version and a markup (but no comments) version for sending back to Energy. Markup with comments version is saved in the folder for reference.

Saved here

Salman

---

**From:** Ronald Kwan
**Sent:** Wednesday, December 14, 2016 9:52 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi,

We should put John as the OFA contact, and me as the person signing.

Thanks,
Ron

---

**From:** Gavin He
**Sent:** December-12-16 17:01
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi Ron,

Ken Kandeepan just made an edit on 4 (b) on page 3:

He just changed "The Ministry will provide to *the Corporate and Electricity Finance Division of* the OFA all IESO invoices and settlement statements…" to "The Ministry will provide to the OFA all IESO invoices and settlement statements…", for consistency purpose.

Please let us know if you are okay with the edits. If so, I will provide this back to Energy.

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, December 09, 2016 5:14 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi,

How about this?

Ron

---

**From:** Gavin He
**Sent:** December-09-16 17:04
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi Ron,

Please find attached the draft MOU between OFA and Ministry of Energy regarding the OREC.

The MOU was reviewed by OFA Legal and Energy. Please note that Ken had a comment under 4(e), which was the proposed edits from Energy. We have reviewed the language and we are of the view that there's some strategic interest in keeping that bullet in.

Please let me know if you have any questions.

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, November 27, 2016 3:49 PM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Benefit Implementation

Hi Salman,

Could you review when you return on Tuesday.

Thanks,

John.

---

**From:** Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
**Sent:** Sunday, November 27, 2016 2:15 PM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; Singh, Inayat (ENERGY)

<Inayat.Singh2@ontario.ca>; Tai An (ENERGY) <Tai.An@ontario.ca>
**Subject:** RE: Benefit Implementation

Hi, attached is the ENERGY-OFA MOU, one or two adjustments in the attached.

If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.

Thanks,

---

**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Michael,

Attached is a working draft of the MOU. OFA Legal had based it on the OCEB one, slightly updated for the proposed new rebate. I'm sure Energy will have some updates to suggest on it too.

Ron << File: MOU - MoE OFA re OREC(v3)_Clean.doc >>

-----Original Appointment-----
**From:** Reid, Michael (ENERGY) [mailto:Michael.Reid@ontario.ca]
**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

---

Location: 77 Grenville Street, 6th Floor, Boardroom 6B

Upon arriving on the 6th floor, please call Betty at 5-6559 on the lobby phone.

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This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them,

and destroy all copies. Thank you.

**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the ~~[~~*Ontario Rebate for Electricity Consumers Act, 2016*~~] – NTD, pending the legislature considering the Bill], including~~ and the regulations thereunder (the "Act"), certain consumers will be entitled to receive ~~a credit, known as the~~ financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers ("~~" or "~~OREC"), against~~", in respect of~~ the cost of electricity consumed by them ~~during the period~~ commencing January 1, 2017;

2. ~~Funds in respect of the~~ Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to ~~most~~specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act~~, its regulations and the Market Rules~~;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the OREC Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f) of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

1. **Payment Authorization**

   (i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

   (ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

   (iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

      i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

      ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

2. **Payment Process**

   ~~a) The Ministry is registered with the IESO as an IESO Program Participant.~~

   a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

   ~~c)~~b) The Ministry will take all necessary steps to provide the OFA with access to the ~~Ministry's~~ IESO ~~account and will arrange for~~Portal so that the OFA ~~to~~will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

   ~~d)~~c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

   ~~e)~~d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

   ~~f)~~e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

3. **Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ~~ensure that~~provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of ~~has full access to~~ such of those records as the Ministry may request from time to time.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

~~e)~~

**4. OREC Cost Forecasting**

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the ~~Corporate and Electricity Finance Division of~~ the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies, retailers, and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to ~~complete and accurate~~ data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process~~.~~.

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

~~d)a) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.~~

d) ~~e)~~ The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement ~~of~~on the forecasts.

e) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for the appropriated amount or for a change in the appropriated amount for OREC.

**5. Limited Role of the OFA**

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention: John Kim
email: john.kim@ofina.on.ca

c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy
880 Bay Street, 5th Floor
Attention:
email:

**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

Name:

Title:

**Ontario Financing Authority**

by:_____

Name: Ronald Kwan

Title: Assistant Deputy Minister
Corporate and Electricity Finance Division
Ontario Financing Authority

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**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the *Ontario Rebate for Electricity Consumers Act, 2016* and the regulations thereunder (the "Act"), certain consumers will be entitled to receive financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers ("" or "OREC"), against", in respect of the cost of electricity consumed by them commencing January 1, 2017;

2. Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the OREC Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f) of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

**1. Payment Authorization**

(i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

(ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

(iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

**2. Payment Process**

a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

b) The Ministry will take all necessary steps to provide the OFA with access to the IESO Portal so that the OFA will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

**3. Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

**4. OREC Cost Forecasting**

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies, retailers, and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process.

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement on the forecasts.

e) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for the appropriated amount or for a change in the appropriated amount for OREC.

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The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

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**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

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a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention: John Kim
email: john.kim@ofina.on.ca

c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy
880 Bay Street, 5th Floor

Attention:
email:

**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

Name:

Title:

**Ontario Financing Authority**

by:_____

Name: Ronald Kwan

Title: Assistant Deputy Minister
Corporate and Electricity Finance Division
Ontario Financing Authority

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| | |
|---|---|
| **From:** | Hunter, Robert A. (ENERGY) |
| **To:** | Gavin He |
| **Cc:** | John Kim; Salman Qadir; Ken Kandeepan; Singh, Inayat (ENERGY); Sunita Chander (ENERGY); Shajee Kathirgamanathan |
| **Subject:** | RE: Benefit Implementation |
| **Date:** | Thursday, December 15, 2016 10:43:14 AM |

Thank you Gavin, I will update the contacts accordingly.

-Robert
(416) 325-6899

---

**From:** Gavin He [mailto:Gavin.He@ofina.on.ca]
**Sent:** December-15-16 10:42 AM
**To:** Hunter, Robert A. (ENERGY)
**Cc:** Kim, John (OFA); Salman Qadir; Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Chander, Sunita (ENERGY); Kathirgamanathan,Shajee (OFA)
**Subject:** RE: Benefit Implementation

Hi Robert,

Thank you for checking in with us. Could you please update the list with below 3 contacts?

John Kim - John.Kim@ofina.on.ca
Shajee Kathirgamanathan - Shajee.Kathirgamanathan@ofina.on.ca
Gavin He – Gavin.He@ofina.on.ca

Thanks,
Gavin He

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Thursday, December 15, 2016 10:26 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hi all,

FYI – The Ministry is currently creating a new reporting portal for the Rebate program. The following staff from the OFA had access to the Ministry's previous clean energy benefit portal:

Adrian Nalasco - adrian.nalasco@ofina.on.ca
Darren Scanlan - Darren.Scanlan@ofina.on.ca
Ronald Kwan - Ronald.Kwan@ofina.on.ca

Can you confirm whether the OFA would like to carry forward with the same contacts? If not, could you please update this list to provide the 3 contacts you would like to have access?

We are looking for this information by the end of the week and will just use the current 3 contacts if no changes are received.

Thank you,

-Robert
(416) 325-6899

---

**From:** Gavin He [mailto:Gavin.He@ofina.on.ca]
**Sent:** December-14-16 1:42 PM
**To:** Chander, Sunita (ENERGY); Hunter, Robert A. (ENERGY)
**Cc:** Kim, John (OFA); Salman Qadir; Kandeepan, Ken (OFA); Singh, Inayat (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Sunita and Robert,

Please find attached the updated MOU with edits from OFA. I have attached a clean and track-changes versions for your easy reference.

Please let us know if you have any questions.

Thanks,
Gavin He

---

**From:** Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
**Sent:** Monday, December 12, 2016 11:53 AM
**To:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Benefit Implementation

Hi all, just wanted to remind everybody about timing as we will need to get these MOUs finalized for a Jan 1 implementation date. Can I ask when we can all agree to an MOU that can be signed by ADMs?

On our end we need to send to our DM and MO as well, so I would like to send that mid-week this week.

-Sunita

Sunita Chander
A/Director, Distribution and Agency Policy Branch
Strategic, Network and Agency Policy Division
Ministry of Energy

77 Grenville St., 6th Floor
Toronto ON M7A 2C1
Tel: 416-325-6594
Email: sunita.chander@ontario.ca

---

**From:** Hunter, Robert A. (ENERGY)

**Sent:** December 8, 2016 4:05 PM
**To:** Kim, John (OFA)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Salman Qadir; Gavin He; Chander, Sunita (ENERGY)
**Subject:** RE: Benefit Implementation

Hi John,

In response to your question we have updated the language in the MOU Section 3. b) to be more clear. Please see the below language that we plan to include in this MOU.

> "The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time."

Does this language provide the level of clarity that you are looking for? If not, please let me know and we can discuss.

Thank you,

-Robert
(416) 325-6899

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 9:25 AM
**To:** Hunter, Robert A. (ENERGY); Chander, Sunita (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Salman Qadir; Gavin He
**Subject:** RE: Benefit Implementation

Hi Sunita, Robert,

We need some clarity on what you mean by this not most likely.

Thanks,

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Thursday, December 08, 2016 9:03 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hi John,

In regards to records that the OFA must maintain related to the OREC, we do not need to have direct database access to your records, but records should be available upon request of the Ministry. Most likely we would ask for documents to be shared electronically via email if necessary, unless directed otherwise.

Regards,

-Robert
(416) 325-6899

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 8:47 AM
**To:** Hunter, Robert A. (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Chander, Sunita (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Robert,

In the version you sent back, you mention the Ministry having full access to such records. What are your expectations of how such access to take place?

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Monday, December 05, 2016 10:21 AM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hello,

Following up on Sunita's earlier email; have you had a chance to review the attached MOU? If there are any changes please let us know as soon as possible. We are aiming to have this finalized by the end of this week.

Thank you,

-Robert
(416) 325-6899

---

**From:** Chander, Sunita (ENERGY)
**Sent:** November-27-16 2:15 PM
**To:** Kandeepan, Ken (OFA); Kim, John (OFA)
**Cc:** Hunter, Robert A. (ENERGY); Singh, Inayat (ENERGY); An, Tai (ENERGY/MEDEI/MRI)
**Subject:** RE: Benefit Implementation

Hi, attached is the ENERGY-OFA MOU, one or two adjustments in the attached.

If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.

Thanks,

<< File: MOU - MoE OFA- DAP Nov 25.doc >>

---

**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Michael,

Attached is a working draft of the MOU. OFA Legal had based it on the OCEB one, slightly updated for the proposed new rebate. I'm sure Energy will have some updates to suggest on it too.

Ron << File: MOU - MoE OFA re OREC(v3)_Clean.doc >>

-----Original Appointment-----
**From:** Reid, Michael (ENERGY) [mailto:Michael.Reid@ontario.ca]
**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

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Location: 77 Grenville Street, 6th Floor, Boardroom 6B

Upon arriving on the 6th floor, please call Betty at 5-6559 on the lobby phone.

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

**From:** Shajee Kathirgamanathan
**To:** John Kim
**Subject:** RE: Cabinet Briefing Note
**Date:** Thursday, September 08, 2016 6:27:09 PM

---

One minor change with the ordering. Same v8 file:
S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note\Cabinet Note - Electricity Price Mitigation v8.docx

Thanks

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, September 08, 2016 6:01 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Cabinet Briefing Note

Hi John,

Here's the revised Cabinet Briefing note.

File attached also found here:
S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note\Cabinet Note - Electricity Price Mitigation v8.docx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Senior Advisor
Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Ronald Kwan |
| **Cc:** | Tomasz Bugajski; Shajee Kathirgamanathan |
| **Subject:** | RE: Cabinet note |
| **Date:** | Friday, September 09, 2016 9:41:57 AM |
| **Attachments:** | Cabinet Note - Electricity Price Mitigation v9.docx |

Thanks Ron. Pls. see attached addressing your comments.

We have put in a bullet in the Consideration section about the 64-68 TWh in OCEB range and that it could represent 10-17% higher program cost. Hope that was okay with you.

John.

---

**From:** Ronald Kwan
**Sent:** Friday, September 09, 2016 8:36 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Cabinet note

Hi John,

A few quick comments on the note and Minute.

Ron

---

**From:** John Kim
**Sent:** September-08-16 9:09 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Cabinet note

Hi Ron,

Pls. see attached updated note. It's not clear if this item will stay on the agenda tomorrow afternoon for the TBS DM briefing but we would like to get it done and send to TBS for the record.

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** Wednesday, September 07, 2016 2:51 PM
**To:** John Kim <John.Kim@ofina.on.ca>

**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Cabinet note

Hi John,

I did not have time for a full review. I made a few quick suggestions. Is this briefing still happening?

Ron

---

**From:** John Kim
**Sent:** September 7, 2016 7:00 AM
**To:** Ronald Kwan
**Cc:** Tomasz Bugajski; Shajee Kathirgamanathan
**Subject:** Cabinet note

Hi Ron,

Pls. see attached draft note we intend to use for Associate briefing today at 4pm.

Thanks,

John.

Y. John Kim
Director(A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

**Tab x**

**CABINET BRIEFING NOTE**

| | |
|---|---|
| **Committee:** | Cabinet |
| **Meeting Date:** | September ~~14~~13, 2016 |
| **Ministry:** | ENERGY |
| **Last reviewed by:** | **Tracking to:** Cabinet – September ~~14~~13, 2016 |

**[BASED ON DRAFT CABINET SUBMISSION]**

| | |
|---|---|
| **SUBMISSION TITLE:** | Electricity Price Mitigation (Ontario Rebate for Electricity Consumers) |

## I. REQUEST/DECISION REQUIRED:

The Ministry of Energy is proposing measures to provide relief to various electricity consumer classes. These measure include:

1.a. Provide an ~~pre-tax~~ 8% rebate, equal to the provincial portion of HST, to consumers eligible for the ~~to~~ Regulated Price Plan (RPP) ~~consumers~~;

1.b. Updating Rural or Remote Rate Protection (RRRP) by adding additional $110 million in rate-based funding to R2 low density electricity consumers from the current level of $127 million [$125.5 million in the latest Energy deck];

2.a. Expanding the Industrial Conservation Initiative (ICI) eligibility to customers above 1MW in all sectors;

~~2.b.~~ Recycle cap and trade proceeds ($60 million) to commercial and industrial electricity consumers to provide a modest 1% reduction in rates, with modest savings from proceeds intended for electricity relief through the Climate Change Action Plan to provide fiscal offsets ($60 million).

~~2.c.~~

~~2.d.~~2.b. ~~[Approve in principle an expenditure increase estimated at $261M [estimate subject to refinement from ENERGY] in 2016-17 for the Electricity Price Mitigation, offset from the Treasury Board Contingency Fund.]~~

**Commented [RK1]:** Let's put in the amount of increase -- $110M, to the existing $127M

**Commented [JK2]:** From the latest minute.

**Commented [RK3]:** Let's put in the estimated amount.

**Commented [SK24]:** Re-ordered/numbered to align with revised deck.

**Commented [SK25]:** Unclear if this is necessary for the cabinet note as the TB/MBC note may be worried more on fiscal implications.

**Commented [RK6]:** Remove from here, but should be part of fiscal impact part of the note.

**Commented [SK27R6]:** Will do. It's in the financial summary section.

## II. KEY POINTS:

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online.

As part of the 2016 Budget, the government committed to mitigating electricity cost impacts that were anticipated from the cap and trade program. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable for residential and industrial consumers. This included a commitment to provide a modest benefit of up to $2 per month, on average, to residential consumers.

**Tab x**

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the CCAP commitment and additional price mitigation, the Ministry of Energy has developed price mitigation options that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

| | Measure | Targeted Recipients | Impact (annually) | |
|---|---|---|---|---|
| | | | Fiscal | Rate Base |
| **1.a** | 8% Rebate to Regulated Price Plan eligible consumers | Residential, small business, small farms and other small users | $1B | - |
| **1.b** | Updating Rural or Remote Rate Protection | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. | - | $110M |
| **2.a** | Expanding ICI eligibility to customers above 1MW in all sectors | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors | - | $47M/ $82M* |
| **2.b** | Redirecting cap and trade proceeds recycling:<br>• As part of the original CCAP policy, $330M of the cap & trade proceeds was to be recycled for electricity price mitigation for residential and non-residential users.<br>• Under this proposal, a lower total amount of $270 M would be used to mitigate non-residential users.<br>• Therefore, provides $60M for potential fiscal offsets to the 8% rebate. | Commercial and industrial electricity customers | ($60M)** | - |

*Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.
**To meet the Budget 2016 commitment, the Climate Change Action Plan (CCAP) committed $1.3B from the Greenhouse Gas Reduction Account (GGRA) or about $330M annually. Current proposal will require $60M less or $270M annually. Assumes the $60M is diverted to in-plan initiatives.

- ENERGY provided the following overview of bill impacts:

| Regulated Price Plan (Residential) Impact[1]* | Class B (Commercial)[4] | Class A (Industrial)[4] |
|---|---|---|

**Commented [SK28]:** Table below from the latest ENERGY Deck (FPC Major Project Morning of Sept 8).

**Tab x**

| Average[2] (750 kWh/month) | Rural[3**] (1000 kWh/month) | | Existing | New |
|---|---|---|---|---|
| -$1011/month (-68%) | -$45/month (-20%) | -$1/MWh (-1%) | -$1/MWh (-1%) | Up to -$52/MWh (-34%) |

Note: The impact of cap and trade would not be added to electricity bills until 2017 and impact of ICI would not be added until 2018. All impacts included here for illustrative purposes

1*. ENERGY did not provide the monthly impact for other Regulated Price Plan not classified as Residential (eg. farms, small businesses) that would benefit from the 8% Rebate to Regulated Price Plan.

2. Regulated Price Plan Impact represents the pre-tax values of 8% rebate and does not include the impact of ICI expansion and RRRP update (total impact of $1.31/month based on 750 kWh/month).

3.** Rural customers refers to those Hydro One customers eligible to receive RRRP (R2 rate class customers). Impact shown is pre-tax and does not include the impact of ICI expansion and RRRP update (total impact of $1.74/month based on 1000 kWh/month).

4. The impact of cap and trade would not be added to electricity bills until 2017 and impact of ICI would not be added until 2018.

**1.a. 8% Rebate to Regulated Price Plan (RPP)**

- An 8% rebate ~~on the pre-tax portion~~ for Regulated Price Plan (RPP) eligible consumers would be equal to the provincial portion of HST and funded by the tax base.
- The $1 billion figure is a 2017 to 2020 calendar year average of cost estimates developed by Ministry of Energy staff, as follows:

| *$ millions* | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|
| | 1,003 | 1,014 | 975 | 1,049 |
| Avg. 2017-20 | 1,010 | | | |

- On a fiscal year basis, the above estimates become:

| *$ millions* | **2016-17** | **2017-18** | **2018-19** | **2019-20** |
|---|---|---|---|---|
| | 261 | 1,006 | 1,004 | 994 |
| 3-Year Avg. | 1,001 | | | |

- Ministry of Energy staff are in the process of developing a refined estimate of the cost.

- The rebate would appear directly on bills. As such, Local Distribution Companies (LDC) would be the delivery mechanism for the rebate.
  - While non-Regulated Price Plan eligible consumers would not see a benefit from the 8% rebate under this option, all industrial and commercial consumers would receive proceeds recycling through the Greenhouse Gas Reduction Account (GGRA).
  - Commercial and industrial consumers would also continue to receive input tax credits and Public Service Bodies would continue to receive PSB rebates.
- New legislation would be required and closely mirror the Ontario Clean Energy Benefit (OCEB) Act, 2010. More details further below.
- On-bill rebate delivery would likely require adjustments to Local Distribution Company (LDC) billing systems, which could impact delivery costs and timelines.
- In the past, LDCs have asked for at least six months' notice when implementing billing system changes.

  - One option to address any timing concerns is to allow LDCs to provide retroactive payments if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- The rebate would not be directly linked to HST.

**1.b. Updating (Increasing) Rural or Remote Rate Protection**

- RRRP funding supporting Hydro One R2 (rural) customers capped at current levels since 2004.
- The current program provides a monthly subsidy of ~~a about~~ $~~32~~31.50/month.
- Proposal will provide an additional $110 million in support to approximately 329,000 R2 customers to $235 million annually.
- Proposal will increase the subsidy by about $28/month and equalize R2 bills with Hydro One R1 (medium) density customers at 1,000 kWh.
- All residential consumers would see an average cost increase of about $0.60/month.
- ENERGY is considering options to periodically adjust the amount of rate protection eg. indexed at inflation or "trued up" on a regular basis.

**Commented [RK9]:** On what basis?

**2.a. Expanding ICI Eligibility to customers above 1MW in all sectors**

- Lower threshold for participation in ICI to 1 MW and remove sectoral restrictions.
- Most newly eligible ICI participants who choose to opt-in to the program would be able to reduce their electricity costs substantially. All other consumers would see a relatively small increase in their bills.
- Expanding the ICI will reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods (80MW in the short term and 165 MW in the long term)
- Bill savings to new participants up to 21% in the short term and up to 34% long-term.
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - Companies that would become eligible under such an expansion include Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.
- Class B consumers would have a collective increase in the Global Adjustment of $47M in the short term and $~~87M~~ 82M in the long term from this initiative.
- Residential consumers would see an average cost increase of $0.42/month in the short term and $0.74/month in the long term.

**2.b. Redirect Cap and Trade Proceeds Recycling**

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers.
- Ontario's Climate Change Action Plan (CCAP) includes up to $1.32 billion over 4 years to help keep electricity rates affordable for residential and industrial consumers.
- ~~The GGRA allocated $120M to average residential consumers, $170M to commercial and $40M to industrial consumers.~~

**Commented [SK210]:** Suggest deletion. This breakdown is not in the latest deck. Furthermore the chart on Slide 21 shows $335M original allocation, not $330M.

**Tab x**

- The 8% rebate to the Regulated Price Plan consumers more than fulfills the commitment to reduce residential rates by $2/month.
    - Proposal would lead to savings of the $120M in GGRA proceeds previously allocated to residential consumers, and help offset the fiscal impact of the 8% rebate to the Regulated Price Plan consumers.
- To provide additional price mitigation to commercial and industrial electricity consumers, ENERGY is proposing to direct an additional $60M annually of cap and trade auction proceeds (to $270~~M~~ million from a previous amount of $210~~M~~ million annually) to industrial and commercial consumers not in the RPP to mitigate impacts.
- The current proposal would require an estimated $60 million less per year, or $0.24 billion less over the first compliance period.

## III. KEY CONSIDERATIONS

- This request ~~on~~for an 8% rebate does not align with the 2016 Budget fiscal plan and there are very limited~~no~~ ($60~~M~~ million) proposed offsets.

- Due to the nature of the ICI Global Adjustment mechanism and cost recovery of the RRRP, the rate base proposals (~~##~~21b and ~~#3~~#2a), while benefiting the targeted recipients, would **come at a cost to all other electricity rate payers in Ontario**.

- ~~This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets.~~

- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
    - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC) were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
    - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
    - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

- 

**8% Rebate to Regulated Price Plan**

- The 8% ~~pre-tax~~ rebate would provide a typical residential consumer about an $11 per month benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average, cap and trade commitment.

- This 8% ~~pre-tax~~ rebate equal to the provincial portion of HST is similar to the previous Ontario Clean Energy Benefit (See Appendix for background) which provided a 10% post-tax rebate.
- The proposal indicates the Regulated Price Plan consumption amount to be 58TWh [Slide 2 in latest, FPC-Major Projects Deck]. Unclear if this applies to all eligible RPP consumers. A p~~P~~reliminary MOF estimate for consumption ~~for~~under the OCEB program approximated annual OCEB-eligible consumption range of 64-68TWh ~~of annual electricity consumption~~ between September 2011 and December 2015. [This would represent about 10-17% more in additional program cost to the current estimate of $1 billion per year.]
- The OCEB legislation was set out with an end date, and was subsequently modified to be capped at 3,000 kWh per month for all electricity customers after 8 months of the program.
    - This proposal does not specify any consumption caps nor an end date.
- Due to the lack of a cap, compared to OCEB, this proposal is more generous to the high volume RPP users.

  - OCEB rebate was applicable for up to 36,000 kWh annually (12 months times 3,000 kWh cap per month) while this proposal would be **more generous for those consuming more than 50,850 kWh** annually.
  - Furthermore, highest volume users in this proposal would receive **up to 392% more** than under the OCEB program.
- Unclear why any proposals for a cap would be any more complex or onerous to LDCs than prior OCEB cap (instituted beginning September 2012 to termination of OCEB program in December 2015). However, cap may affect some types of consumers more than others, such as small businesses, condo dwellers in separately-metered units paying for electricity usage in the common elements, and residential consumers heating with electricity.

- ~~Blanket r~~Reduction in electricity prices for all users irrespective of consumption amounts hamper efforts to conserve electricity, and mutes TOU price signals.
- [Businesses ~~that fall under the Regulated Price Plan~~ pay little to no HST due to the Input Tax Credit. For those businesses eligible for the Regulated Price plan, ~~T~~the 8% reduction can be deemed a windfall ~~for these users~~.]

**Updating Rural or Remote Rate Protection**

- According to ENERGY, the RRRP is a $175M program with the majority of program funding ($125.5M) to Hydro One's lowest-density 'R2' customers
- ~~Unclear why customers on RRRP who are not Hydro One's R2 customers are not also targeted for this benefit.~~

**Expanding ICI Eligibility to customers above 1MW in all sectors**

- Not all users with demand above 1MW will be in a position to take full advantage of the ICI expansion (eg. inability to load shift during peaks).
- Consumers in the commercial sector currently do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
  - Expansion of the ICI can give commercial consumers who are able to shift demand during peak hours, the opportunity to opt-in and benefit.

**Redirect Cap and Trade Proceeds Recycling**

- Deck implies $60M in savings ~~from 8% Rebate for the RPP consumers.~~compared to earlier climate change electricity price mitigation recycling plan.
  - ~~Unclear, how the redirected amount $60M ($120M-$60M) will be allocated to commercial and industrial users.~~
  - A fiscal offset to the initiative would materialize only if the $60M is diverted to in-plan initiatives.

## IV. Cabinet Committee Discussion Summary

n/a

**Commented [SK11]:** 36000*0.113/0.08 = 50,850

36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate
0.08 – pre-tax effective rebate (8%)

**Commented [SK212]:** 36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate

36000*0.113 = 4068 [OCEB effective rebated consumption]

Max under proposal: 250,000
pre-tax effective rebate: 0.08
Proposal's effective rebated consumption: 250,000*0.08 = 20,000

(20,000-4068)/4068 = **3.9164**

**Commented [SK213]:** Is this referring to the issue with common elements in condos and how they fall under one bill separate from the units?

**Commented [SK214]:** I'm trying to say that there's a portion of RRRP customers who will not receive this benefit.

Is there a reason these other customers are not also getting the expansion?

**Commented [JK15]:** Which sectors? There was a deck recently that showed the composition of GA in the bills paid by sectors. I believe it was one of the price mitigation decks.

**Commented [SK216R15]:** This is a general statement.

Slide 32 in the 20160902_330pm deck.

## V. Financial Summary

| $ Millions | 2016-17 | 2017-18 | 2018-19 |
|---|---|---|---|
| Initiative cost requested | 261 | 1,006 | 1,004 |
| Requested program base | 261 | 1,006 | 1,004 |
| Total fiscal impact (draw from c-funds) | 261 | 1,006 | 1,004 |

## VI. Performance Measures

[To estimate the impact of the program, the savings provided to the various consumers, and any potential for adjustments to the program, information should be provided from LDCs on consumption profiles and rebate amounts, particularly those affected by the 8% rebate on Regulated Price Plan Consumers.]

Formatted: Not Highlight

| | |
|---|---|
| **Name of analyst:** | Shajee Kathirgamanathan (416-325-1402) |
| **Date:** | September ~~6~~8, 2016 |
| **Branch / Division:** | Electricity Finance Branch / Corporate and Electricity Finance Division |

## APPENDIX A: PROPOSED POLICY MINUTE

[WORK IN PROGRESS, WAITING ON ENERGY'S FINAL SUBMISSION]

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

i) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

ii) Increase the total amount of rate protection available to R2 with low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2004.

iii) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

iv) Expanding eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

2. ENERGY seek necessary TB/MBC approvals.

3. ENERGY seek approvals for:

i) the proposed *Ontario Rebate for Electricity Consumers Act, 2016* – and any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments and consequential legislative amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*, subject to the Legislature's approval of the Act, including the following elements:

   i. The rebate would be available starting January 1, 2017;
   ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
   iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers electricity bills;
   iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way in which electricity vendors providing the rebate are to be reimbursed;

**Commented [SK217]:** This was from the Policy Minute. I assume this is the 'Minute' we are waiting for.

v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;
vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments.
vii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date.

4. ENERGY notes the following amendments:

i) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the *Electricity Act, 1998* to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

ii) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density rural electricity customers and provide for a periodic adjustment mechanism.

5. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

6. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan.

~~CABINET AGREED THAT:~~

~~1. THE MINISTRY OF ENERGY (ENERGY), WITH SUPPORT FROM THE MINISTRY OF FINANCE (MOF), SHALL PREPARE LEGISLATION THAT WOULD PROVIDE AN EIGHT PERCENT (8%) REBATE ON THE PRE-TAX COST OF ELECTRICITY FOR THE FOLLOWING CLASSES OF CONSUMERS:~~
~~A. ALL CONSUMERS ELIGIBLE TO BE BILLED UNDER THE ONTARIO ENERGY BOARD'S REGULATED PRICE PLAN; AND~~
~~B. ANY OTHER CONSUMERS WHO WERE ELIGIBLE FOR FINANCIAL ASSISTANCE UNDER THE *ONTARIO CLEAN ENERGY BENEFIT ACT, 2010* (OCEBA) DURING THE PERIOD THAT PROGRAM WAS IN PLACE.~~

~~2. THE LEGISLATION SHALL BE GENERALLY MODELLED UPON THE OCEBA, AND WOULD INCLUDE THE FOLLOWING ELEMENTS:~~
~~A. THE REBATE WOULD BE AVAILABLE STARTING JANUARY 1, 2017 AND BEFORE SUCH DATE AS MAY BE PRESCRIBED;~~
~~B. THE REBATE WOULD NOT BE SUBJECT TO A CAP UNLESS A CAP IS PRESCRIBED;~~
~~C. THE LEGISLATION WOULD SPECIFY THE TYPES OF COSTS TO WHICH THE REBATE WOULD OR WOULD NOT BE APPLIED, WITH AUTHORITY TO MAKE CHANGES BY REGULATION;~~

D. THE LEGISLATION WOULD ADDRESS INVOICING REQUIREMENTS, INCLUDING AUTHORITY TO PRESCRIBE HOW THE REBATE IS TO APPEAR ON CONSUMER ELECTRICITY BILLS;
E. THE LEGISLATION WOULD INCLUDE AUTHORITY TO PRESCRIBE THE WAY IN WHICH THE REBATE IS TO BE FLOWED THROUGH TO CONSUMERS, AND THE WAY IN WHICH ELECTRICITY VENDORS PROVIDING THE REBATE ARE TO BE REIMBURSED;
F. THE LEGISLATION WOULD INCLUDE RECORD-KEEPING REQUIREMENTS FOR ELECTRICITY VENDORS AND ANY OTHER PRESCRIBED PERSONS; AND
G. THE LEGISLATION WOULD INCLUDE INSPECTION POWERS FOR INSPECTORS APPOINTED BY THE MINISTER OF FINANCE, INCLUDING POWERS RELATED TO RECOVERY OF OVERPAYMENTS.

3. ENERGY AMEND O. REG. 429/04 (ADJUSTMENTS UNDER SECTION 25.33 OF THE ACT) MADE UNDER THE ELECTRICITY ACT, 1998 TO EXPAND ELIGIBILITY FOR CLASS A CONSUMERS AND CLASS A MARKET PARTICIPANTS UNDER THE INDUSTRIAL CONSERVATION INITIATIVE (ICI) TO ALL ELECTRICITY CONSUMERS AND MARKET PARTICIPANTS WITH A PEAK DEMAND ABOVE AN AVERAGE OF ONE MEGAWATT (1MW) WITH NO SECTORAL RESTRICTIONS ON PARTICIPATION.
4. ENERGY AMEND O. REG 442/01 (RURAL OR REMOTE ELECTRICITY RATE PROTECTION) MADE UNDER THE ONTARIO ENERGY BOARD ACT, 1998 TO INCREASE THE TOTAL AMOUNT OF RATE PROTECTION AVAILABLE TO LOW DENSITY HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE RATE PROTECTION PROGRAM BY $110 MILLION, EFFECTIVE JANUARY 1, 2017.
5. ENERGY CONSIDER AND, IF APPROPRIATE, UTILIZE A MECHANISM TO PERIODICALLY ADJUST THE TOTAL ANNUAL AMOUNT OF RATE PROTECTION AVAILABLE TO HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE ELECTRICITY RATE PROTECTION REGULATION / PROGRAM, EFFECTIVE JANUARY 1, 2018.
6. ENERGY TO RECYCLE UP TO AN AVERAGE OF $270 MILLION OF CAP AND TRADE AUCTION PROCEEDS FROM THE GREENHOUSE GAS REDUCTION ACCOUNT PER YEAR OVER THE FIRST COMPLIANCE PERIOD (2017-2020) TO COMMERCIAL AND INDUSTRIAL ELECTRICITY CONSUMERS.
7. ENERGY AND MOF TO WORK WITH CABINET OFFICE (CO) AND PREMIER'S OFFICE (PO) ON COMMUNICATIONS PLAN.

**Tab x**

## APPENDIX B: BACKGROUND – ONTARIO CLEAN ENERGY BENEFIT

Commented [RK18]: What about using the eligibility table in Energy's submission?

- OCEB was in effect from 2011 to 2015, and provided residential, farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax.
    - Effective September 2012 electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month.
- OCEB helped Ontario families through the transition to a more reliable and cleaner electricity system, with the monthly cap balancing the fiscal implications of providing electricity relief.
- OCEB costs totalled $1,006 million in 2013-14 and $1,078 million in 2014-15, with a projected cost for 2015-16 of $860 million (for the 9 months remaining in the program).

| **Eligible Consumers** | |
|---|---|
| **Categories Listed in Legislation (coincides with categories eligible for RPP)** | |
| **Residential** | • a dwelling<br>• a property within the meaning of the Condominium Act, 1998<br>• a residential complex, within the meaning of the Residential Tenancies Act, 2006<br>• a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the Co-operative Corporations Act |
| **Farms** | • carries on a business that is a farming business for the purposes of the Farm Registration and Farm Organizations Funding Act, 1993, and<br>• holds a valid registration number assigned under that Act or the consumer's obligation to file a farming business registration form was waived pursuant to an order made under subsection 22 (6) of that Act |
| **Demand for electricity of 50 kW or less, or consumes not more than 250,000 kWh annually** | Would include small business, smaller broader- public-sector entities, and other small users. |
| **Special Cases (not eligible for RPP, but eligible for OCEB)** | |
| **Consumers On Retail Contracts** | Includes consumers with existing retail contracts and those who sign them during the duration of the program. |
| **Cornwall Electric and Hydro One Remote Communities Inc.** | Included since they are licensed distributors. |
| **Other Consumers Prescribed by Regulation** | 10 First Nations remote unlicensed distributors have been added by regulation. |
| **Exclusions** | |
| **Generators** | Generation station service and the microFIT distribution service charge are excluded in legislation. |

**From:** Ronald Kwan
**To:** John Kim
**Cc:** Tomasz Bugajski; Shajee Kathirgamanathan
**Subject:** RE: Cabinet note
**Date:** Friday, September 09, 2016 8:35:39 AM
**Attachments:** Cabinet Note - Electricity Price Mitigation v8_Markup.docx
Cab min Sept2-16 CO MOF Edits CLEAN_Markup.docx

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Hi John,

A few quick comments on the note and Minute.

Ron

---

**From:** John Kim
**Sent:** September-08-16 9:09 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Cabinet note

Hi Ron,

Pls. see attached updated note. It's not clear if this item will stay on the agenda tomorrow afternoon for the TBS DM briefing but we would like to get it done and send to TBS for the record.

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** Wednesday, September 07, 2016 2:51 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Cabinet note

Hi John,

I did not have time for a full review. I made a few quick suggestions. Is this briefing still happening?

Ron

---

**From:** John Kim

**Sent:** September 7, 2016 7:00 AM
**To:** Ronald Kwan
**Cc:** Tomasz Bugajski; Shajee Kathirgamanathan
**Subject:** Cabinet note

Hi Ron,

Pls. see attached draft note we intend to use for Associate briefing today at 4pm.

Thanks,

John.

Y. John Kim
Director(A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

**Tab x**

**CABINET BRIEFING NOTE**

| | |
|---|---|
| **Committee:** | Cabinet |
| **Meeting Date:** | September ~~14~~13, 2016 |
| **Ministry:** | ENERGY |
| **Last reviewed by:** | **Tracking to:** Cabinet – September ~~14~~13, 2016 |

**[BASED ON DRAFT CABINET SUBMISSION]**

**SUBMISSION TITLE:** Electricity Price Mitigation (Ontario Rebate for Electricity Consumers)

## I. REQUEST/DECISION REQUIRED:

The Ministry of Energy is proposing measures to provide relief to various electricity consumer classes. These measure include:

1.a. Provide an ~~pre-tax~~ 8% rebate, equal to the provincial portion of HST, to consumers eligible for the ~~to~~ Regulated Price Plan (RPP) ~~consumers~~;

1.b. Updating Rural or Remote Rate Protection (RRRP);

2.a. Expanding the Industrial Conservation Initiative (ICI) eligibility to customers above 1MW in all sectors;

~~2.b.~~ Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest 1% reduction in rates, with modest savings from proceeds intended for electricity relief through the Climate Change Action Plan to provide fiscal offsets.

~~2.c.~~

~~2.d.~~2.b. ~~[Approve in principle an expenditure increase estimated at $261M [estimate subject to refinement from ENERGY] in 2016-17 for the Electricity Price Mitigation, offset from the Treasury Board Contingency Fund.]~~

**Commented [RK1]:** Let's put in the amount of increase -- $110M, to the existing $127M

**Commented [RK2]:** Let's put in the estimated amount.

**Commented [SK23]:** Re-ordered/numbered to align with revised deck.

**Commented [SK24]:** Unclear if this is necessary for the cabinet note as the TB/MBC note may be worried more on fiscal implications.

**Commented [RK5]:** Remove from here, but should be part of fiscal impact part of the note.

**Commented [SK26R5]:** Will do. It's in the financial summary section.

## II. KEY POINTS:

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online.

As part of the 2016 Budget, the government committed to mitigating electricity cost impacts that were anticipated from the cap and trade program. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable for residential and industrial consumers. This included a commitment to provide a modest benefit of up to $2 per month, on average, to residential consumers.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a

cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the CCAP commitment and additional price mitigation, the Ministry of Energy has developed price mitigation options that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

| | Measure | Targeted Recipients | Impact (annually) | |
|---|---|---|---|---|
| | | | Fiscal | Rate Base |
| **1.a** | 8% Rebate to Regulated Price Plan eligible consumers | Residential, small business, small farms and other small users | $1B | - |
| **1.b** | Updating Rural or Remote Rate Protection | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. | - | $110M |
| **2.a** | Expanding ICI eligibility to customers above 1MW in all sectors | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors | - | $47M/ $82M* |
| **2.b** | Redirecting cap and trade proceeds recycling:<br>• As part of the original CCAP policy, $330M of the cap & trade proceeds was to be recycled for electricity price mitigation for residential and non-residential users.<br>• Under this proposal, a lower total amount of $270 M would be used to mitigate non-residential users.<br>• Therefore, provides $60M for potential fiscal offsets to the 8% rebate. | Commercial and industrial electricity customers | ($60M)** | - |

*Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.
**To meet the Budget 2016 commitment, the Climate Change Action Plan (CCAP) committed $1.3B from the Greenhouse Gas Reduction Account (GGRA) or about $330M annually. Current proposal will require $60M less or $270M annually. Assumes the $60M is diverted to in-plan initiatives.

- ENERGY provided the following overview of bill impacts:

| Regulated Price Plan (Residential) Impact[1]* | | Class B (Commercial)[4] | Class A (Industrial)[4] | |
|---|---|---|---|---|
| Average[2] (750 kWh/month) | Rural[3]** (1000 kWh/month) | | Existing | New |

**Commented [SK27]:** Table below from the latest ENERGY Deck (FPC Major Project Morning of Sept 8).

| | | | | |
|---|---|---|---|---|
| -$~~10~~11/month (-~~68~~%) | -$45/month (-20%) | -$1/MWh (-1%) | -$1/MWh (-1%) | Up to -$52/MWh (-34%) |

~~Note: The impact of cap and trade would not be added to electricity bills until 2017 and impact of ICI would not be added until 2018. All impacts included here for illustrative purposes~~

1~~*~~. ENERGY did not provide the monthly impact for other Regulated Price Plan not classified as Residential (eg. farms, small businesses) that would benefit from the 8% Rebate to Regulated Price Plan.

2. Regulated Price Plan Impact represents the pre-tax values of 8% rebate and does not include the impact of ICI expansion and RRRP update (total impact of $1.31/month based on 750 kWh/month).

3.~~**~~ Rural customers refers to those Hydro One customers eligible to receive RRRP (R2 rate class customers). Impact shown is pre-tax and does not include the impact of ICI expansion and RRRP update (total impact of $1.74/month based on 1000 kWh/month).

4. The impact of cap and trade would not be added to electricity bills until 2017 and impact of ICI would not be added until 2018.

**1.a. 8% Rebate to Regulated Price Plan (RPP)**

- An 8% rebate ~~on the pre-tax portion~~ for Regulated Price Plan (RPP) eligible consumers would be equal to the provincial portion of HST and funded by the tax base.
- The $1 billion figure is a 2017 to 2020 calendar year average of cost estimates developed by Ministry of Energy staff, as follows:

| *$ millions* | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|
| | 1,003 | 1,014 | 975 | 1,049 |
| Avg. 2017-20 | 1,010 | | | |

- On a fiscal year basis, the above estimates become:

| *$ millions* | **2016-17** | **2017-18** | **2018-19** | **2019-20** |
|---|---|---|---|---|
| | 261 | 1,006 | 1,004 | 994 |
| 3-Year Avg. | 1,001 | | | |

- Ministry of Energy staff are in the process of developing a refined estimate of the cost.

- The rebate would appear directly on bills. As such, Local Distribution Companies (LDC) would be the delivery mechanism for the rebate.
  - While non-Regulated Price Plan eligible consumers would not see a benefit from the 8% rebate under this option, all industrial and commercial consumers would receive proceeds recycling through the Greenhouse Gas Reduction Account (GGRA).
  - Commercial and industrial consumers would also continue to receive input tax credits and Public Service Bodies would continue to receive PSB rebates.
- New legislation would be required and closely mirror the Ontario Clean Energy Benefit (OCEB) Act, 2010. More details further below.
- On-bill rebate delivery would likely require adjustments to Local Distribution Company (LDC) billing systems, which could impact delivery costs and timelines.
- In the past, LDCs have asked for at least six months' notice when implementing billing system changes.

  - One option to address any timing concerns is to allow LDCs to provide retroactive payments if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- The rebate would not be directly linked to HST.

**1.b. Updating (Increasing) Rural or Remote Rate Protection**

- RRRP funding supporting Hydro One R2 (rural) customers capped at current levels since 2004.
- The current program provides a monthly subsidy of ~~a about~~ $~~32~~31.50/month.
- Proposal will provide an additional $110 million in support to approximately 329,000 R2 customers to $235 million annually.
- Proposal will increase the subsidy by about $28/month and equalize R2 bills with Hydro One R1 (medium) density customers at 1,000 kWh.
- All residential consumers would see an average cost increase of about $0.60/month.
- ENERGY is considering options to periodically adjust the amount of rate protection eg. indexed at inflation or "trued up" on a regular basis.

**Commented [RK8]:** On what basis?

**2.a. Expanding ICI Eligibility to customers above 1MW in all sectors**

- Lower threshold for participation in ICI to 1 MW and remove sectoral restrictions.
- Most newly eligible ICI participants who choose to opt-in to the program would be able to reduce their electricity costs substantially. All other consumers would see a relatively small increase in their bills.
- Expanding the ICI will reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods (80MW in the short term and 165 MW in the long term)
- Bill savings to new participants up to 21% in the short term and up to 34% long-term.
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - Companies that would become eligible under such an expansion include Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.
- Class B consumers would have a collective increase in the Global Adjustment of $47M in the short term and $~~87M~~ 82M in the long term from this initiative.
- Residential consumers would see an average cost increase of $0.42/month in the short term and $0.74/month in the long term.

**2.b. Redirect Cap and Trade Proceeds Recycling**

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers.
- Ontario's Climate Change Action Plan (CCAP) includes up to $1.32 billion over 4 years to help keep electricity rates affordable for residential and industrial consumers.
- ~~The GGRA allocated $120M to average residential consumers, $170M to commercial and $40M to industrial consumers.~~

**Commented [SK29]:** Suggest deletion. This breakdown is not in the latest deck. Furthermore the chart on Slide 21 shows $335M original allocation, not $330M.

**Tab x**

- The 8% rebate to the Regulated Price Plan consumers more than fulfills the commitment to reduce residential rates by $2/month.
    - Proposal would lead to savings of the $120M in GGRA proceeds previously allocated to residential consumers, and help offset the fiscal impact of the 8% rebate to the Regulated Price Plan consumers.
- To provide additional price mitigation to commercial and industrial electricity consumers, ENERGY is proposing to direct an additional $60M annually of cap and trade auction proceeds (to $270M from a previous amount of $210M annually) to industrial and commercial consumers not in the RPP to mitigate impacts.
- The current proposal would require an estimated $60 million less per year, or $0.24 billion less over the first compliance period.

## III. KEY CONSIDERATIONS

- This request ~~on~~for an 8% rebate does not align with the 2016 Budget fiscal plan and there are very limited~~no~~ ($60M) proposed offsets.

- Due to the nature of the ICI Global Adjustment mechanism and cost recovery of the RRRP, the rate base proposals (~~##~~21b and ~~#3~~#2a), while benefiting the targeted recipients, would **come at a cost to all other electricity rate payers in Ontario**.

- ~~This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets.~~

- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
    - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC) were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
    - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
    - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

-

**8% Rebate to Regulated Price Plan**

- The 8% ~~pre-tax~~ rebate would provide a typical residential consumer about an $11 per month benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average, cap and trade commitment.

- This 8% ~~pre-tax~~ rebate equal to the provincial portion of HST is similar to the previous Ontario Clean Energy Benefit (See Appendix for background) which provided a 10% post-tax rebate.
- The proposal indicates the Regulated Price Plan consumption amount to be 58TWh [Slide 2 in latest, FPC-Major Projects Deck]. Unclear if this applies to all eligible RPP consumers. A p~~P~~reliminary MOF estimate for consumption ~~for~~under the OCEB program approximated annual OCEB-eligible consumption range of 64-68TWh ~~of annual electricity consumption~~ between September 11 and December 2015. [This would represent about 10-17% more in additional program cost to the current estimate of $1 billion per year.]
- The OCEB legislation was set out with an end date, and was subsequently modified to be capped at 3,000 kWh per month for all electricity customers after 8 months of the program.
    - This proposal does not specify any consumption caps nor an end date.
- Due to the lack of a cap, compared to OCEB, this proposal is more generous to the high volume RPP users.

  - OCEB rebate was applicable for up to 36,000 kWh annually (12 months times 3,000 kWh cap per month) while this proposal would be **more generous for those consuming more than 50,850 kWh** annually.
  - Furthermore, highest volume users in this proposal would receive **up to 392% more** than under the OCEB program.
- Unclear why any proposals for a cap would be any more complex or onerous to LDCs than prior OCEB cap (instituted beginning September 2012 to termination of OCEB program in December 2015). However, cap may affect some types of consumers more than others, such as small businesses, condo dwellers in separately-metered units paying for electricity usage in the common elements, and residential consumers heating with electricity.

- ~~Blanket r~~Reduction in electricity prices for all users irrespective of consumption amounts hamper efforts to conserve electricity, and mutes TOU price signals.
- [Businesses ~~that fall under the Regulated Price Plan~~ pay little to no HST due to the Input Tax Credit. For those businesses eligible for the Regulated Price plan, ~~T~~the 8% reduction can be deemed a windfall ~~for these users~~.]

**Updating Rural or Remote Rate Protection**

- According to ENERGY, the RRRP is a $175M program with the majority of program funding ($125.5M) to Hydro One's lowest-density 'R2' customers
- ~~Unclear why customers on RRRP who are not Hydro One's R2 customers are not also targeted for this benefit.~~

**Expanding ICI Eligibility to customers above 1MW in all sectors**

- Not all users with demand above 1MW will be in a position to take full advantage of the ICI expansion (eg. inability to load shift during peaks).
- Consumers in the commercial sector currently do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
  - Expansion of the ICI can give commercial consumers who are able to shift demand during peak hours, the opportunity to opt-in and benefit.

**Redirect Cap and Trade Proceeds Recycling**

- Deck implies $60M in savings ~~from 8% Rebate for the RPP consumers.~~compared to earlier climate change electricity price mitigation recycling plan.
  - ~~Unclear, how the redirected amount $60M ($120M-$60M) will be allocated to commercial and industrial users.~~
  - A fiscal offset to the initiative would materialize only if the $60M is diverted to in-plan initiatives.

## IV. Cabinet Committee Discussion Summary

n/a

**Commented [SK10]:** 36000*0.113/0.08 = 50,850

36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate
0.08 – pre-tax effective rebate (8%)

**Commented [SK211]:** 36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate

36000*0.113 = 4068 [OCEB effective rebated consumption]

Max under proposal: 250,000
pre-tax effective rebate: 0.08
Proposal's effective rebated consumption: 250,000*0.08 = 20,000

(20,000-4068)/4068 = **3.9164**

**Commented [SK212]:** Is this referring to the issue with common elements in condos and how they fall under one bill separate from the units?

**Commented [SK13]:** Will need to verify

**Commented [SK214]:** I'm trying to say that there's a portion of RRRP customers who will not receive this benefit.

Is there a reason these other customers are not also getting the expansion?

**Commented [JK15]:** Which sectors? There was a deck recently that showed the composition of GA in the bills paid by sectors. I believe it was one of the price mitigation decks.

**Commented [SK216R15]:** This is a general statement.

Slide 32 in the 20160902_330pm deck.

## V. Financial Summary

| $ Millions | 2016-17 | 2017-18 | 2018-19 |
|---|---|---|---|
| Initiative cost requested | 261 | 1,006 | 1,004 |
| Requested program base | 261 | 1,006 | 1,004 |
| Total fiscal impact (draw from c-funds) | 261 | 1,006 | 1,004 |

## VI. Performance Measures

[To estimate the impact of the program, the savings provided to the various consumers, and any potential for adjustments to the program, information should be provided from LDCs on consumption profiles and rebate amounts, particularly those affected by the 8% rebate on Regulated Price Plan Consumers.]

| | |
|---|---|
| **Name of analyst:** | Shajee Kathirgamanathan (416-325-1402) |
| **Date:** | September ~~6~~8, 2016 |
| **Branch / Division:** | Electricity Finance Branch / Corporate and Electricity Finance Division |

## APPENDIX A: PROPOSED POLICY MINUTE

[WORK IN PROGRESS, WAITING ON ENERGY'S FINAL SUBMISSION]

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

i) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

ii) Increase the total amount of rate protection available to R2 with low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2004.

iii) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

iv) Expanding eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

2. ENERGY seek necessary TB/MBC approvals.

3. ENERGY seek approvals for:

i) the proposed *Ontario Rebate for Electricity Consumers Act, 2016* – and any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments and consequential legislative amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*, subject to the Legislature's approval of the Act, including the following elements:

i. The rebate would be available starting January 1, 2017;
ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers electricity bills;
iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way in which electricity vendors providing the rebate are to be reimbursed;

**Commented [SK217]:** This was from the Policy Minute. I assume this is the 'Minute' we are waiting for.

v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;
vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments.
vii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date.

4. ENERGY notes the following amendments:

i) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the *Electricity Act, 1998* to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

ii) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density rural electricity customers and provide for a periodic adjustment mechanism.

5. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

6. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan.

~~CABINET AGREED THAT:~~

~~1. THE MINISTRY OF ENERGY (ENERGY), WITH SUPPORT FROM THE MINISTRY OF FINANCE (MOF), SHALL PREPARE LEGISLATION THAT WOULD PROVIDE AN EIGHT PERCENT (8%) REBATE ON THE PRE-TAX COST OF ELECTRICITY FOR THE FOLLOWING CLASSES OF CONSUMERS:~~
~~A. ALL CONSUMERS ELIGIBLE TO BE BILLED UNDER THE ONTARIO ENERGY BOARD'S REGULATED PRICE PLAN; AND~~
~~B. ANY OTHER CONSUMERS WHO WERE ELIGIBLE FOR FINANCIAL ASSISTANCE UNDER THE *ONTARIO CLEAN ENERGY BENEFIT ACT, 2010* (OCEBA) DURING THE PERIOD THAT PROGRAM WAS IN PLACE.~~

~~2. THE LEGISLATION SHALL BE GENERALLY MODELLED UPON THE OCEBA, AND WOULD INCLUDE THE FOLLOWING ELEMENTS:~~
~~A. THE REBATE WOULD BE AVAILABLE STARTING JANUARY 1, 2017 AND BEFORE SUCH DATE AS MAY BE PRESCRIBED;~~
~~B. THE REBATE WOULD NOT BE SUBJECT TO A CAP UNLESS A CAP IS PRESCRIBED;~~
~~C. THE LEGISLATION WOULD SPECIFY THE TYPES OF COSTS TO WHICH THE REBATE WOULD OR WOULD NOT BE APPLIED, WITH AUTHORITY TO MAKE CHANGES BY REGULATION;~~

D. THE LEGISLATION WOULD ADDRESS INVOICING REQUIREMENTS, INCLUDING AUTHORITY TO PRESCRIBE HOW THE REBATE IS TO APPEAR ON CONSUMER ELECTRICITY BILLS;
E. THE LEGISLATION WOULD INCLUDE AUTHORITY TO PRESCRIBE THE WAY IN WHICH THE REBATE IS TO BE FLOWED THROUGH TO CONSUMERS, AND THE WAY IN WHICH ELECTRICITY VENDORS PROVIDING THE REBATE ARE TO BE REIMBURSED;
F. THE LEGISLATION WOULD INCLUDE RECORD-KEEPING REQUIREMENTS FOR ELECTRICITY VENDORS AND ANY OTHER PRESCRIBED PERSONS; AND
G. THE LEGISLATION WOULD INCLUDE INSPECTION POWERS FOR INSPECTORS APPOINTED BY THE MINISTER OF FINANCE, INCLUDING POWERS RELATED TO RECOVERY OF OVERPAYMENTS.

3. ENERGY AMEND O. REG. 429/04 (ADJUSTMENTS UNDER SECTION 25.33 OF THE ACT) MADE UNDER THE ELECTRICITY ACT, 1998 TO EXPAND ELIGIBILITY FOR CLASS A CONSUMERS AND CLASS A MARKET PARTICIPANTS UNDER THE INDUSTRIAL CONSERVATION INITIATIVE (ICI) TO ALL ELECTRICITY CONSUMERS AND MARKET PARTICIPANTS WITH A PEAK DEMAND ABOVE AN AVERAGE OF ONE MEGAWATT (1MW) WITH NO SECTORAL RESTRICTIONS ON PARTICIPATION.
4. ENERGY AMEND O. REG 442/01 (RURAL OR REMOTE ELECTRICITY RATE PROTECTION) MADE UNDER THE ONTARIO ENERGY BOARD ACT, 1998 TO INCREASE THE TOTAL AMOUNT OF RATE PROTECTION AVAILABLE TO LOW DENSITY HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE RATE PROTECTION PROGRAM BY $110 MILLION, EFFECTIVE JANUARY 1, 2017.
5. ENERGY CONSIDER AND, IF APPROPRIATE, UTILIZE A MECHANISM TO PERIODICALLY ADJUST THE TOTAL ANNUAL AMOUNT OF RATE PROTECTION AVAILABLE TO HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE ELECTRICITY RATE PROTECTION REGULATION / PROGRAM, EFFECTIVE JANUARY 1, 2018.
6. ENERGY TO RECYCLE UP TO AN AVERAGE OF $270 MILLION OF CAP AND TRADE AUCTION PROCEEDS FROM THE GREENHOUSE GAS REDUCTION ACCOUNT PER YEAR OVER THE FIRST COMPLIANCE PERIOD (2017-2020) TO COMMERCIAL AND INDUSTRIAL ELECTRICITY CONSUMERS.
7. ENERGY AND MOF TO WORK WITH CABINET OFFICE (CO) AND PREMIER'S OFFICE (PO) ON COMMUNICATIONS PLAN.

**Tab x**

## APPENDIX B: BACKGROUND – ONTARIO CLEAN ENERGY BENEFIT

Commented [RK18]: What about using the eligibility table in Energy's submission?

- OCEB was in effect from 2011 to 2015, and provided residential, farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax.
    - Effective September 2012 electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month.
- OCEB helped Ontario families through the transition to a more reliable and cleaner electricity system, with the monthly cap balancing the fiscal implications of providing electricity relief.
- OCEB costs totalled $1,006 million in 2013-14 and $1,078 million in 2014-15, with a projected cost for 2015-16 of $860 million (for the 9 months remaining in the program).

| **Eligible Consumers** | |
|---|---|
| **Categories Listed in Legislation (coincides with categories eligible for RPP)** | |
| **Residential** | • a dwelling<br>• a property within the meaning of the Condominium Act, 1998<br>• a residential complex, within the meaning of the Residential Tenancies Act, 2006<br>• a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the Co-operative Corporations Act |
| **Farms** | • carries on a business that is a farming business for the purposes of the Farm Registration and Farm Organizations Funding Act, 1993, and<br>• holds a valid registration number assigned under that Act or the consumer's obligation to file a farming business registration form was waived pursuant to an order made under subsection 22 (6) of that Act |
| **Demand for electricity of 50 kW or less, or consumes not more than 250,000 kWh annually** | Would include small business, smaller broader- public-sector entities, and other small users. |
| **Special Cases (not eligible for RPP, but eligible for OCEB)** | |
| **Consumers On Retail Contracts** | Includes consumers with existing retail contracts and those who sign them during the duration of the program. |
| **Cornwall Electric and Hydro One Remote Communities Inc.** | Included since they are licensed distributors. |
| **Other Consumers Prescribed by Regulation** | 10 First Nations remote unlicensed distributors have been added by regulation. |
| **Exclusions** | |
| **Generators** | Generation station service and the microFIT distribution service charge are excluded in legislation. |

***Policy***

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

i) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account w~~as~~ere with a licensed distributor.

ii) Increase the total amount of rate protection available to R2 ~~with~~ low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million, which has been capped since 2004.

iii) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

**Commented [RK1]:** Shouldn't this be better defined on the nature of the mechanism (inflation adjustment?) and / or what is being targeted as the effect of the mechanism (e.g., to pay similar amount as an R1 consumer, or some other target)?

iv) Expand~~ing~~ eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

2. ENERGY seek necessary TB/MBC approvals.

3. ENERGY seek approvals for:

i) the proposed *Ontario Rebate for Electricity Consumers Act, 2016* ~~**– NTD LSB – please confirm what title to use.]** and any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments and consequential legislative amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*,~~ which would, subject to the Legislature's approval of the Act, includ~~e~~~~ing~~ the following elements:

i. The rebate would be available starting January 1, 2017;
ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers' electricity bills;
iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way

in which electricity vendors providing the rebate are to be reimbursed;

v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;

vi. The legislation would include inspection powers for inspectors appointed by the ~~m~~Minister of Finance, including powers related to the recovery of overpayments.

~~vi.~~vii. The legislation would include consequential amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*,

viii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date.

4. ENERGY to report back to LRC and Cabinet for approval of any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments.

5.~~4~~. ENERGY notes the following amendments:

i) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the *Electricity Act, 1998* to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

ii) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density ~~rural~~ electricity customers and provide for a periodic adjustment mechanism.

~~5~~6. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

~~6~~7. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan.

~~***TB/MBC***~~

**Commented [RK2]:** Shouldn't the clause indicate what the amendments are about – e.g., wrt the OEBA, to implement the proposed ORECA; and for OCEBA, to have wrap up timelines as per viii below, or is Energy asking for more? If so, what?

**Commented [RK3]:** Comment as above.

~~TBC with TBS~~

***~~LRC~~***

Cabinet approved version of the proposed ~~[name]~~ *Ontario Rebate for Electricity Consumers Act, 2016* ~~of this draft legislation~~ for introduction, subject to the following:

1. The Office of Legislative Counsel is authorized to prepare a French version and to make minor adjustments to the English version, for the purpose of ensuring consistency between the two versions and making other improvements or correcting mistakes discovered in the translation process.

**From:** John Kim
**To:** Ronald Kwan
**Cc:** Tomasz Bugajski; Shajee Kathirgamanathan
**Subject:** RE: Cabinet note
**Date:** Thursday, September 08, 2016 9:09:27 PM
**Attachments:** Cabinet Note - Electricity Price Mitigation v8.docx

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Hi Ron,

Pls. see attached updated note. It's not clear if this item will stay on the agenda tomorrow afternoon for the TBS DM briefing but we would like to get it done and send to TBS for the record.

Thanks,

John.

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**From:** Ronald Kwan
**Sent:** Wednesday, September 07, 2016 2:51 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Cabinet note

Hi John,

I did not have time for a full review. I made a few quick suggestions. Is this briefing still happening?

Ron

---

**From:** John Kim
**Sent:** September 7, 2016 7:00 AM
**To:** Ronald Kwan
**Cc:** Tomasz Bugajski; Shajee Kathirgamanathan
**Subject:** Cabinet note

Hi Ron,

Pls. see attached draft note we intend to use for Associate briefing today at 4pm.

Thanks,

John.

Y. John Kim
Director(A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

**Tab x**

**CABINET BRIEFING NOTE**

| | |
|---|---|
| **Committee:** | Cabinet |
| **Meeting Date:** | September ~~14~~13, 2016 |
| **Ministry:** | ENERGY |
| **Last reviewed by:** | **Tracking to:** Cabinet – September ~~14~~13, 2016 |

**[BASED ON DRAFT CABINET SUBMISSION]**

**SUBMISSION TITLE:** Electricity Price Mitigation (Ontario Rebate for Electricity Consumers)

## I. REQUEST/DECISION REQUIRED:

The Ministry of Energy is proposing measures to provide relief to various electricity consumer classes. These measure include:

1.a. Provide an ~~pre-tax~~ 8% rebate equal to the provincial portion of HST to consumers eligible for the ~~to~~ Regulated Price Plan (RPP) ~~consumers~~;

1.b. Updating Rural or Remote Rate Protection (RRRP);

2.a. Expanding the Industrial Conservation Initiative (ICI) eligibility to customers above 1MW in all sectors;

~~2.b.~~ Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest 1% reduction in rates, with modest savings from proceeds intended for electricity relief through the Climate Change Action Plan to provide fiscal offsets.

~~2.c.~~

~~2.d.~~2.b. ~~[Approve in principle an expenditure increase estimated at $261M [estimate subject to refinement from ENERGY] in 2016-17 for the Electricity Price Mitigation, offset from the Treasury Board Contingency Fund.]~~

**Commented [SK21]:** Re-ordered/numbered to align with revised deck.

**Commented [SK22]:** Unclear if this is necessary for the cabinet note as the TB/MBC note may be worried more on fiscal implications.

**Commented [RK3]:** Remove from here, but should be part of fiscal impact part of the note.

**Commented [SK24R3]:** Will do. It's in the financial summary section.

## II. KEY POINTS:

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online.

As part of the 2016 Budget, the government committed to mitigating electricity cost impacts that were anticipated from the cap and trade program. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable for residential and industrial consumers. This included a commitment to provide a modest benefit of up to $2 per month, on average, to residential consumers.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a

cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the CCAP commitment and additional price mitigation, the Ministry of Energy has developed price mitigation options that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

| | Measure | Targeted Recipients | Impact (annually) | |
|---|---|---|---|---|
| | | | Fiscal | Rate Base |
| **1.a** | 8% Rebate to Regulated Price Plan eligible consumers | Residential, small business, small farms and other small users | $1B | - |
| **1.b** | Updating Rural or Remote Rate Protection | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. | - | $110M |
| **2.a** | Expanding ICI eligibility to customers above 1MW in all sectors | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors | - | $47M/ $82M* |
| **2.b** | Redirecting cap and trade proceeds recycling:<br>• As part of the original CCAP policy, $330M of the cap & trade proceeds was to be recycled for electricity price mitigation for residential and non-residential users.<br>• Under this proposal, $270 M would be used to mitigate non-residential users<br>• provides $60M for potential fiscal offsets to the 8% rebate | Commercial and industrial electricity customers | ($60M)** | - |

*Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.
**To meet the Budget 2016 commitment, the Climate Change Action Plan (CCAP) committed $1.3B from the Greenhouse Gas Reduction Account (GGRA) or about $330M annually. Current proposal will require $60M less or $270M annually. Assumes the $60M is diverted to in-plan initiatives.

- ENERGY provided the following overview of bill impacts:

| Regulated Price Plan (Residential) Impact[1]* | | Class B (Commercial)[4] | Class A (Industrial)[4] | |
|---|---|---|---|---|
| Average[2] (750 kWh/month) | Rural[3]** (1000 kWh/month) | | Existing | New |

**Commented [SK25]:** Table below from the latest ENERGY Deck (FPC Major Project Morning of Sept 8).

| | | | | |
|---|---|---|---|---|
| -$~~10~~11/month (-~~6~~8%) | -$45/month (-20%) | -$1/MWh (-1%) | -$1/MWh (-1%) | Up to -$52/MWh (-34%) |

~~Note: The impact of cap and trade would not be added to electricity bills until 2017 and impact of ICI would not be added until 2018. All impacts included here for illustrative purposes~~

1~~*~~. ENERGY did not provide the monthly impact for other Regulated Price Plan not classified as Residential (eg. farms, small businesses) that would benefit from the 8% Rebate to Regulated Price Plan.

2. Regulated Price Plan Impact represents the pre-tax values of 8% rebate and does not include the impact of ICI expansion and RRRP update (total impact of $1.31/month based on 750 kWh/month).

3.~~**~~ Rural customers refers to those Hydro One customers eligible to receive RRRP (R2 rate class customers). Impact shown is pre-tax and does not include the impact of ICI expansion and RRRP update (total impact of $1.74/month based on 1000 kWh/month).

4. The impact of cap and trade would not be added to electricity bills until 2017 and impact of ICI would not be added until 2018.

**1.a. 8% Rebate to Regulated Price Plan (RPP)**

- An 8% rebate ~~on the pre-tax portion~~ for Regulated Price Plan (RPP) eligible consumers would be equal to the provincial portion of HST and funded by the tax base.
- The $1 billion figure is a 2017 to 2020 calendar year average of cost estimates developed by Ministry of Energy staff, as follows:

| *$ millions* | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|
| | 1,003 | 1,014 | 975 | 1,049 |
| Avg. 2017-20 | 1,010 | | | |

- On a fiscal year basis, the above estimates become:

| *$ millions* | **2016-17** | **2017-18** | **2018-19** | **2019-20** |
|---|---|---|---|---|
| | 261 | 1,006 | 1,004 | 994 |
| 3-Year Avg. | 1,001 | | | |

- Ministry of Energy staff are in the process of developing a refined estimate of the cost.

- The rebate would appear directly on bills. As such, Local Distribution Companies (LDC) would be the delivery mechanism for the rebate.
  - While non-Regulated Price Plan eligible consumers would not see a benefit from the 8% rebate under this option, all industrial and commercial consumers would receive proceeds recycling through the Greenhouse Gas Reduction Account (GGRA).
  - Commercial and industrial consumers would also continue to receive input tax credits and Public Service Bodies would continue to receive PSB rebates.
- New legislation would be required and closely mirror the Ontario Clean Energy Benefit (OCEB) Act, 2010. More details further below.
- On-bill rebate delivery would likely require adjustments to Local Distribution Company (LDC) billing systems, which could impact delivery costs and timelines.
- In the past, LDCs have asked for at least six months' notice when implementing billing system changes.

  - One option to address any timing concerns is to allow LDCs to provide retroactive payments if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- The rebate would not be directly linked to HST.

**1.b. Updating (Increasing) Rural or Remote Rate Protection**

- RRRP funding supporting Hydro One R2 (rural) customers capped at current levels since 2004.
- The current program provides a monthly subsidy of ~~a about~~ $~~32~~31.50/month.
- Proposal will provide an additional $110 million in support to approximately 329,000 R2 customers to $235 million annually.
- Proposal will increase the subsidy by about $28/month and equalize R2 bills with Hydro One R1 (medium) density customers at 1,000 kWh.
- All residential consumers would see an average cost increase of about $0.60/month.
- ENERGY is considering options to periodically adjust the amount of rate protection eg. indexed at inflation or “trued up” on a regular basis.

**2.a. Expanding ICI Eligibility to customers above 1MW in all sectors**

- Lower threshold for participation in ICI to 1 MW and remove sectoral restrictions.
- Most newly eligible ICI participants who choose to opt-in to the program would be able to reduce their electricity costs substantially. All other consumers would see a relatively small increase in their bills.
- Expanding the ICI will reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods (80MW in the short term and 165 MW in the long term)
- Bill savings to new participants up to 21% in the short term and up to 34% long-term.
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
  - Companies that would become eligible under such an expansion include Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.
- Class B consumers would have a collective increase in the Global Adjustment of $47M in the short term and $~~87M~~ 82M in the long term from this initiative.
- Residential consumers would see an average cost increase of $0.42/month in the short term and $0.74/month in the long term.

**2.b. Redirect Cap and Trade Proceeds Recycling**

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers.
- Ontario’s Climate Change Action Plan (CCAP) includes up to $1.32 billion over 4 years to help keep electricity rates affordable for residential and industrial consumers.
- ~~The GGRA allocated $120M to average residential consumers, $170M to commercial and $40M to industrial consumers.~~

**Commented [SK26]:** Suggest deletion. This breakdown is not in the latest deck. Furthermore the chart on Slide 21 shows $335M original allocation, not $330M.

**Tab x**

- The 8% rebate to the Regulated Price Plan consumers fulfills the commitment to reduce residential rates by $2/month.
    - Proposal would lead to savings of the $120M in GGRA proceeds previously allocated to residential consumers, and help offset the fiscal impact of the 8% rebate to the Regulated Price Plan consumers.
- To provide price mitigation to commercial and industrial electricity consumers, ENERGY is proposing to direct an additional $60M of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to mitigate impacts.
- The current proposal would require an estimated $60 million less per year, or $0.24 billion less over the first compliance period.

## III. KEY CONSIDERATIONS

- This request ~~on~~for an 8% rebate does not align with the 2016 Budget fiscal plan and there are no proposed offsets.

- Due to the nature of the ICI Global Adjustment mechanism and cost recovery of the RRRP, the rate base proposals (~~##~~21b and ~~#3~~#2a), while benefiting the targeted recipients, would **come at a cost to all other electricity rate payers in Ontario**.

- ~~This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets.~~

- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
    - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC) were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
    - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
    - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

- 

**8% Rebate to Regulated Price Plan**

- The 8% ~~pre-tax~~ rebate would provide a typical residential consumer about an $11 per month benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average, cap and trade commitment.

- This 8% ~~pre-tax~~ rebate equal to the provincial portion of HST is similar to the previous Ontario Clean Energy Benefit (See Appendix for background) which provided a 10% post-tax rebate.
- The proposal indicates the Regulated Price Plan consumption amount to be 58TWh [Slide 2 in latest, FPC-Major Projects Deck]. Unclear if this applies to all eligible RPP consumers. A p~~P~~reliminary MOF estimate for consumption ~~for~~under the OCEB program approximated annual OCEB-eligible consumption range of 64-68TWh ~~of annual electricity consumption~~ between September 11 and December 2015. [This would represent about 10-17% more in additional program cost to the current estimate of $1 billion per year.]
- The OCEB legislation was set out with an end date, and was subsequently modified to be capped at 3,000 kWh per month for all electricity customers after 8 months of the program.
    - This proposal does not specify any consumption caps nor an end date.
- Due to the lack of a cap, compared to OCEB, this proposal is more generous to the high volume RPP users.

  - OCEB rebate was applicable for up to 36,000 kWh annually (12 months times 3,000 kWh cap per month) while this proposal would be **more generous for those consuming more than 50,850 kWh** annually.
  - Furthermore, highest volume users in this proposal would receive **up to 392% more** than under the OCEB program.
- Unclear why any proposals for a cap would be any more complex or onerous to LDCs than prior OCEB cap (instituted beginning September 2012 to termination of OCEB program in December 2015). However, cap may affect some types of consumers more than others, such as small businesses, condo dwellers in separately-metered units paying for electricity usage in the common elements, and residential consumers heating with electricity.

- ~~Blanket r~~Reduction in electricity prices for all users irrespective of consumption amounts hamper efforts to conserve electricity, and mutes TOU price signals.
- [Businesses ~~that fall under the Regulated Price Plan~~ pay little to no HST due to the Input Tax Credit. For those businesses eligible for the Regulated Price plan, ~~T~~the 8% reduction can be deemed a windfall ~~for these users~~.]

**Updating Rural or Remote Rate Protection**

- According to ENERGY, the RRRP is a $175M program with the majority of program funding ($125.5M) to Hydro One's lowest-density 'R2' customers
- ~~Unclear why customers on RRRP who are not Hydro One's R2 customers are not also targeted for this benefit.~~

**Expanding ICI Eligibility to customers above 1MW in all sectors**

- Not all users with demand above 1MW will be in a position to take full advantage of the ICI expansion (eg. inability to load shift during peaks).
- Consumers in the commercial sector currently do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
  - Expansion of the ICI can give commercial consumers who are able to shift demand during peak hours, the opportunity to opt-in and benefit.

**Redirect Cap and Trade Proceeds Recycling**

- Deck implies $60M in savings ~~from 8% Rebate for the RPP consumers.~~compared to earlier climate change electricity price mitigation recycling plan.
  - ~~Unclear, how the redirected amount $60M ($120M-$60M) will be allocated to commercial and industrial users.~~
  - A fiscal offset to the initiative would materialize only if the $60M is diverted to in-plan initiatives.

## IV. Cabinet Committee Discussion Summary

n/a

**Commented [SK7]:** 36000*0.113/0.08 = 50,850

36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate
0.08 – pre-tax effective rebate (8%)

**Commented [SK28]:** 36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate

36000*0.113 = 4068 [OCEB effective rebated consumption]

Max under proposal: 250,000
pre-tax effective rebate: 0.08
Proposal's effective rebated consumption: 250,000*0.08 = 20,000

(20,000-4068)/4068 = **3.9164**

**Commented [SK29]:** Is this referring to the issue with common elements in condos and how they fall under one bill separate from the units?

**Commented [SK10]:** Will need to verify

**Commented [SK211]:** I'm trying to say that there's a portion of RRRP customers who will not receive this benefit.

Is there a reason these other customers are not also getting the expansion?

**Commented [JK12]:** Which sectors? There was a deck recently that showed the composition of GA in the bills paid by sectors. I believe it was one of the price mitigation decks.

**Commented [SK213R12]:** This is a general statement.

Slide 32 in the 20160902_330pm deck.

## V. Financial Summary

| $ Millions | 2016-17 | 2017-18 | 2018-19 |
|---|---|---|---|
| Initiative cost requested | 261 | 1,006 | 1,004 |
| Requested program base | 261 | 1,006 | 1,004 |
| Total fiscal impact (draw from c-funds) | 261 | 1,006 | 1,004 |

## VI. Performance Measures

[To estimate the impact of the program, the savings provided to the various consumers, and any potential for adjustments to the program, information should be provided from LDCs on consumption profiles and rebate amounts, particularly those affected by the 8% rebate on Regulated Price Plan Consumers.]

| | |
|---|---|
| **Name of analyst:** | Shajee Kathirgamanathan (416-325-1402) |
| **Date:** | September ~~6~~8, 2016 |
| **Branch / Division:** | Electricity Finance Branch / Corporate and Electricity Finance Division |

## APPENDIX A: PROPOSED POLICY MINUTE

[WORK IN PROGRESS, WAITING ON ENERGY'S FINAL SUBMISSION]

Cabinet agreed that:

1. ENERGY implement electricity price mitigation for residential, commercial and industrial consumers through the following:

i) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor.

ii) Increase the total amount of rate protection available to R2 with low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2004.

iii) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

iv) Expanding eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

2. ENERGY seek necessary TB/MBC approvals.

3. ENERGY seek approvals for:

i) the proposed *Ontario Rebate for Electricity Consumers Act, 2016* – and any supporting regulations under the proposed *Ontario Rebate for Electricity Consumers Act, 2016*, and with other complementary regulatory amendments and consequential legislative amendments to the *Ontario Energy Board Act, 1998* and the *Ontario Clean Energy Benefit Act, 2010*, subject to the Legislature's approval of the Act, including the following elements:

   i. The rebate would be available starting January 1, 2017;
   ii. The legislation would specify the types of costs to which the rebate would or would not be applied, with authority to make changes by regulation;
   iii. The legislation would address invoicing requirements, including authority to prescribe how the rebate is to appear on consumers electricity bills;
   iv. The legislation would include authority to prescribe the way in which the rebate is to be flowed through to consumers, and the way in which electricity vendors providing the rebate are to be reimbursed;

**Commented [SK214]:** This was from the Policy Minute. I assume this is the 'Minute' we are waiting for.

v. The legislation would include record-keeping requirements for electricity vendors and other prescribed persons;
vi. The legislation would include inspection powers for inspectors appointed by the minister of Finance, including powers related to the recovery of overpayments.
vii. The legislation would provide for regulation-making authority to establish a limitation period for ceasing payments and reimbursement based on past entitlement. Similar amendments would be provided for the *Ontario Clean Energy Benefit Act, 2010* but would allow the ceasing of all payments and reimbursements after a prescribed date.

4. ENERGY notes the following amendments:

i) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the *Electricity Act, 1998* to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

ii) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural and Remote Rate Protection Plan to R2 low density rural electricity customers and provide for a periodic adjustment mechanism.

5. ENERGY work with MOECC to recycle an estimated annual average of $270 million of Cap and Trade auction proceeds from the Greenhouse Gas Reduction Account for non-RPP commercial and industrial electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism.

6. ENERGY and MOF work with Cabinet Office, Premier's office to develop a communications plan.

~~CABINET AGREED THAT:~~

~~1. THE MINISTRY OF ENERGY (ENERGY), WITH SUPPORT FROM THE MINISTRY OF FINANCE (MOF), SHALL PREPARE LEGISLATION THAT WOULD PROVIDE AN EIGHT PERCENT (8%) REBATE ON THE PRE-TAX COST OF ELECTRICITY FOR THE FOLLOWING CLASSES OF CONSUMERS:~~
~~A. ALL CONSUMERS ELIGIBLE TO BE BILLED UNDER THE ONTARIO ENERGY BOARD'S REGULATED PRICE PLAN; AND~~
~~B. ANY OTHER CONSUMERS WHO WERE ELIGIBLE FOR FINANCIAL ASSISTANCE UNDER THE *ONTARIO CLEAN ENERGY BENEFIT ACT, 2010* (OCEBA) DURING THE PERIOD THAT PROGRAM WAS IN PLACE.~~

~~2. THE LEGISLATION SHALL BE GENERALLY MODELLED UPON THE OCEBA, AND WOULD INCLUDE THE FOLLOWING ELEMENTS:~~
~~A. THE REBATE WOULD BE AVAILABLE STARTING JANUARY 1, 2017 AND BEFORE SUCH DATE AS MAY BE PRESCRIBED;~~
~~B. THE REBATE WOULD NOT BE SUBJECT TO A CAP UNLESS A CAP IS PRESCRIBED;~~
~~C. THE LEGISLATION WOULD SPECIFY THE TYPES OF COSTS TO WHICH THE REBATE WOULD OR WOULD NOT BE APPLIED, WITH AUTHORITY TO MAKE CHANGES BY REGULATION;~~

D. THE LEGISLATION WOULD ADDRESS INVOICING REQUIREMENTS, INCLUDING AUTHORITY TO PRESCRIBE HOW THE REBATE IS TO APPEAR ON CONSUMER ELECTRICITY BILLS;
E. THE LEGISLATION WOULD INCLUDE AUTHORITY TO PRESCRIBE THE WAY IN WHICH THE REBATE IS TO BE FLOWED THROUGH TO CONSUMERS, AND THE WAY IN WHICH ELECTRICITY VENDORS PROVIDING THE REBATE ARE TO BE REIMBURSED;
F. THE LEGISLATION WOULD INCLUDE RECORD-KEEPING REQUIREMENTS FOR ELECTRICITY VENDORS AND ANY OTHER PRESCRIBED PERSONS; AND
G. THE LEGISLATION WOULD INCLUDE INSPECTION POWERS FOR INSPECTORS APPOINTED BY THE MINISTER OF FINANCE, INCLUDING POWERS RELATED TO RECOVERY OF OVERPAYMENTS.

3. ENERGY AMEND O. REG. 429/04 (ADJUSTMENTS UNDER SECTION 25.33 OF THE ACT) MADE UNDER THE ELECTRICITY ACT, 1998 TO EXPAND ELIGIBILITY FOR CLASS A CONSUMERS AND CLASS A MARKET PARTICIPANTS UNDER THE INDUSTRIAL CONSERVATION INITIATIVE (ICI) TO ALL ELECTRICITY CONSUMERS AND MARKET PARTICIPANTS WITH A PEAK DEMAND ABOVE AN AVERAGE OF ONE MEGAWATT (1MW) WITH NO SECTORAL RESTRICTIONS ON PARTICIPATION.
4. ENERGY AMEND O. REG 442/01 (RURAL OR REMOTE ELECTRICITY RATE PROTECTION) MADE UNDER THE ONTARIO ENERGY BOARD ACT, 1998 TO INCREASE THE TOTAL AMOUNT OF RATE PROTECTION AVAILABLE TO LOW DENSITY HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE RATE PROTECTION PROGRAM BY $110 MILLION, EFFECTIVE JANUARY 1, 2017.
5. ENERGY CONSIDER AND, IF APPROPRIATE, UTILIZE A MECHANISM TO PERIODICALLY ADJUST THE TOTAL ANNUAL AMOUNT OF RATE PROTECTION AVAILABLE TO HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE ELECTRICITY RATE PROTECTION REGULATION / PROGRAM, EFFECTIVE JANUARY 1, 2018.
6. ENERGY TO RECYCLE UP TO AN AVERAGE OF $270 MILLION OF CAP AND TRADE AUCTION PROCEEDS FROM THE GREENHOUSE GAS REDUCTION ACCOUNT PER YEAR OVER THE FIRST COMPLIANCE PERIOD (2017-2020) TO COMMERCIAL AND INDUSTRIAL ELECTRICITY CONSUMERS.
7. ENERGY AND MOF TO WORK WITH CABINET OFFICE (CO) AND PREMIER'S OFFICE (PO) ON COMMUNICATIONS PLAN.

**Tab x**

## APPENDIX B: BACKGROUND – ONTARIO CLEAN ENERGY BENEFIT

- OCEB was in effect from 2011 to 2015, and provided residential, farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax.
    - Effective September 2012 electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month.
- OCEB helped Ontario families through the transition to a more reliable and cleaner electricity system, with the monthly cap balancing the fiscal implications of providing electricity relief.
- OCEB costs totalled $1,006 million in 2013-14 and $1,078 million in 2014-15, with a projected cost for 2015-16 of $860 million (for the 9 months remaining in the program).

| **Eligible Consumers** | |
|---|---|
| **Categories Listed in Legislation (coincides with categories eligible for RPP)** | |
| **Residential** | • a dwelling<br>• a property within the meaning of the Condominium Act, 1998<br>• a residential complex, within the meaning of the Residential Tenancies Act, 2006<br>• a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the Co-operative Corporations Act |
| **Farms** | • carries on a business that is a farming business for the purposes of the Farm Registration and Farm Organizations Funding Act, 1993, and<br>• holds a valid registration number assigned under that Act or the consumer's obligation to file a farming business registration form was waived pursuant to an order made under subsection 22 (6) of that Act |
| **Demand for electricity of 50 kW or less, or consumes not more than 250,000 kWh annually** | Would include small business, smaller broader- public-sector entities, and other small users. |
| **Special Cases (not eligible for RPP, but eligible for OCEB)** | |
| **Consumers On Retail Contracts** | Includes consumers with existing retail contracts and those who sign them during the duration of the program. |
| **Cornwall Electric and Hydro One Remote Communities Inc.** | Included since they are licensed distributors. |
| **Other Consumers Prescribed by Regulation** | 10 First Nations remote unlicensed distributors have been added by regulation. |
| **Exclusions** | |
| **Generators** | Generation station service and the microFIT distribution service charge are excluded in legislation. |

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Ronald Kwan |
| **Cc:** | Tomasz Bugajski; Shajee Kathirgamanathan |
| **Subject:** | RE: Cabinet note |
| **Date:** | Friday, September 09, 2016 10:19:14 AM |

Sure, we will wait for your response back.

John.

---

**From:** Ronald Kwan
**Sent:** Friday, September 09, 2016 10:09 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Cabinet note

Hi,

Let me review that. I think their estimates may have been based on OCEB anyway, so may need to rephrase.

Ron

On Sep 9, 2016, at 9:41 AM, John Kim <John.Kim@ofina.on.ca> wrote:

> Thanks Ron. Pls. see attached addressing your comments.
>
> We have put in a bullet in the Consideration section about the 64-68 TWh in OCEB range and that it could represent 10-17% higher program cost. Hope that was okay with you.
>
> John.
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Friday, September 09, 2016 8:36 AM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
> **Subject:** RE: Cabinet note
>
> Hi John,
>
> A few quick comments on the note and Minute.
>
> Ron
>
> ---

**From:** John Kim
**Sent:** September-08-16 9:09 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Cabinet note

Hi Ron,

Pls. see attached updated note. It's not clear if this item will stay on the agenda tomorrow afternoon for the TBS DM briefing but we would like to get it done and send to TBS for the record.

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** Wednesday, September 07, 2016 2:51 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Cabinet note

Hi John,

I did not have time for a full review. I made a few quick suggestions. Is this briefing still happening?

Ron

---

**From:** John Kim
**Sent:** September 7, 2016 7:00 AM
**To:** Ronald Kwan
**Cc:** Tomasz Bugajski; Shajee Kathirgamanathan
**Subject:** Cabinet note

Hi Ron,

Pls. see attached draft note we intend to use for Associate briefing today at 4pm.

Thanks,

John.

Y. John Kim
Director(A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

<Cabinet Note - Electricity Price Mitigation v9.docx>

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | John Kim |
| **Subject:** | RE: Case Examples Impacts of Electricity Relief and Tax Credits Sept 16 201 .docx |
| **Date:** | Tuesday, September 20, 2016 5:45:38 PM |
| **Attachments:** | Case Examples Impacts of Electricity Relief and Tax Credits Sept 16 2016_Markup,SPFB,EFB.docx |

I've added a bunch of comments. Lots of issues.

If there was the same issue for all 4 charts, I just put it in a comment box once.

Please see attached or found here:
S:\Users\CEF\Hydro 2016\Branch_EFB\Branch Input\Case Impacts of Electricity Relief - input for TPD\Case Examples Impacts of Electricity Relief and Tax Credits Sept 16 2016_Markup,SPFB,EFB.docx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Tuesday, September 20, 2016 1:25 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** FW: Case Examples Impacts of Electricity Relief and Tax Credits Sept 16 201 .docx

Could you add to this so we have one version?

---

**From:** Emily Kerr
**Sent:** Tuesday, September 20, 2016 1:25 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>
**Subject:** RE: Case Examples Impacts of Electricity Relief and Tax Credits Sept 16 201 .docx

Hi John,

We had the attached comments on the electricity price examples from tax. Would you want to consolidate these with your comments?

Emily

---

**From:** Ronald Kwan
**Sent:** Monday, September 19, 2016 5:55 PM

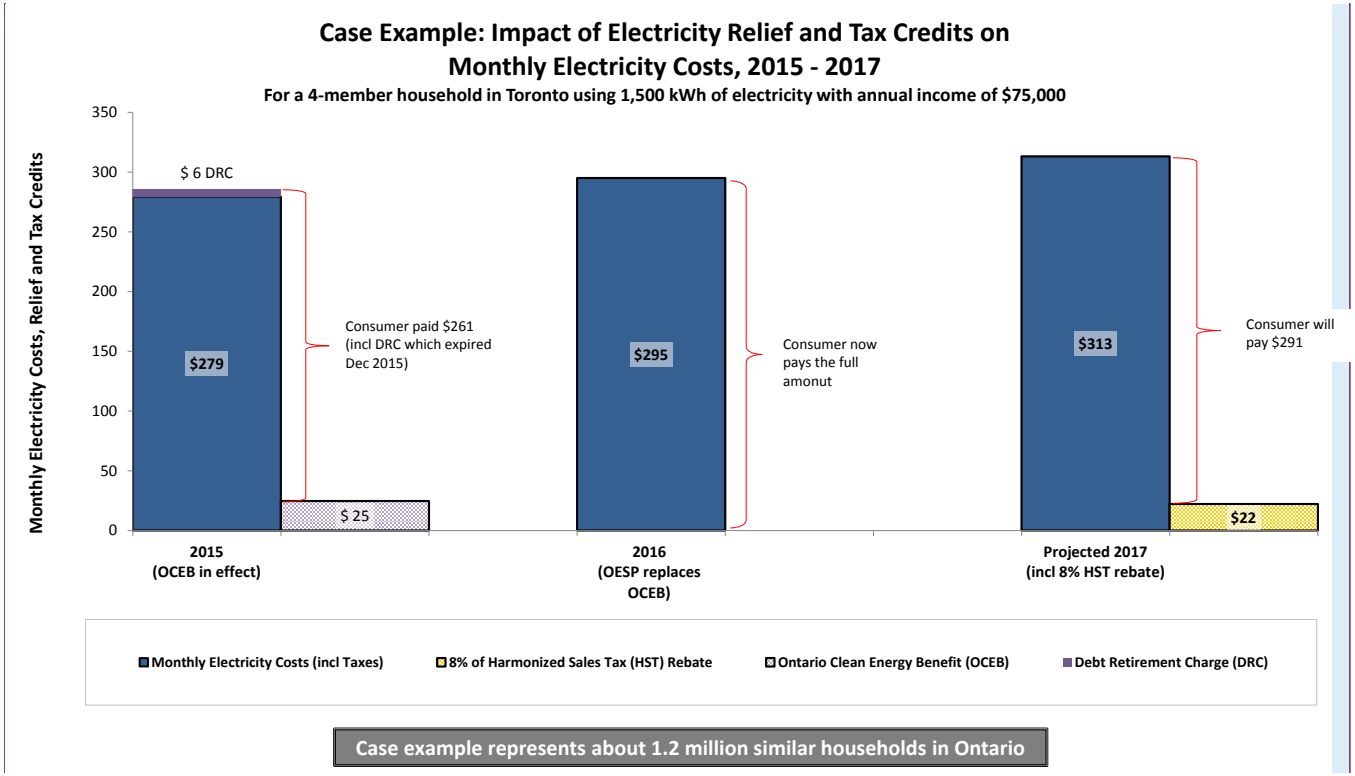
**To:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Case Examples Impacts of Electricity Relief and Tax Credits Sept 16 201 .docx

Hi,

See attached from Tax.

Please review and provide comments and any potential suggested revisions.

Thanks,
Ron




**Source: Ministry of Finance estimates**

**NOTES:**

1. Case example assumes the family owns a house in Toronto and pays property taxes worth about $3,500.
2. Case example family has an electricity meter with the Toronto Hydro.
3. Monthly electricity costs are based on OEB bill calculator, with a 'time-of-use' pattern (off-peak 62%, mid-peak 23% and on-peak 15%) and total electricity usage of 1,500 kWh. Sensitivity analysis on 'time-of-use' patterns and electricity usage shows minimal differences in monthly costs.
4. ~~According to the Ontario Energy Board (OEB), a~~A ~~similar family type~~ consumer using 1,500 kWh~~to the case example~~ paid ~~about~~ $10.50~~6~~ per month in 2015 for the DRC.
5. Case example family receives full OCEB benefits in 2015. The OCEB provided a 10% rebate on the first 3,000 kWh of electricity usage
6. For 2016 and 2017, the case example family is not entitled to any OESP payments. (The OESP cut-off is $52,000).
7. Case example family at its current income level is not entitled to OSTC and ~~PEPTC~~OEPTC.
8. Case example family does not receive the Northern Ontario Energy Credit (NOEC) as they live in Toronto, Ontario.

**Commented [SK21]:** **Same issues for all the charts:** What is the source of the Monthly Electricity Costs in 2015, 2016 and 2017?

**Commented [SK22]:** 1,500 kWh seems high for Toronto. Presumably natural gas heating rather than electric heating.

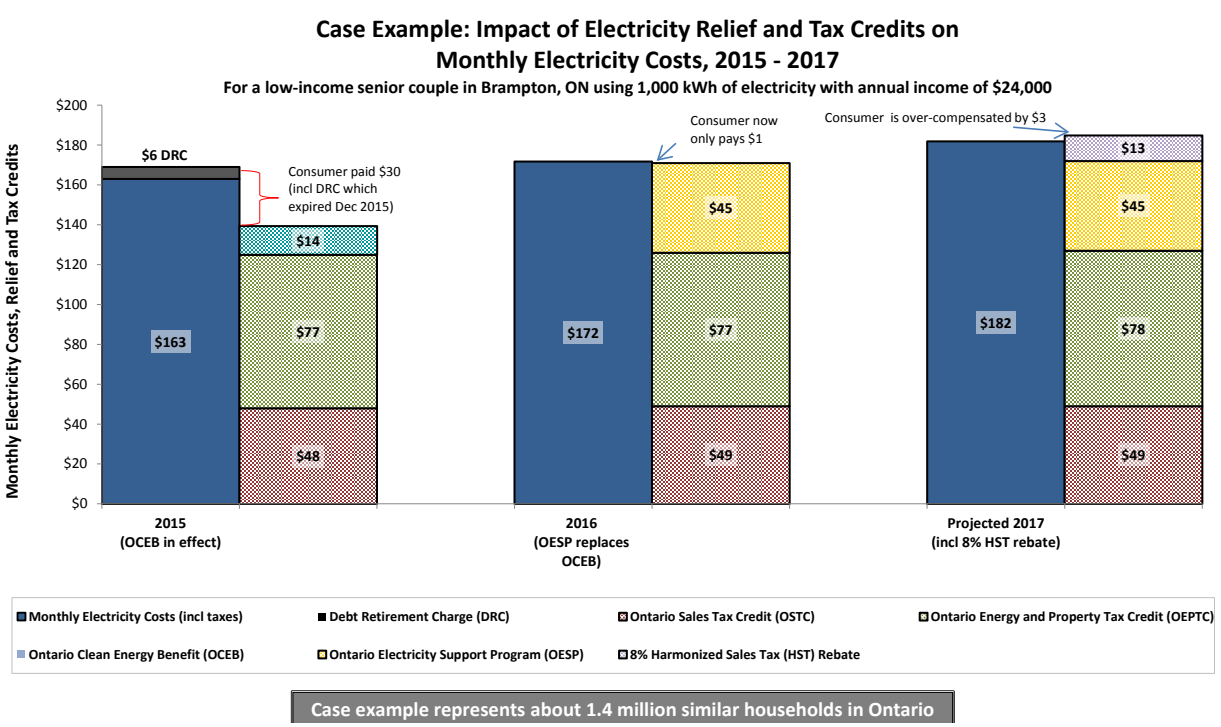
**Same issues for all four charts:** The title for the 2016 bar says 'OESP replaces OCEB'. This is an inaccurate statement, suggest deletion.

The title for the 2017 bar says 'incl. 8% HST rebate'. Should read instead: including 8% Provincial HST".

**Commented [EK3]:** 2015: DRC was $10.50 per month before tax for a consumer using 1,500 kWh per month. Total electricity bill before OCEB is $279 + $10.50(+tax) = $289.50. Therefore, OCEB amount is $29.

Is there a source for there being 1.2 million urban households at an income level of $75,000?

In general, the total number of similar households for the examples in this document seems high. According to the values in this document the total number of households represented in the four examples is six million. There are about five million households in Ontario, which would include other household types not represented by the examples given in this document.




**Source: Ministry of Finance estimates**

**NOTES:**

1. Case example assumes the couple rents an apartment in Brampton, ON with a separate meter with Hydro One Brampton Network Inc.
2. Monthly electricity costs based on OEB bill calculator, with a 'time-of-use' pattern (off-peak 75%, mid-peak 20% and on-peak 5%) [what's the assumption behind this off-mid-on peak distribution of consumption] and total electricity usage of 1,000 kWh [what is the justification for 1,000 kWh]. Sensitivity analysis on 'time-of-use' patterns and electricity usage shows minimal differences in monthly costs.
3. ~~According to the Ontario Energy Board (OEB), a similar family type to the case example~~A consumer using 1,000 kWh paid ~~about~~ $~~6~~7 per month in 2015 for the DRC.
4. Case example family receives full OCEB benefits in 2015. The OCEB provided a 10% rebate on the first 3,000 kWh of electricity usage
5. For 2016 and 2017, the case example family is entitled to higher ~~high-intensity~~ OESP payments as an energy intensive user.
6. The OSTC and OEPTC [please confirm] is not fully attributable to offsetting the impact of ~~increasing~~ electricity prices.
7. OEPTC estimate is based on property tax information of similar families living in Brampton with similar incomes and household sizes.
8. Case example family does not receive the Northern Ontario Energy Credit (NOEC) as they live in Brampton, ON; nor the Ontario Senior Homeowners' Property Tax Grant (OSHPTG) as they are renters and do not directly pay property taxes.

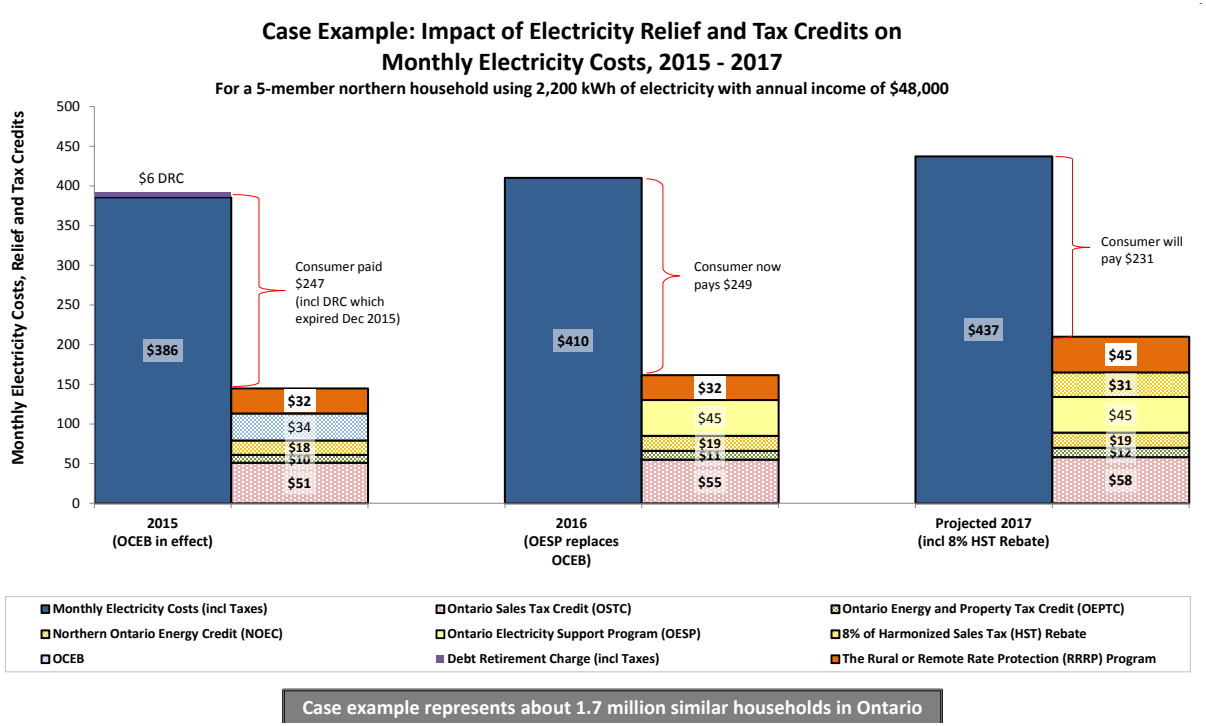
**Commented [SK24]:** **Same issues for all four charts:**
Is there any desire to distinguish taxpayer funded benefits and ratepayer funded benefits? (Just a suggestion)

**Commented [SK25]:**
**Same issues for all four charts:**
OSTC, and OEPTC are not fully attributable to offsetting electricity costs. It's distortionary to indicate that consumers are 'only' paying $30, or $1 or over-compensated by $3.

**Commented [EK6]:** 2015: DRC was $7 per month before tax for a consumer using 1,000 kWh per month. Total electricity bill before OCEB is $163 + $7(+tax) = $170. Therefore, OCEB amount is $17.

What is the source for 1.4 million low-income urban households which qualify for higher OESP payments?

Higher OESP payments are only available to households with electric heating, or that use medical devices requiring a lot of power, or First Nations and Métis households. Assuming the higher OESP payments limits the generality of this example. There wouldn't be 1.4 million households that qualify for higher OESP payments.




**Source: Ministry of Finance estimates**

**NOTES:**

1. Case example assumes the family lives in northern Ontario, owns a house that is heated with electricity. In low density, rural areas, reliance on electricity for home heating is more common.
2. Case example family is a ~~client~~ customer of the Northern Ontario Wires Inc. [Suggest using Hydro One Year-Round Low Density, R2 example instead of Northern Ontario Wires Inc.]
3. Monthly electricity costs based on OEB bill calculator, with a 'time-of-use' pattern (off-peak 65%, mid-peak 15% and on-peak 20%) [whats the reason for this TOU distribution?] and total electricity usage of 2,200 kWh [where does this come from?]. Sensitivity analysis on 'time-of-use' patterns and electricity usage shows minimal differences in monthly costs.
4. ~~According to the Ontario Energy Board (OEB), a similar family type to the case example~~ A consumer using 2,200 kWh paid ~~about~~ $~~6~~15.40 per month in 2015 for the DRC.
5. Case example family receives full OCEB benefits in 2015. The OCEB provided a 10% rebate on the first 3,000 kWh of electricity usage
6. For 2016 and 2017, the case example family is entitled to higher ~~high-intensity~~ OESP payments as an energy intensive user.
7. The OSTC, NOEC and OEPTC is not fully attributable to offsetting the impact of ~~increasing~~ electricity prices.
8. OEPTC estimate is based on property tax information of similar families living in northern Ontario with similar incomes and household sizes.

**Commented [SK27]:** Just a minor suggestion, but using more distinctive colours would make it easier to attribute the benefit amount/bar chart with legend. There are 3 yellow-beige colours (particularly in the 3rd bar) that are almost indistinguishable.

**Commented [SK28]:** RRRP in 2017 should be ~$60/month.

The news releases mentioned $45 when referencing the benefit caused by BOTH the 8% rebate (assuming 1000kWh/month) and RRRP expansion.

**Commented [SK29]:** The discount Provided by RRRP is already embedded in the price of the bill (ie. if it wasn't for the RRRP reducing the bill, the blue chart would otherwise be higher).

In other words, by adding the orange bar, the impact of RRRP is being counted twice in these illustrations.

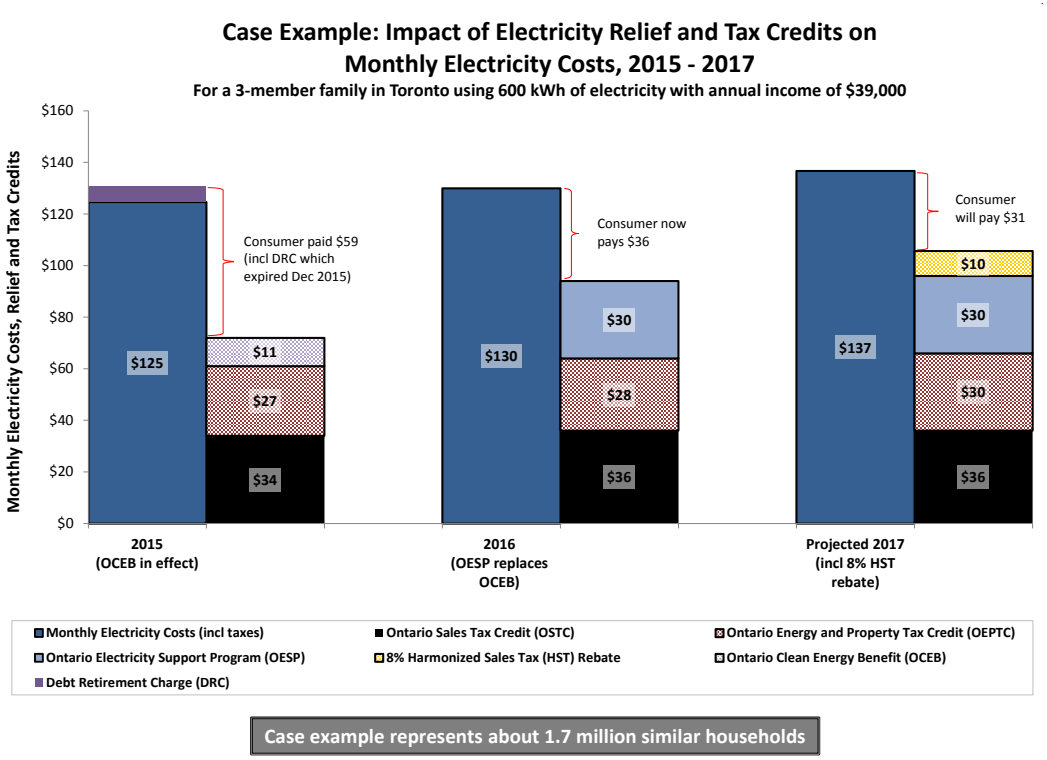
**Commented [SK210]:** Northern Ontario Wires customers not eligible for increased RRRP payments, only Hydro One R2 customers.

See Northern Ontario Wires rate application:
http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/520947/view/dec_ro_NOW_20160317.PDF

Vs Hydro One
http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/512951/view/Rate_Order_HONI_Dx_20160114.PDF (pg 10 of PDF)

**Commented [EK11]:** 2015: DRC was $15.40 per month before tax for a consumer using 2,200 kWh per month. Total electricity bill before OCEB is $386 + $15.40(+tax) = $401.40. Therefore, OCEB amount is $40.

What is the source for 1.7 million northern households?




**Source: Ministry of Finance estimates**

**NOTES:**

1. Case example assumes the family lives in Toronto, owns a house and pays about $2,800 in property taxes.
2. Case example family is a ~~client~~ customer of ~~the~~ Toronto Hydro.
3. Monthly electricity costs based on OEB bill calculator, with a 'time-of-use' pattern (off-peak 70%, mid-peak 17% and on-peak 10%) [whats the source of this amount?] and total electricity usage ~~-~~of ~~-~~600 kWh [Whats the source of this amount]. Sensitivity analysis on 'time-of-use' patterns and electricity usage shows minimal differences in monthly costs.
4. ~~According to the Ontario Energy Board (OEB), a similar family type to the case example~~ A consumer using 600 kWh paid ~~about~~ $~~6~~4.20 per month in 2015 for the DRC.
5. Case example family receives full OCEB benefits in 2015. The OCEB provided a 10% rebate on the first 3,000 kWh of electricity usage
6. For 2016 and 2017, the case example family is entitled to regular OESP payments.
7. The OSTC and OEPTC is not fully attributable to offsetting the impact of ~~increasing~~ electricity prices.
8. OEPTC estimate is based on property tax information of similar families living in Toronto with similar incomes and household sizes.

**Commented [SK212]:** Just a suggestion, if the benefit doesn't apply in this scenario, remove it from the legend.

**Commented [SK213]:** Just a suggestion, use similar colours as above for the same credit/benefit. Eg. if OSTC is black here, it should be black in all charts above.

**Commented [SK214]:** What is the source for the 1.7 similar households.

Also what is the definition of 'similar'? (3-member family, in Toronto, 600kWh, $39K).

**Commented [EK15]:** 2015: DRC was $4.20 per month before tax for a consumer using 2,200 kWh per month. Total electricity bill before OCEB is $125 + $4.20(+tax) = $401.40. Therefore, OCEB amount is $13.

| | |
|---|---|
| **From:** | Emily Kerr |
| **To:** | Ronald Kwan; Sandy Roberts; John Kim; Shajee Kathirgamanathan |
| **Cc:** | Tomasz Bugajski |
| **Subject:** | RE: Case Examples Impacts of Electricity Relief and Tax Credits Sept 16 201 .docx |
| **Date:** | Tuesday, September 20, 2016 11:20:22 PM |
| **Attachments:** | Case Examples Impacts of Electricity Relief and Tax Credits Sept 16 2016....docx |

Hi Ron,

Comments on the electricity price examples from tax are attached.

Emily

---

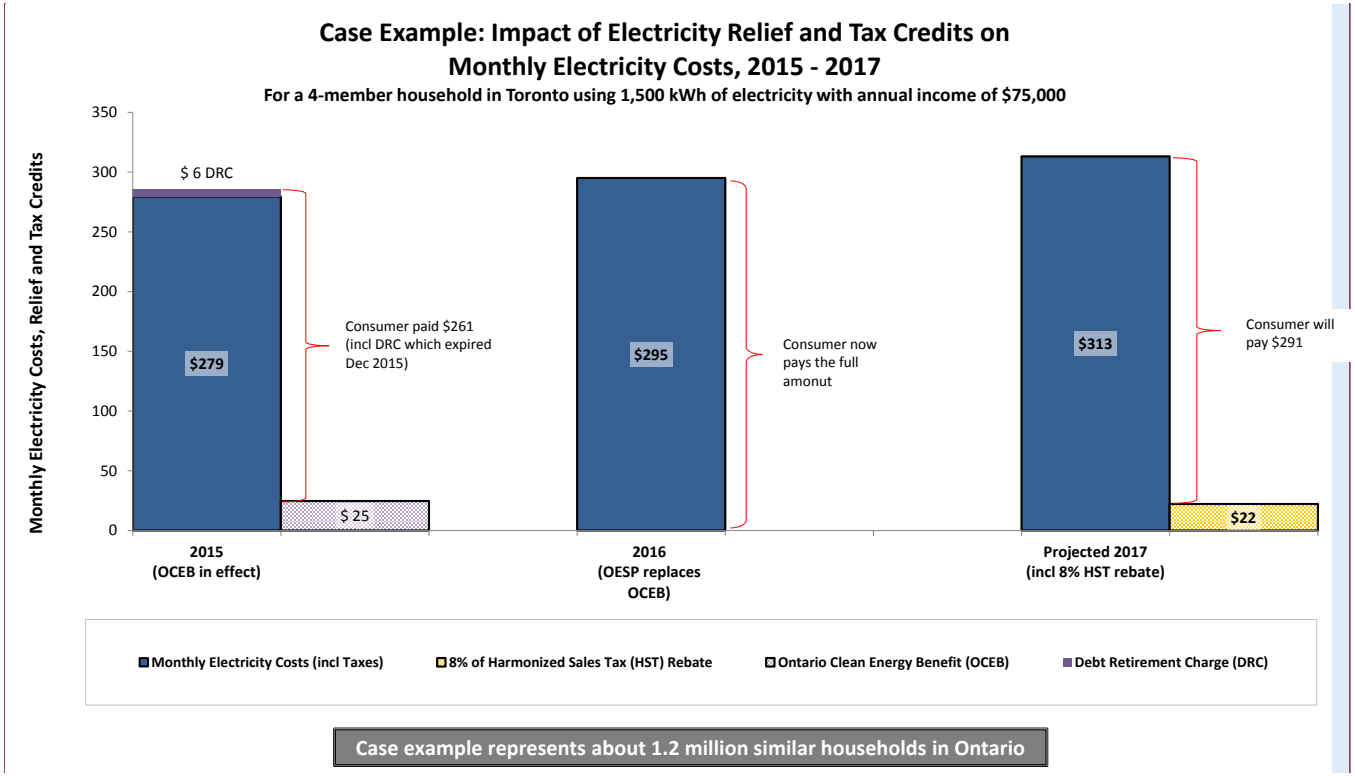
**From:** Ronald Kwan
**Sent:** Monday, September 19, 2016 5:55 PM
**To:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Case Examples Impacts of Electricity Relief and Tax Credits Sept 16 201 .docx

Hi,

See attached from Tax.

Please review and provide comments and any potential suggested revisions.

Thanks,
Ron




**Source: Ministry of Finance estimates**

**NOTES:**

1. Case example assumes the family owns a house in Toronto and pays property taxes worth about $3,500.
2. Case example family has an electricity meter with the Toronto Hydro.
3. Monthly electricity costs are based on OEB bill calculator, with a 'time-of-use' pattern (off-peak 62%, mid-peak 23% and on-peak 15%) and total electricity usage of 1,500 kWh. Sensitivity analysis on 'time-of-use' patterns and electricity usage shows minimal differences in monthly costs.
4. ~~According to the Ontario Energy Board (OEB), a~~A ~~similar family type~~ consumer using 1,500 kWh~~to the case example~~ paid ~~about~~ $10.50~~6~~ per month in 2015 for the DRC.
5. Case example family receives full OCEB benefits in 2015. The OCEB provided a 10% rebate on the first 3,000 kWh of electricity usage
6. For 2016 and 2017, the case example family is not entitled to any OESP payments. (The OESP cut-off is $52,000).
7. Case example family at its current income level is not entitled to OSTC and ~~PEPTC~~OEPTC.
8. Case example family does not receive the Northern Ontario Energy Credit (NOEC) as they live in Toronto, Ontario.

**Commented [SK21]:** **Same issues for all the charts:** What is the source of the Monthly Electricity Costs in 2015, 2016 and 2017?

**Commented [SK22]:** 1,500 kWh seems high for Toronto. Presumably natural gas heating rather than electric heating.

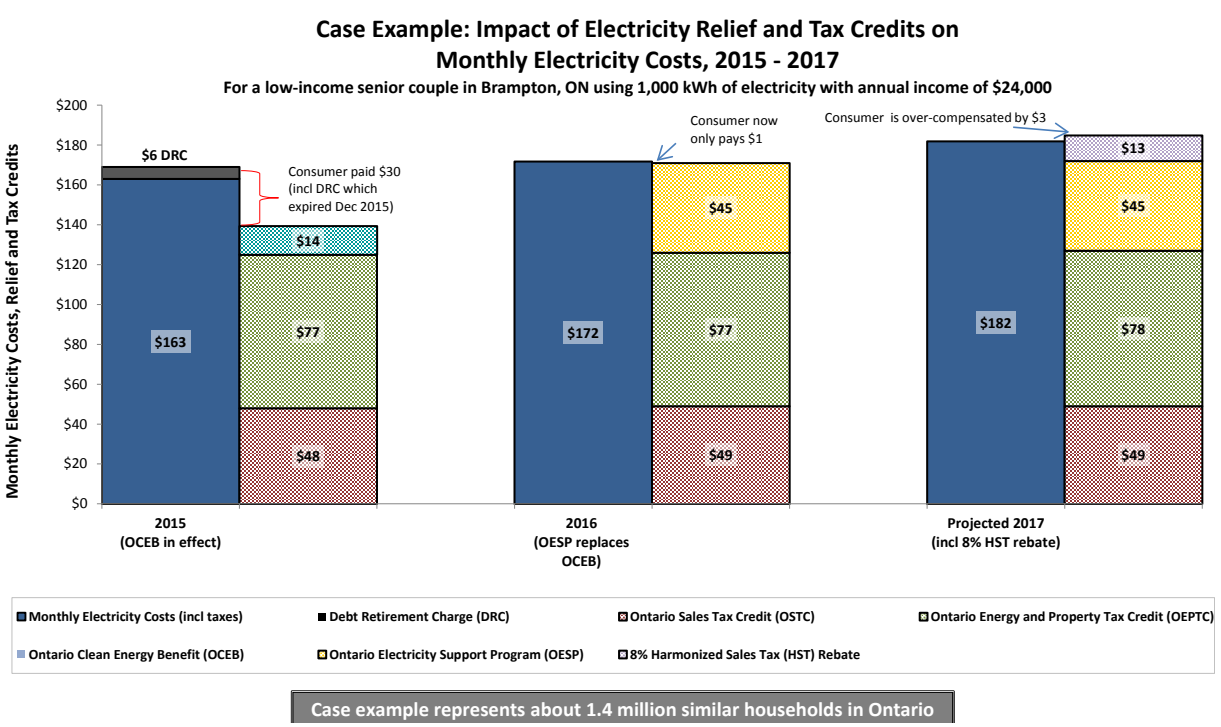
**Same issues for all four charts:** The title for the 2016 bar says 'OESP replaces OCEB'. This is an inaccurate statement, suggest deletion.

The title for the 2017 bar says 'incl. 8% HST rebate'. Should read instead: including 8% Provincial HST".

**Commented [EK3]:** 2015: DRC was $10.50 per month before tax for a consumer using 1,500 kWh per month. Total electricity bill before OCEB is $279 + $10.50(+tax) = $289.50. Therefore, OCEB amount is $29.

Is there a source for there being 1.2 million urban households at an income level of $75,000?

In general, the total number of similar households for the examples in this document seems high. According to the values in this document the total number of households represented in the four examples is six million. There are about five million households in Ontario, which would include other household types not represented by the examples given in this document.




**Source: Ministry of Finance estimates**

**NOTES:**

1. Case example assumes the couple rents an apartment in Brampton, ON with a separate meter with Hydro One Brampton Network Inc.
2. Monthly electricity costs based on OEB bill calculator, with a 'time-of-use' pattern (off-peak 75%, mid-peak 20% and on-peak 5%) [what's the assumption behind this off-mid-on peak distribution of consumption] and total electricity usage of 1,000 kWh [what is the justification for 1,000 kWh]. Sensitivity analysis on 'time-of-use' patterns and electricity usage shows minimal differences in monthly costs.
3. ~~According to the Ontario Energy Board (OEB), a similar family type to the case example~~A consumer using 1,000 kWh paid ~~about~~ $~~6~~7 per month in 2015 for the DRC.
4. Case example family receives full OCEB benefits in 2015. The OCEB provided a 10% rebate on the first 3,000 kWh of electricity usage
5. For 2016 and 2017, the case example family is entitled to higher ~~high-intensity~~ OESP payments as an energy intensive user.
6. The OSTC and OEPTC [please confirm] is not fully attributable to offsetting the impact of ~~increasing~~ electricity prices.
7. OEPTC estimate is based on property tax information of similar families living in Brampton with similar incomes and household sizes.
8. Case example family does not receive the Northern Ontario Energy Credit (NOEC) as they live in Brampton, ON; nor the Ontario Senior Homeowners' Property Tax Grant (OSHPTG) as they are renters and do not directly pay property taxes.

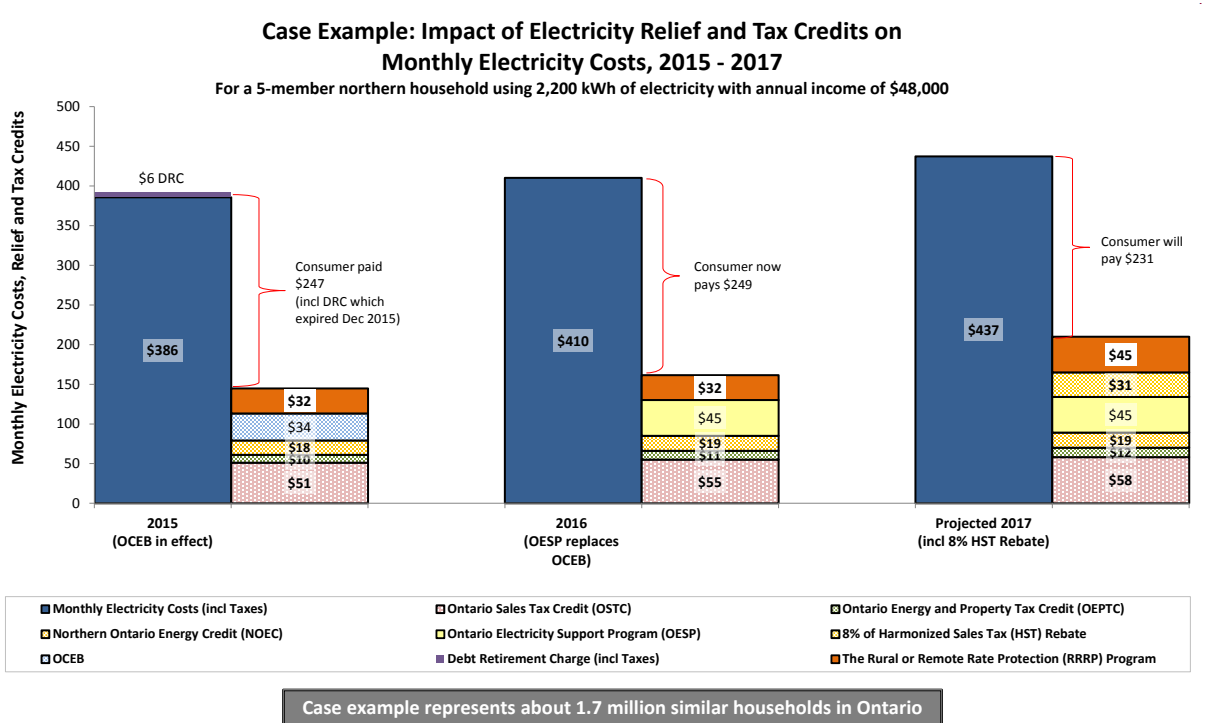
**Commented [SK24]:** **Same issues for all four charts:**
Is there any desire to distinguish taxpayer funded benefits and ratepayer funded benefits? (Just a suggestion)

**Commented [SK25]:**
**Same issues for all four charts:**
OSTC, and OEPTC are not fully attributable to offsetting electricity costs. It's distortionary to indicate that consumers are 'only' paying $30, or $1 or over-compensated by $3.

**Commented [EK6]:** 2015: DRC was $7 per month before tax for a consumer using 1,000 kWh per month. Total electricity bill before OCEB is $163 + $7(+tax) = $170. Therefore, OCEB amount is $17.

What is the source for 1.4 million low-income urban households which qualify for higher OESP payments?

Higher OESP payments are only available to households with electric heating, or that use medical devices requiring a lot of power, or First Nations and Métis households. Assuming the higher OESP payments limits the generality of this example. There wouldn't be 1.4 million households that qualify for higher OESP payments.




**Source: Ministry of Finance estimates**

**NOTES:**

1. Case example assumes the family lives in northern Ontario, owns a house that is heated with electricity. In low density, rural areas, reliance on electricity for home heating is more common.
2. Case example family is a ~~client~~ customer of the Northern Ontario Wires Inc. [Suggest using Hydro One Year-Round Low Density, R2 example instead of Northern Ontario Wires Inc.]
3. Monthly electricity costs based on OEB bill calculator, with a 'time-of-use' pattern (off-peak 65%, mid-peak 15% and on-peak 20%) [whats the reason for this TOU distribution?] and total electricity usage of 2,200 kWh [where does this come from?]. Sensitivity analysis on 'time-of-use' patterns and electricity usage shows minimal differences in monthly costs.
4. ~~According to the Ontario Energy Board (OEB), a similar family type to the case example~~ A consumer using 2,200 kWh paid ~~about~~ $~~6~~15.40 per month in 2015 for the DRC.
5. Case example family receives full OCEB benefits in 2015. The OCEB provided a 10% rebate on the first 3,000 kWh of electricity usage
6. For 2016 and 2017, the case example family is entitled to higher ~~high-intensity~~ OESP payments as an energy intensive user.
7. The OSTC, NOEC and OEPTC is not fully attributable to offsetting the impact of ~~increasing~~ electricity prices.
8. OEPTC estimate is based on property tax information of similar families living in northern Ontario with similar incomes and household sizes.

**Commented [SK27]:** Just a minor suggestion, but using more distinctive colours would make it easier to attribute the benefit amount/bar chart with legend. There are 3 yellow-beige colours (particularly in the 3rd bar) that are almost indistinguishable.

**Commented [SK28]:** RRRP in 2017 should be ~$60/month.

The news releases mentioned $45 when referencing the benefit caused by BOTH the 8% rebate (assuming 1000kWh/month) and RRRP expansion.

**Commented [SK29]:** The discount Provided by RRRP is already embedded in the price of the bill (ie. if it wasn't for the RRRP reducing the bill, the blue chart would otherwise be higher).

In other words, by adding the orange bar, the impact of RRRP is being counted twice in these illustrations.

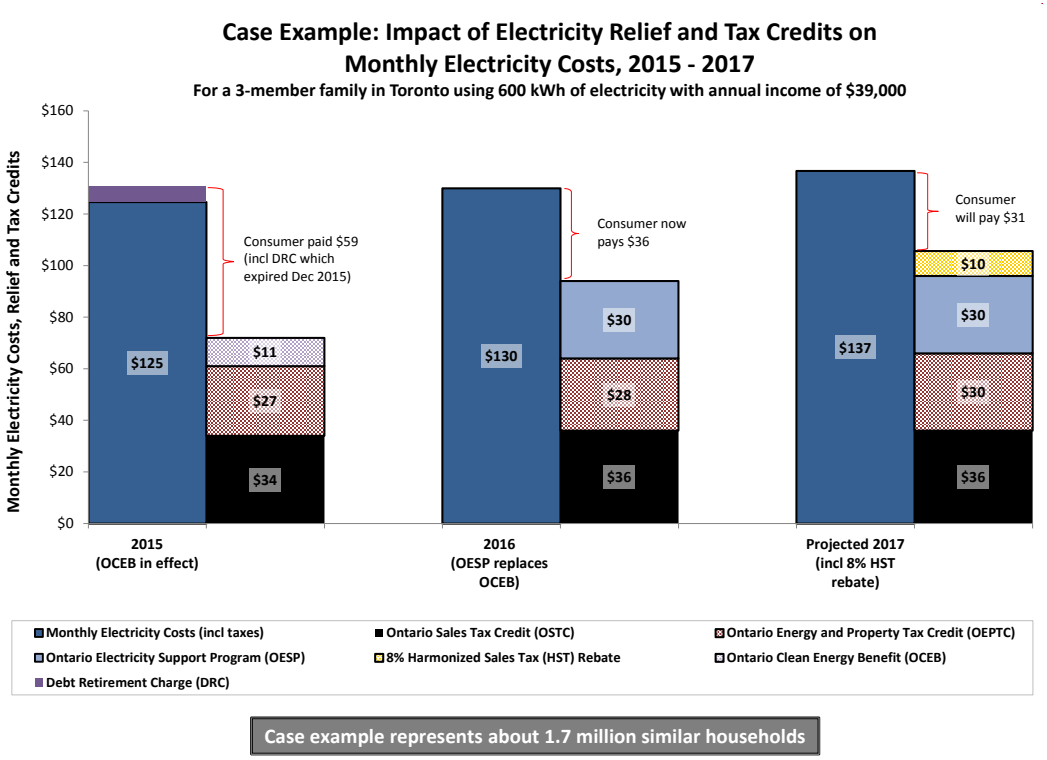
**Commented [SK210]:** Northern Ontario Wires customers not eligible for increased RRRP payments, only Hydro One R2 customers.

See Northern Ontario Wires rate application:
http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/520947/view/dec_ro_NOW_20160317.PDF

Vs Hydro One
http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/512951/view/Rate_Order_HONI_Dx_20160114.PDF (pg 10 of PDF)

**Commented [EK11]:** 2015: DRC was $15.40 per month before tax for a consumer using 2,200 kWh per month. Total electricity bill before OCEB is $386 + $15.40(+tax) = $401.40. Therefore, OCEB amount is $40.

What is the source for 1.7 million northern households?




**Source: Ministry of Finance estimates**

**NOTES:**

1. Case example assumes the family lives in Toronto, owns a house and pays about $2,800 in property taxes.
2. Case example family is a ~~client~~ customer of ~~the~~ Toronto Hydro.
3. Monthly electricity costs based on OEB bill calculator, with a 'time-of-use' pattern (off-peak 70%, mid-peak 17% and on-peak 10%) [whats the source of this amount?] and total electricity usage ~~-~~of ~~-~~600 kWh [Whats the source of this amount]. Sensitivity analysis on 'time-of-use' patterns and electricity usage shows minimal differences in monthly costs.
4. ~~According to the Ontario Energy Board (OEB), a similar family type to the case example~~ A consumer using 600 kWh paid ~~about~~ $~~6~~4.20 per month in 2015 for the DRC.
5. Case example family receives full OCEB benefits in 2015. The OCEB provided a 10% rebate on the first 3,000 kWh of electricity usage
6. For 2016 and 2017, the case example family is entitled to regular OESP payments.
7. The OSTC and OEPTC is not fully attributable to offsetting the impact of ~~increasing~~ electricity prices.
8. OEPTC estimate is based on property tax information of similar families living in Toronto with similar incomes and household sizes.

**Commented [SK212]:** Just a suggestion, if the benefit doesn't apply in this scenario, remove it from the legend.

**Commented [SK213]:** Just a suggestion, use similar colours as above for the same credit/benefit. Eg. if OSTC is black here, it should be black in all charts above.

**Commented [SK214]:** What is the source for the 1.7 similar households.

Also what is the definition of 'similar'? (3-member family, in Toronto, 600kWh, $39K).

**Commented [EK15]:** 2015: DRC was $4.20 per month before tax for a consumer using 2,200 kWh per month. Total electricity bill before OCEB is $125 + $4.20(+tax) = $401.40. Therefore, OCEB amount is $13.

| | |
|---|---|
| **From:** | Emily Kerr |
| **To:** | Francisco Chinchon; Ronald Kwan; John Kim |
| **Cc:** | Gavin He |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx |
| **Date:** | Thursday, January 19, 2017 1:02:21 PM |
| **Attachments:** | Comments on Energy Rate Mitigation Options_Jan 19-2017_v3_Markup.docx |

Hi,

I just made formatting changes on page 1 so that the footnotes of the table would be entirely on page 1. I also fixed a typo on page 3.

---

**From:** Francisco Chinchon
**Sent:** Thursday, January 19, 2017 12:46 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

I fixed a formatting glitch in the appendix and Gavin's comment is still there (not sure if the paragraph is to stay and the comment to go or the other way).

---

**From:** Ronald Kwan
**Sent:** Thursday, January 19, 2017 12:37 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

Further cleaned up.

Ron

---

**From:** Ronald Kwan
**Sent:** January-19-17 12:34
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

And a clean version

---

**From:** Ronald Kwan
**Sent:** January-19-17 12:32
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>

**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

Hi,

Some suggestions. Please review ASAP.

Ron

---

**From:** John Kim
**Sent:** January-19-17 11:30
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

Hi Ron,

Pls. see attached updated note.

Thanks,

John.

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Rate Mitigation Plan Options"

The Ministry of Energy (Energy) is providing potential price mitigation initiatives.

## CONTEXT

- As outlined in Energy's deck, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g., GEIA renegotiation with Samsung consortium, decreasing FIT prices, etc.).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

- A significant number of Energy's proposals involve shifting costs or risks from the rate base to the tax base. The fiscal exposure could be well over $2 billion in 2017-18.
- The largest impacts on rates and largest potential fiscal exposures are from the deferred recovery of Global Adjustment costs ($2 bn per year or more) and an enhanced, tax-base-funded 5% rebate for Regulated Price Plan (RPP) customers (about $700 million per year).
    - Significant fiscal exposure comes from proposals not yet fully costed by Energy (e.g., the Global Adjustment, with Energy to benefit from consulting with OPCD and KPMG on accounting).
    - Energy also presents other proposals where costs and impacts are not shown or "TBD".
    - Energy does not show OPG efficiencies as a fiscal risk in its table on slide 8. It is estimated at a $240 million per year exposure on slide 33.
- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,535 | 1,225 | 2,035 |

1. 2016-17, 2017-18 based on forecasted numbers

2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit NIERP – Northern Industrial Electricity Rate program DRC – Debt etirement Charge
OREC – Ont. Rebate for Electricity Consumers NOEC – Northern Ontario Energy Credit OEPTC – Ont. Energy & Property Tax Credit

**ENERGY'S BROAD POLICY THEMES / RATIONALES**

- In recognition of the costs borne by ratepayers related to the to decarbonizing and modernizing the province's electricity sector:
    1. Provide significant and immediate rate relief through cost deferral of the global adjustment (GA).
    2. Provide a greater focus on vulnerable consumers by funding electricity support programs, such as the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Protection, (RRRP) through the tax-base. In addition, provide greater support for lower income Ontarians by enhancing the OESP, etc.
    3. Empower energy agencies to increase cost effectiveness and improve efficiency by having – Independent Electricity System Operator (IESO) modernize Ontario's electricity market through electricity market renewal initiatives, the Ontario Energy Board (OEB) identify opportunities for future LDC cost reductions/efficiencies and work with Ontario Power Generation (OPG) to find further efficiencies in operations and pass on savings to ratepayers.
    4. Enhance the existing 8% rebate that went into effect January 1, 2017.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not fully address the fiscal impact/accounting treatment, or implementation<br>o Based on preliminary discussions with KPMG, Energy has identified key steps (presumably for there not to be a fiscal impact):<br>▪ need to be able to create an asset<br>▪ Need to identify an entity that could hold such an asset (e.g. OEFC, IESO or LDCs?)<br>o Energy is said to be working with LSB, IESO, MOF, TBS and external accountants on legislative, regulatory and accounting requirements<br>o Energy's deck clearly identify that under the current legal framework, the GA would not be able to recover interest costs of the deferral<br>• Likely will lead to significant annual fiscal impact and increase in net debt (illustrated as $9 Bn on slide 9, or $23 Bn on slides 11 & 12 scenarios; previously estimated by Energy to be up to $65 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement. | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • Furthermore, likely entails significant legal / Constitutional Law risks | |
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by $0.83 based on current OESP charge.**<br><br>**Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈ $1.60 in 2017, increasing to ≈ $1.80 in 2022.** | • Would provide on-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households.<br>• There may be a risk that expanding OESP or RRRP may change the view of the federal government that it is not a taxable benefit. When OESP was created, TPD worked with Finance Canada and Energy to ensure that it was not considered a taxable benefit.<br>• RRRP expansion that subsidised high-cost distribution systems may create a disincentive effect on achieving efficiencies ~~é~~and cost reductions in those LDCs (or Toronto, as the benchmark). Energy and OEB would need to address this through the regulatory system or other measures such as eligibility conditions. | <u>OESP</u><br>• 2017-18: $162 M<br>• Increasing to $323 M in 2020-21.<br><br><u>Conservation</u><br>• 2017-18: $457 M<br>• Increasing to $493 M in 2020-21 |
| **Create a new low income conservation benefit program that would build on existing programs.** | • Conservation programs provide electricity system benefits. Fiscal-funding would result in a cross-subsidisation from tax-base.<br>• Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan. | • $60 million per year. |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Enhance Tax-base RPP Rebat by 5%, to 13%** | • This proposal would increase the funding requirement of the newly established Ontario Rebate for Electricity Consumers (OREC) by about $700 million per fiscal year, to reduce an average residential bill by about $7 each month or $84 annually.<br>• The current OREC provides average savings of about $11 each month or $130 annually. | • About $700 per year |

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

**DETAIL ON ENERGY PROPOSALS INCLUDED IN THE JANUARY 18th DECK**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 1a, 1b, and low GA Financing scenario), or more (e.g., about $5.5 bn in 2017 under high GA Financing scenario), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

Under the high GA Financing scenario, now discussed in the Appendix of the latest deck, net debt could rise by $65 Bn over time, as estimated by Energy, and the cost pressure could be up to $51 per month by 2047. There would be significant interest rate exposure to the fiscal impact and accumulated debt estimates. The size of the deficit and debt impacts could affect the Province's credit rating and cost of debt.

**Commented [GH1]:** This option has been moved to the appendix section, not sure if need to be mentioned.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
    - Option 1a: Moderate GA financing, paying $3.2 and $3.4 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
    - Option 1b: Moderate GA financing, paying $1.1 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
    - Option 3: Low / GA financing – paying $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off, with limits of no more than $2 billion above the true cost of GA.
    - Option 4: High / GA financing – paying $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively, with no limits above the true cost of GA.
- It should be noted that under any of these options the relief period is quite limited when compare to the period under where future ratepayers will have to pay the cost of the deferral. Chart 1a and 1b (slides 10 and 11) illustrate that the impact of the relief would not last beyond 2022 (1a) and 2024 (1b) whill the higher cost caused by the deferral would hit electricity bills until 2042 at the least.
- Impact of the Level of Financing on Large Industrial Electricity Consumers provided in the deck was based on previous scenarios. It should be updated using above scenarios.
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].
- Preliminary discussions between CEFD and OPCD staff suggest that there are material fiscal and reporting risk associated with this proposal.

OESP & RRRP ($0.51-0.62 bn in 2017 to $0.80-0.92 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Low Income Conservation Benefit Program

- A new low income conservation benefit program would build on existing programs.
  - Existing low income programs delivered by local distribution companies and IESO help qualified homeowners and social and/or assisted housing providers improve the energy efficiency of their homes.
  - With respect to a new program Energy notes that participants could receive incentives for conservation measures not currently covered, increased incentive amounts, and targeted education and awareness initiatives.

- Energy notes an illustrative budget of $60 million per year, but states that further analysis is required on costing and implementation details, including alignment with the existing conservation framework.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.

  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
  - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
  - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

**SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION –JANUARY 18 DECK**

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| Amortize and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| RRRP | | 457 | 469 | 479 | 493 |
| OESP – Enhance Benefit | | 162 | 225 | 279 | 323 |
| Low Income Conservation Program | | 60 | 60 | 60 | 60 |
| First Nations Rate | | 18 | 18 | 18 | 18 |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Enhanced RPP Rebate | 169 | 699 | 679 | 732 | 724 |
| Proposed Program Total:[3] | **229 + GA** | **1,636 + GA** | **1,691 + GA** | **1,808 + GA** | **1,858 + GA** |
| | | | | | |

1. Based on estimated / forecasted numbers [May have some variations from the January 18 deck.]
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

## Appendix: Options not currently recommended by Energy

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | • $260 million annually from 2017-18 to 2020-21. |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion. | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC]. |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.<br>o Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base<br>• Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan | |

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
    - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
    - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
    - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
    - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
    - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Ronald Kwan; Francisco Chinchon; Emily Kerr |
| **Cc:** | Gavin He |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx |
| **Date:** | Monday, January 16, 2017 8:10:33 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v11 (CEFD)_Markup2.docx |

Corrected a couple more numbers in both tables.

Thanks,

John.

---

**From:** John Kim
**Sent:** Monday, January 16, 2017 6:52 AM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Went through the tables and double checked the numbers, also based on updated. (Sorry about the messy check file but attached, as an fyi.)

Thanks,

John.

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**From:** John Kim
**Sent:** January 16, 2017 6:21 AM
**To:** Ronald Kwan; Francisco Chinchon; Emily Kerr
**Cc:** Gavin He
**Subject:** Re: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Good morning. Just having a look now and did a file compare for everyone's convenience.

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** January 16, 2017 6:16 AM
**To:** Francisco Chinchon; John Kim; Emily Kerr

**Cc:** Gavin He
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi,

I made a couple more changes to the table at the end of the BN.

Ron

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**From:** Ronald Kwan
**Sent:** January-16-17 6:06 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi All,

I made some additional changes. Revised version attached. Please review ASAP in the morning.

Thanks,
Ron

---

**From:** Emily Kerr
**Sent:** January-15-17 9:35 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Sorry, one more change in the attached.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 8:42 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi all, I added on the TT per Ron's comment.

Francisco

On Jan 15, 2017, at 6:56 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

Hi,

Just started to review.  Looks good.

On the table, I marked out some requests – split OESP and RRRP into separate rows, and add a 17-18 fiscal cost / exposure column (including commenting more on and adding in the fiscal risk of the OPG efficiencies related proposal).  On the Trillium Trust, it might be fair to point out that Energy raises the prospect of investing in projects that would not otherwise be viewed by the OEB as projects that meet a system benefits test – so not really a rate saving if the projects would not have been done on the rate base.  Really a tax-based subsidisation for other policy reasons.

I'll review more later this evening.

Thanks,
Ron

---

**From:** Gavin He
**Sent:** January-15-17 4:40 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi Ron,

Please find attached updated notes and Energy's deck with proposed edits and comments from SIFB, EFB, and SPFB.

The files are also saved under below folder:
S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Energy_Jan16

Thanks,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge
>
>
> Sent from my iPad

<Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup2.docx>

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

- A significant number of Energy's proposals involve shifting costs from the rate base to the tax base.
- While the subset of proposals costed by Energy may have a fairly limited residential rate payer impact (e.g. about $6-7/month for residential, or less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (about $2 billion in 2017-18).
- Additional fiscal exposure comes from proposals not yet costed by Energy (e.g., conservation costs, with Energy consulting OPCD on accounting). Energy also presents other proposals where costs and impacts are "TBD".
- In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts (e.g., of about $5.5 Bn in calendar 2017) during the period that GA costs are deferred, depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,5~~32~~25 | 1,225 | 2,~~005~~035 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

## ENERGY'S BROAD POLICY THEMES / RATIONALES

A key theme / rationale cited by Energy is to no longer use the rate-base to pay for "social programs" by shifting the cost of OESP, RRRP and a proposed First Nation Rate to the tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by ≈ $0.55 in 2017, increasing to ≈ $1.45 in 2022.** | • Would provide on-bill benefits.<br><br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. | • 2017-18: $162 M<br><br>• Increasing to $322 M in 2020-21. |
| **Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈** | | • 2017-18: $666 M<br><br>• Increasing to $719 M in 2020-21 |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **$1.55 in 2017, increasing to ≈ $1.75 in 2022.** | | |
| | | |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.<br>o Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC] |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax". | • $260 million annually from |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | 2017-18 to 2020-21. |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding the Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • Current legislated March 31, 2018 end of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end.<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant annual fiscal impact and increase in net debt (estimated by Energy to be up to $66 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • Annual fiscal impact not yet determined. |

**DETAIL ON ENERGY PROPOSALS**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
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  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

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- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
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<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
    - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
    - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
    - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
    - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
    - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

<u>Departure Tax</u>:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset

by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).

- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.

- If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 2&3), or more (e.g., about $5.5 bn in 2017 under option 4), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

## SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| Conservation Funding | | TBD | TBD | TBD | TBD |
| [Trillium Trust] | 100 | 390 | 390 | 390 | 390 |
| Departure Tax | 260 | 260 | 260 | 260 | 260 |
| DRC removal for Class B | 110 | 450 | | | |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total:[3] | **530** | **2,1687** | **1,800** | **1,869602** | **1,931659** |
| | | | | | |
| Amortise and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total: | **1,225** | **2,0305** | **1,715** | **1,826** | **1,826** |
| TOTAL (Excl. GA)[3] | 1,6951,755 | 3,9334,203 | 3,2753,515 | 3,1883,695 | 3,2453,757 |

1. Based on estimated / forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**January 16, 2017**

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon; John Kim; Emily Kerr |
| **Cc:** | Gavin He |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx |
| **Date:** | Monday, January 16, 2017 6:16:26 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v11 (CEFD).docx |

Hi,

I made a couple more changes to the table at the end of the BN.

Ron

---

**From:** Ronald Kwan
**Sent:** January-16-17 6:06 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi All,

I made some additional changes. Revised version attached. Please review ASAP in the morning.

Thanks,
Ron

---

**From:** Emily Kerr
**Sent:** January-15-17 9:35 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Sorry, one more change in the attached.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 8:42 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi all, I added on the TT per Ron's comment.

Francisco

On Jan 15, 2017, at 6:56 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

Hi,

Just started to review.  Looks good.

On the table, I marked out some requests – split OESP and RRRP into separate rows, and add a 17-18 fiscal cost / exposure column (including commenting more on and adding in the fiscal risk of the OPG efficiencies related proposal).  On the Trillium Trust, it might be fair to point out that Energy raises the prospect of investing in projects that would not otherwise be viewed by the OEB as projects that meet a system benefits test – so not really a rate saving if the projects would not have been done on the rate base.  Really a tax-based subsidisation for other policy reasons.

I'll review more later this evening.

Thanks,
Ron

---

**From:** Gavin He
**Sent:** January-15-17 4:40 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi Ron,

Please find attached updated notes and Energy's deck with proposed edits and comments from SIFB, EFB, and SPFB.

The files are also saved under below folder:
S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Energy_Jan16

Thanks,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge
>
>
> Sent from my iPad

<Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup2.docx>

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

- A significant number of Energy's proposals involve shifting costs from the rate base to the tax base.
- While the subset of proposals costed by Energy may have a fairly limited residential rate payer impact (e.g. about $6-7/month for residential, or less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (about $2 billion in 2017-18).
- Additional fiscal exposure comes from proposals not yet costed by Energy (e.g., conservation costs, with Energy consulting OPCD on accounting). Energy also presents other proposals where costs and impacts are "TBD".
- In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts (e.g., of about $5.5 Bn in calendar 2017) during the period that GA costs are deferred, depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

## ENERGY'S BROAD POLICY THEMES / RATIONALES

A key theme / rationale cited by Energy is to no longer use the rate-base to pay for "social programs" by shifting the cost of OESP, RRRP and a proposed First Nation Rate to the tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by ≈ $0.55 in 2017, increasing to ≈ $1.45 in 2022.** | • Would provide on-bill benefits.<br><br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. | • 2017-18: $162 M<br><br>• Increasing to $322 M in 2020-21. |
| **Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈** | | • 2017-18: $666 M<br><br>• Increasing to $719 M in 2020-21 |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **$1.55 in 2017, increasing to ≈ $1.75 in 2022.** | | |
| | | |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.<br>o Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC] |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax". | • $260 million annually from |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | 2017-18 to 2020-21. |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding the Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • Current legislated March 31, 2018 end of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end.<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant annual fiscal impact and increase in net debt (estimated by Energy to be up to $66 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • Annual fiscal impact not yet determined. |

**DETAIL ON ENERGY PROPOSALS**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
    - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
    - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
    - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
    - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
    - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
    - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

<u>Departure Tax</u>:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset

by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).

- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.

- If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 2&3), or more (e.g., about $5.5 bn in 2017 under option 4), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

## SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| Conservation Funding | | TBD | TBD | TBD | TBD |
| [Trillium Trust] | 100 | 390 | 390 | 390 | 390 |
| Departure Tax | 260 | 260 | 260 | 260 | 260 |
| DRC removal for Class B | 110 | 450 | | | |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total:[3] | **530** | **2,167** | **1,800** | **1,602** | **1,659** |
| | | | | | |
| Amortise and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total: | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| TOTAL (Excl. GA)[3] | **1,695** | **3,933** | **3,275** | **3,188** | **3,245** |

1. Based on estimated / forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**January 16, 2017**

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon; John Kim; Emily Kerr |
| **Cc:** | Gavin He |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx |
| **Date:** | Monday, January 16, 2017 6:06:30 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v10 (CEFD).docx |

Hi All,

I made some additional changes. Revised version attached. Please review ASAP in the morning.

Thanks,
Ron

---

**From:** Emily Kerr
**Sent:** January-15-17 9:35 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Sorry, one more change in the attached.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 8:42 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi all, I added on the TT per Ron's comment.

Francisco

On Jan 15, 2017, at 6:56 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi,
>
> Just started to review. Looks good.
>
> On the table, I marked out some requests – split OESP and RRRP into separate rows, and add a 17-18 fiscal cost / exposure column (including commenting more on and adding in the fiscal risk of the OPG efficiencies related proposal). On the Trillium Trust, it might be fair to point out that Energy raises the prospect of investing in projects that would not otherwise be viewed by the OEB as projects that meet a system benefits test – so not really a rate saving if the projects would not have been done on the rate base. Really a tax-based subsidisation for other policy reasons.

I'll review more later this evening.

Thanks,
Ron

---

**From:** Gavin He
**Sent:** January-15-17 4:40 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi Ron,

Please find attached updated notes and Energy's deck with proposed edits and comments from SIFB, EFB, and SPFB.

The files are also saved under below folder:
S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Energy_Jan16

Thanks,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>

> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
>  Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge
>
>
> Sent from my iPad

<Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup2.docx>

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

- A significant number of Energy's proposals involve shifting costs from the rate base to the tax base.
- While the subset of proposals costed by Energy may have a fairly limited residential rate payer impact (e.g. about $6-7/month for residential, or less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (about $2 billion in 2017-18).
- Additional fiscal exposure comes from proposals not yet costed by Energy (e.g., conservation costs, with Energy consulting OPCD on accounting). Energy also presents other proposals where costs and impacts are "TBD".
- In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts (e.g., of about $5.5 Bn in calendar 2017) during the period that GA costs are deferred, depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

## ENERGY'S BROAD POLICY THEMES / RATIONALES

A key theme / rationale cited by Energy is to no longer use the rate-base to pay for "social programs" by shifting the cost of OESP, RRRP and a proposed First Nation Rate to the tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by ≈ $0.55 in 2017, increasing to ≈ $1.45 in 2022.** | • Would provide on-bill benefits.<br><br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. | • 2017-18: $162 M<br><br>• Increasing to $322 M in 2020-21. |
| **Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈** | | • 2017-18: $666 M<br><br>• Increasing to $719 M in 2020-21 |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **$1.55 in 2017, increasing to ≈ $1.75 in 2022.** | | |
| | | |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.<br>o Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC] |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax". | • $260 million annually from |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | 2017-18 to 2020-21. |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding the Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • Current legislated March 31, 2018 end of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end.<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant annual fiscal impact and increase in net debt (estimated by Energy to be up to $66 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • Annual fiscal impact not yet determined. |

**DETAIL ON ENERGY PROPOSALS**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
    - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
    - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
    - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
    - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
    - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
    - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

<u>Departure Tax</u>:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset

by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).

- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.

- If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 2&3), or more (e.g., about $5.5 bn in 2017 under option 4), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

## SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| Conservation Funding | | TBD | TBD | TBD | TBD |
| [Trillium Trust] | 100 | 390 | 390 | 390 | 390 |
| Departure Tax | 260 | 260 | 260 | 260 | 260 |
| DRC removal for Class B | 110 | 450 | | | |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total:[3] | **470** | **1,927** | **1,560** | **1,362** | **1,419** |
| | | | | | |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total: | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| TOTAL[3] | **1,695** | **3,933** | **3,275** | **3,188** | **3,245** |

1. Based on estimated / forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**January 16, 2017**

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Emily Kerr; Francisco Chinchon; John Kim |
| **Cc:** | Gavin He |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx |
| **Date:** | Sunday, January 15, 2017 9:35:14 PM |

Thanks Emily, Francisco.

Ron

---

**From:** Emily Kerr
**Sent:** January-15-17 9:27 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi,

I separated OESP and RRRP in the table and added a fiscal impact column to the table. I wasn't sure what to put for the section on empowering energy agencies to increase cost effectiveness and improve efficiency.

The current version of the note is attached.

Emily

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 8:42 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi all, I added on the TT per Ron's comment.

Francisco

On Jan 15, 2017, at 6:56 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi,
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> Just started to review. Looks good.
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> On the table, I marked out some requests – split OESP and RRRP into separate rows, and add a 17-18 fiscal cost / exposure column (including commenting more on and adding in the fiscal risk of the OPG efficiencies related proposal). On the Trillium Trust, it might be fair to point out that Energy raises the prospect of

investing in projects that would not otherwise be viewed by the OEB as projects that meet a system benefits test – so not really a rate saving if the projects would not have been done on the rate base.  Really a tax-based subsidisation for other policy reasons.

I'll review more later this evening.

Thanks,
Ron

---

**From:** Gavin He
**Sent:** January-15-17 4:40 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi Ron,

Please find attached updated notes and Energy's deck with proposed edits and comments from SIFB, EFB, and SPFB.

The files are also saved under below folder:
S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Energy_Jan16

Thanks,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge
>
>
> Sent from my iPad

<Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup2.docx>

| | |
|---|---|
| **From:** | Emily Kerr |
| **To:** | Francisco Chinchon; John Kim |
| **Cc:** | Ronald Kwan; Gavin He |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx |
| **Date:** | Sunday, January 15, 2017 9:35:12 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup4.docx |

Sorry, one more change in the attached.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 8:42 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
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<Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup2.docx>

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which ~~will~~is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has ~~taken steps to~~ expanded the Rural or Remote Electricity Rate Protection program, ~~expected to~~ saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $~~5~~6-~~6~~7/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (about $~~1~~2 billion ~~to $1.3 billion~~in 2017-18), with some proposals not costed (e.g., conservation costs, with Energy consulting OPCD on accounting). ~~Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion).~~ Energy also presents other proposals where costs and impacts are "TBD".

In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts of ~~up to over~~ more than $2 billion annually during the period that GA costs are deferred depending on the scenario.. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

**Commented [GH1]:** This was included in the debt-financing GA section below, so not sure if we need to mention it here.

Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Fiscal Cost |
|---|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility~~, and provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.~~** | • Would provide ~~Significant fiscal exposure – $0.4-0.45 bn at current levels, higher if enhanced.~~ oOn-bill benefits.<br>• Funding programs through tax base estimated to reduce average monthly residential bill by approximately $0.55 in 2017, increasing to approximately $1.45 in 2022.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. | • 2017-18: $162 M<br>• Increasing to $322 M in 2020-21. |
| **Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.** | • Funding programs through tax base estimated to reduce average monthly residential bill by approximately $1.55 in 2017, increasing to approximately $1.75 in 2022.<br>• Could contemplate phase-in to manage fiscal impact. | • 2017-18: $666 M<br>• Increasing to $719 M in 2020-21 |

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**Commented [RK3]:** Could we add in a fiscal cost columbn instead, to show Energy's estimated 17-18 fiscal cost, or what we think is the exposure (accounting TBC can be footnoted).

**Commented [EK4]:** Updated based on slide 12 in Energy's updated deck.

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**Commented [RK2]:** Can we split the OESP and RRRP into two rows,

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| | | |
|---|---|---|
| **Amortize ~~Fund~~ conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account. ~~programs through the tax base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time~~** | • It is unclear whether consevation costs could be amortized according to accounting standards. If this option was pursued without establishing Provincial Controller agreement on accounting, there could be a fiscal risk. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base. ~~Potentially significant fiscal impact – current program costs are about $0.45 bn~~<br>o Conservation programs do provide an electricity system benefits, but ~~would now be~~ fiscal~~ly~~-funding~~ed, so~~ would result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan | • If amortization is not permitted, 2017-18 fiscal impact of $450 M. |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value (share price) and impact fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• In the case of projects located in First Nation territories it could have an upfront fiscal impact if Province is not able to amortize those projects (TBC with OPCD).<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a windfall. It was fiscally neutral, it represented revenue to OEFC and an expense to Hydro One.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the | • $260 million annually from 2017-18 to 2020-21. |

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| | | |
|---|---|---|
| | deffered tax benefit recognized by Hydro One to ratepayers. | |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates<br>• OEB to work with OPG operational efficiencies and pass on to ratepayers | • |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding th Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • Fiscal impact not yet determined. |

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**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022~~Total of about $0.4 to 0.45 Billion/year~~):

~~This w~~Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), ~~-~~and ~~the~~ Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal

impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs. ~~Energy notes that~~
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
  - ~~The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).~~
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- ~~o~~ The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

~~Fund~~ Amortize Conservation Program~~s~~ Costs ~~through the Tax Base~~:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.
- If amortization of conservation costs was not permitted, a fiscal impact could result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

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- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

~~This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.~~

- ~~Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.~~

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that projects that the OEB does not currently consider eligible (as system benefits probably don't exceed investment costs) could be considered. This would mean moving forward projects for other policy objectives rather than rate mitigation.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

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- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income (revenue) to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income (expense) of Hydro One.
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- Having OEFC help implement this measure may require introducing changes to OEFC's objects as is legal mandate is to help reduce and pay down stranded debt.
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).

**Commented [JK5]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

**Commented [JK6]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost~~delay recovery of part~~ of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.~~by~~ This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to or more than $2 billion annually during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.

- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

~~[Check and Update]~~

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ~~OESP, RRRP, First Nation rate~~ | | ~~398~~666 | ~~419~~684 | ~~433~~700 | ~~447~~719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| ~~Conservation Programs through Tax Base~~ | ~~110~~ | ~~450~~ | ~~450~~ | ~~450~~ | ~~450~~ |
| [Trillium Trust] | ~~TBD~~100 | ~~TBD~~390 | ~~TBD~~390 | ~~TBD~~390 | ~~TBD~~390 |
| Departure Tax | 260 | ~~TBD~~260 | ~~TBD~~260 | ~~TBD~~260 | ~~TBD~~260 |
| DRC removal for Class B | 110 | 450 | | | |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total: | ~~220~~470 | ~~1,298~~1,927 | ~~869~~1,560 | ~~883~~1,362 | ~~897~~1,419 |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total:[3] | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| TOTAL[3] | 1,~~445~~695 | 3,~~303~~933 | ~~2,584~~3,275 | ~~2,709~~3,188 | ~~2,723~~3,245 |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
~~**December 12**~~**January 15, 2016**

**From:** Gavin He
**To:** John Kim
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx
**Date:** Sunday, January 15, 2017 9:30:27 PM

---

Hi John,

I was updating the table but it seems Emily already got this updated. I just reviewed her edits and they look fine to me.

Regards,
Gavin He

---

**From:** Emily Kerr
**Sent:** Sunday, January 15, 2017 9:27 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi,

I separated OESP and RRRP in the table and added a fiscal impact column to the table. I wasn't sure what to put for the section on empowering energy agencies to increase cost effectiveness and improve efficiency.

The current version of the note is attached.

Emily

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 8:42 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi all, I added on the TT per Ron's comment.

Francisco

On Jan 15, 2017, at 6:56 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi,
>
> Just started to review. Looks good.

On the table, I marked out some requests – split OESP and RRRP into separate rows, and add a 17-18 fiscal cost / exposure column (including commenting more on and adding in the fiscal risk of the OPG efficiencies related proposal). On the Trillium Trust, it might be fair to point out that Energy raises the prospect of investing in projects that would not otherwise be viewed by the OEB as projects that meet a system benefits test – so not really a rate saving if the projects would not have been done on the rate base. Really a tax-based subsidisation for other policy reasons.

I'll review more later this evening.

Thanks,
Ron

---

**From:** Gavin He
**Sent:** January-15-17 4:40 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi Ron,

Please find attached updated notes and Energy's deck with proposed edits and comments from SIFB, EFB, and SPFB.

The files are also saved under below folder:
S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Energy_Jan16

Thanks,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
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> Hi Steve,
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> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge
>
>
> Sent from my iPad

<Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup2.docx>

| | |
|---|---|
| **From:** | Emily Kerr |
| **To:** | Francisco Chinchon; John Kim |
| **Cc:** | Ronald Kwan; Gavin He |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx |
| **Date:** | Sunday, January 15, 2017 9:27:07 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup4.docx |

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<Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup2.docx>

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which ~~will~~is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has ~~taken steps to~~ expanded the Rural or Remote Electricity Rate Protection program, ~~expected to~~ saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $~~5~~6-~~6~~7/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (about $~~1~~2 billion ~~to $1.3 billion~~in 2017-18), with some proposals not costed (e.g., conservation costs, with Energy consulting OPCD on accounting). ~~Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion).~~ Energy also presents other proposals where costs and impacts are "TBD".

In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts of ~~up to over~~ more than $2 billion annually during the period that GA costs are deferred depending on the scenario.. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

**Commented [GH1]:** This was included in the debt-financing GA section below, so not sure if we need to mention it here.

Over the past five years, the existing fiscally--funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Fiscal Cost |
|---|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility~~, and provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.~~** | • Would provide ~~Significant fiscal exposure – $0.4-0.45 bn at current levels, higher if enhanced.~~ oOn-bill benefits.<br>• Funding programs through tax base estimated to reduce average monthly residential bill by approximately $0.55 in 2017, increasing to approximately $1.45 in 2022.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. | • 2017-18: $162 M<br>• Increasing to $322 M in 2020-21. |
| Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program. | • Would provide on-bill benefits.<br>• Funding programs through tax base estimated to reduce average monthly residential bill by approximately $1.55 in 2017, increasing to approximately $1.75 in 2022.<br>• Could contemplate phase-in to manage fiscal impact. | • 2017-18: $666 M<br>• Increasing to $719 M in 2020-21 |

**Formatted Table**

**Commented [RK3]:** Could we add in a fiscal cost columbn instead, to show Energy's estimated 17-18 fiscal cost, or what we think is the exposure (accounting TBC can be footnoted).

**Commented [EK4]:** Updated based on slide 12 in Energy's updated deck.

**Formatted:** Indent: Left: 0.1", No bullets or numbering

**Commented [RK2]:** Can we split the OESP and RRRP into two rows,

**Formatted:** Indent: Left: 0.1", No bullets or numbering

| | | |
|---|---|---|
| **Amortize ~~Fund~~ conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account. ~~programs through the tax base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time~~** | • It is unclear whether consevation costs could be amortized according to accounting standards. If this option was pursued without establishing Provincial Controller agreement on accounting, there could be a fiscal risk. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base. ~~Potentially significant fiscal impact – current program costs are about $0.45 bn~~<br>o Conservation programs do provide an electricity system benefits, but ~~would now be~~ fiscal~~ly~~-funding~~ed, so~~ would result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan | • If amortization is not permitted, 2017-18 fiscal impact of $450 M. |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value (share price) and impact fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• In the case of projects located in First Nation territories it could have an upfront fiscal impact if Province is not able to amortize those projects (TBC with OPCD).<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a windfall. It was fiscally neutral, it represented revenue to OEFC and an expense to Hydro One.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the | • $260 million annually from 2017-18 to 2020-21. |

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| | deffered tax benefit recognized by Hydro One to ratepayers. | |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates<br>• OEB to work with OPG operational efficiencies and pass on to ratepayers | • |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding th Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • Fiscal impact not yet determined. |

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**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022~~Total of about $0.4 to 0.45 Billion/year~~):

~~This w~~Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), ~~-~~and ~~the~~ Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal

impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs. ~~Energy notes that~~
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
  - ~~The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).~~
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- ~~o~~ The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

~~Fund~~ Amortize Conservation Program~~s~~ Costs ~~through the Tax Base~~:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.
- If amortization of conservation costs was not permitted, a fiscal impact could result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

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- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

~~This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.~~

- ~~Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.~~

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that projects that the OEB does not currently consider eligible (as system benefits probably don't exceed investment costs) could be considered. This would mean moving forward projects for other policy objectives rather than rate mitigation.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

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- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income (revenue) to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income (expense) of Hydro One.
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- Having OEFC help implement this measure may require introducing changes to OEFC's objects as is legal mandate is to help reduce and pay down stranded debt.
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).

**Commented [JK5]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

**Commented [JK6]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost~~delay recovery of part~~ of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.~~by~~ This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to or more than $2 billion annually during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.

- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

~~[Check and Update]~~

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ~~OESP, RRRP, First Nation rate~~ | | ~~398~~666 | ~~419~~684 | ~~433~~700 | ~~447~~719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| ~~Conservation Programs through Tax Base~~ | ~~110~~ | ~~450~~ | ~~450~~ | ~~450~~ | ~~450~~ |
| [Trillium Trust] | ~~TBD~~100 | ~~TBD~~390 | ~~TBD~~390 | ~~TBD~~390 | ~~TBD~~390 |
| Departure Tax | 260 | ~~TBD~~260 | ~~TBD~~260 | ~~TBD~~260 | ~~TBD~~260 |
| DRC removal for Class B | 110 | 450 | | | |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total: | ~~220~~470 | ~~1,298~~1,927 | ~~869~~1,560 | ~~883~~1,362 | ~~897~~1,419 |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total:[3] | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| TOTAL[3] | 1,~~445~~695 | 3,~~303~~933 | ~~2,584~~3,275 | ~~2,709~~3,188 | ~~2,723~~3,245 |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
~~**December 12**~~**January 15, 2016**

| | |
|---|---|
| **From:** | Emily Kerr |
| **To:** | John Kim |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals.doc |
| **Date:** | Monday, December 12, 2016 4:51:44 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals.doc |

Hi John,

I have added one comment to the note.

---

**From:** John Kim
**Sent:** Monday, December 12, 2016 2:50 PM
**To:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals.doc

Hi,

This is a file dump of the earlier work….I need to start going through but figured I shred the template we are working with.

John.

**COMMERCIALLY SENSITIVE AND CONFIDENTIAL**

## Comments on Proposed Initiatives to Transform Ontario's Electricity Sector

The Ministry of Energy is providing an update on progress related to transforming the province's electricity sector by elaborating on the potential initiatives, as outlined in its deck.

**CONTEXT**

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e. meeting goals towards decarbonize) and modernize the electricity infrastructure (i.e. more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One in Hydro One transmission and distribution systems.

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2018 for eligible small businesses, farms and residential consumer and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month.

**COMMENTS**

Energy's proposals generally involve shifting some costs from the rate base to the tax base. A general comment on the proposals would be that while the proposals may have a fairly limited impact, e.g. a little over $8/month for residentia (about little over 5% of the average monthly bill), the proposals would not come at a non-material incremental fiscal cost ($1.3 billion to $1.9 billion).

Over the past five years, the fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt etirement Charge
NIERP – Northern Ontario Electricity Rate program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

OESP & RRRP (Total of about $0.4 Billion/year):

This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy noted in previous drafts of its price mitigation deck that
  - OESP credits could be increased to address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.

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Industrial Conservation Initiative (ICI -- About $900+ Million/year):

Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.

- Energy is not initially proposing it be continued instead as taxpayer funded, but notes that about 30% price increase (from $85/MWh to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
- As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $100 million).

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.

- This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
- Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

Other fiscal cost risks (Total of about $0.8+ Bn):

- Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
- Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
- Lowering of the debt interest paid by OPG (about $30 – 70 million/yr between 2017 and 2021),

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |

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|---|---|---|---|---|---|
| **NOEC** | 25 | 25 | 25 | 25 | 25 |
| **OEPTC[3]** | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| **1. OESP** | | 106 | 119 | 127 | 132 |
| **2. RRRP** | | 292 | 300 | 306 | 315 |
| **3. First Nations Delivery Rate** | | 18 | 18 | 18 | 18 |
| **4. Fund ICI through Tax Base** | | 900+ | 900+ | 900+ | 900+ |
| **5. Departure Tax** | | TBD | TBD | TBD | TBD |
| **6. Conservation Amortisation** | | TBD | TBD | TBD | TBD |
| **7. DRC Ended for Class B** | 110 | 450 | | | |
| **8. Other** | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,305** | **3,901** | **3,197** | **3,237** | **3,261** |

**Electricity Finance Branch, Corporate and Electricity Finance Division**
**Ontario Financing Authority**
**December 12, 2016**

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | John Kim |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals.doc |
| **Date:** | Monday, December 12, 2016 4:42:51 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v3.doc |

Please see file attached, also found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016\Comments on Electricity Sector Transformation Proposals v3.doc

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

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**From:** John Kim
**Sent:** Monday, December 12, 2016 4:20 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** FW: Comments on Electricity Sector Transformation Proposals.doc

Use this version pls.

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**From:** Darren Scanlan
**Sent:** Monday, December 12, 2016 4:18 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals.doc

Hi John – I have added our initial markups to your latest staff note and have made a few markups to the deck (both attached). Sending to assist with the consolidation. Happy to discuss, but please let us know before sending anything to Ron. Francisco was able to take a quick look, but should be able to take a more thorough look once home. Saved here.

---

**From:** John Kim
**Sent:** Monday, December 12, 2016 4:02 PM
**To:** Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals.doc

Latest….asked Shajee to have a look but here it is.

# Comments on Proposed Initiatives to Transform Ontario's Electricity Sector

The Ministry of Energy is providing an update on progress related to transforming the province's electricity sector by elaborating on the potential initiatives, as outlined in its deck.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e. meeting goals towards decarbonize) and modernize the electricity infrastructure (i.e. more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in ~~Hydro One~~ transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting ~~January~~ January 1, 2018 for eligible small businesses, farms and residentials consumer and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month.

## COMMENTS

Energy's proposals generally involve shifting some costs from the rate base to the tax base. ~~A general comment on the proposals would be that w~~While these proposals may have a fairly limited residential rate payer impact (~~,~~e.g. about $5-6/month for residential, ~~(~~less than 5% of the average monthly bill), the proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion)~~,~~. Note these impacts are lower than ~~somewhat down from the impacts from an~~ those prestend in an earlier deck ($1.3 billion to $1.9 billion).

Over the past five years, the fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt etirement Charge
NIERP – Northern Ontario Electricity Rate program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

## Proposals

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This ~~includes~~ would shift~~ing~~ the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), ~~as well as an additional 50% increase,~~ and the Rural or Remote Electricity Rate Program (RRRP), to the tax base.

*Note: that the fiscal exposure ~~is larger~~ would increase if the OESP take up rate is larger, and faster than assumed.*

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time the costs would transition ~~and to transition costs~~ to the new "green bank ~~eneity~~entity" ~~over time~~.

- Energy's rationale for t~~T~~he cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects. Incremental investments would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.) May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy is proposed using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC) and help~~ed~~ reduce stranded debt.
- ~~—~~
- Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO.
- This would ~~also~~ be a one-time measure, ~~(~~potentially spread out over a few years~~)~~, and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) ~~(~~would have an impact of about $0.45 billion~~/year~~ in 2017-18 ~~to 2017-18)~~.

- The end of the DRC had previously been linked with the end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the proposed end date of the DRC.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ~~OCEBe~~ | - | - | - | - | - |
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| ~~OEPTC[2]~~OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| ~~1. OESP, RRRP, First Nation rate~~ | | ~~398~~ | ~~419~~ | ~~433~~ | ~~447~~ |
| ~~2. Conservation Programs through Tax Basee~~ | ~~110~~ | ~~450~~ | ~~450~~ | ~~450~~ | ~~450~~ |
| ~~4. Departure Tax~~ | | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ |
| ~~7. DRC Ended for Class B~~ | ~~110~~ | ~~450~~ | | | |
| **TOTAL** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

**Electricity Finance Branch, Corporate and Electricity Finance Division**
**Ontario Financing Authority**
**December 12, 2016**

**From:** Francisco Chinchon
**To:** Darren Scanlan; John Kim
**Subject:** RE: Comments on Electricity Sector Transformation Proposals.doc
**Date:** Monday, December 12, 2016 4:31:35 PM
**Attachments:** Comments on Electricity Sector Transformation Proposals_SIFBmarkup2.doc

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Hi,

I'm not sure the note is correct with respect to stranded debt. Maybe is a wording thing, but please review.

Francisco

---

**From:** Darren Scanlan
**Sent:** Monday, December 12, 2016 4:18 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals.doc

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**Sent:** Monday, December 12, 2016 4:02 PM
**To:** Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals.doc

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**COMMERCIALLY SENSITIVE AND CONFIDENTIAL**

## Comments on Proposed Initiatives to Transform Ontario's Electricity Sector

The Ministry of Energy is providing an update on progress related to transforming the province's electricity sector by elaborating on the potential initiatives, as outlined in its deck.

**CONTEXT**

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e. meeting goals towards decarbonize) and modernize the electricity infrastructure (i.e. more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One in Hydro One transmission and distribution systems.

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2018 for eligible small businesses, farms and residential consumer and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month.

**COMMENTS**

Energy's proposals generally involve shifting ~~some~~ costs from the rate base to the tax base. A general comment on the proposals would be that while the~~e~~ proposals may have a fairly limited bill impact, e.g. about $5-6/month for residential (less than 5% of the average monthly bill), the proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion), somewhat down from the impacts from an earlier deck ($1.3 billion to $1.9 billion).

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| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,195 | 2,005 |

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As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.

- ~~This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.~~ The departure tax payment was fiscally neutral to the Province as it represented income to OEFC fully offset by reduction in ESDI from Hydro One.
- Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

**Commented [FC1]:** This is not correct. The DT represented revenue to OEFC fully offset by a reduction in ESDI from H1.

**Commented [FC2]:** What are we trying to say here? OEFC only got an uplift at consolidation of the deferred tax benefit and because of the 50.3 payment. The DT on itself didn't cause a reduction in stranded debt.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):

- Ending the DRC early for Class B customers (commercial, small industrial) (about $0.45 billion/year to 2017-18)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |

| | | | | | |
|---|---|---|---|---|---|
| **OREC** | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| **Ending DRC[2]** | 330 | 330 | -- | -- | -- |
| **NIERP** | 120 | 120 | 120 | 120 | 120 |
| **NOEC** | 25 | 25 | 25 | 25 | 25 |
| **OEPTC[3]** | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| **1. OESP, RRRP, First Nation rate** | | 398 | 419 | 433 | 447 |
| **2. Conservation Programs through Tax Base** | 110 | 450 | 450 | 450 | 450 |
| **4. Departure Tax** | | TBD | TBD | TBD | TBD |
| **7. DRC Ended for Class B** | 110 | 450 | | | |
| **TOTAL** | **1,415** | **3,303** | **2,584** | **2,709** | **2,723** |

**Commented [DS3]:** Can add TBDs for a new Trillium Trust row, but just wanted to check in case you are updating / changing the order of items based on the latest deck

**Electricity Finance Branch, Corporate and Electricity Finance Division**
**Ontario Financing Authority**
**December 12, 2016**

| | |
|---|---|
| **From:** | Francisco Chinchon |
| **To:** | Ronald Kwan; John Kim |
| **Cc:** | Emily Kerr; Gavin He |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx |
| **Date:** | Thursday, January 19, 2017 12:45:53 PM |
| **Attachments:** | Comments on Energy Rate Mitigation Options_Jan 19-2017_v3.docx |

I fixed a formatting glitch in the appendix and Gavin's comment is still there (not sure if the paragraph is to stay and the comment to go or the other way).

---

**From:** Ronald Kwan
**Sent:** Thursday, January 19, 2017 12:37 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

Further cleaned up.

Ron

---

**From:** Ronald Kwan
**Sent:** January-19-17 12:34
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

And a clean version

---

**From:** Ronald Kwan
**Sent:** January-19-17 12:32
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

Hi,

Some suggestions. Please review ASAP.

Ron

---

**From:** John Kim
**Sent:** January-19-17 11:30
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>

**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

Hi Ron,

Pls. see attached updated note.

Thanks,

John.

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Rate Mitigation Plan Options"

The Ministry of Energy (Energy) is providing potential price mitigation initiatives.

## CONTEXT

- As outlined in Energy's deck, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g., GEIA renegotiation with Samsung consortium, decreasing FIT prices, etc.).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

- A significant number of Energy's proposals involve shifting costs or risks from the rate base to the tax base. The fiscal exposure could be well over $2 billion in 2017-18.
- The largest impacts on rates and largest potential fiscal exposures are from the deferred recovery of Global Adjustment costs ($2 bn per year or more) and an enhanced, tax-base-funded 5% rebate for Regulated Price Plan (RPP) customers (about $700 million per year).
    - Significant fiscal exposure comes from proposals not yet fully costed by Energy (e.g., the Global Adjustment, with Energy to benefit from consulting with OPCD and KPMG on accounting).
    - Energy also presents other proposals where costs and impacts are not shown or "TBD".
    - Energy does not show OPG efficiencies as a fiscal risk in its table on slide 8. It is estimated at a $240 million per year exposure on slide 33.
- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
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OCEB – Ontario Clean Energy Benefit NIERP – Northern Industrial Electricity Rate program DRC – Debt etirement Charge
OREC – Ont. Rebate for Electricity Consumers NOEC – Northern Ontario Energy Credit OEPTC – Ont. Energy & Property Tax Credit

**ENERGY'S BROAD POLICY THEMES / RATIONALES**

- In recognition of the costs borne by ratepayers related to the to decarbonizing and modernizing the province's electricity sector:
    1. Provide significant and immediate rate relief through cost deferral of the global adjustment (GA).
    2. Provide a greater focus on vulnerable consumers by funding electricity support programs, such as the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Protection, (RRRP) through the tax-base. In addition, provide greater support for lower income Ontarians by enhancing the OESP, etc.
    3. Empower energy agencies to increase cost effectiveness and improve efficiency by having – Independent Electricity System Operator (IESO) modernize Ontario's electricity market through electricity market renewal initiatives, the Ontario Energy Board (OEB) identify opportunities for future LDC cost reductions/efficiencies and work with Ontario Power Generation (OPG) to find further efficiencies in operations and pass on savings to ratepayers.
    4. Enhance the existing 8% rebate that went into effect January 1, 2017.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not fully address the fiscal impact/accounting treatment, or implementation<br>o Based on preliminary discussions with KPMG, Energy has identified key steps (presumably for there not to be a fiscal impact):<br>▪ need to be able to create an asset<br>▪ Need to identify an entity that could hold such an asset (e.g. OEFC, IESO or LDCs?)<br>o Energy is said to be working with LSB, IESO, MOF, TBS and external accountants on legislative, regulatory and accounting requirements<br>o Energy's deck clearly identify that under the current legal framework, the GA would not be able to recover interest costs of the deferral<br>• Likely will lead to significant annual fiscal impact and increase in net debt (illustrated as $9 Bn on slide 9, or $23 Bn on slides 11 & 12 scenarios; previously estimated by Energy to be up to $65 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement. | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • Furthermore, likely entails significant legal / Constitutional Law risks | |
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by $0.83 based on current OESP charge.**<br><br>**Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈ $1.60 in 2017, increasing to ≈ $1.80 in 2022.** | • Would provide on-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households.<br>• There may be a risk that expanding OESP or RRRP may change the view of the federal government that it is not a taxable benefit. When OESP was created, TPD worked with Finance Canada and Energy to ensure that it was not considered a taxable benefit.<br>• RRRP expansion that subsidised high-cost distribution systems may create a disincentive effect on achieving efficiencies é cost reductions in those LDCs (or Toronto, as the benchmark). Energy and OEB would need to address this through the regulatory system or other measures such as eligibility conditions. | <u>OESP</u><br>• 2017-18: $162 M<br>• Increasing to $323 M in 2020-21.<br><br><u>Conservation</u><br>• 2017-18: $457 M<br>• Increasing to $493 M in 2020-21 |
| **Create a new low income conservation benefit program that would build on existing programs.** | • Conservation programs provide electricity system benefits. Fiscal-funding would result in a cross-subsidisation from tax-base.<br>• Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan. | • $60 million per year. |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Enhance Tax-base RPP Rebat by 5%, to 13%** | • This proposal would increase the funding requirement of the newly established Ontario Rebate for Electricity Consumers (OREC) by about $700 million per fiscal year, to reduce an average residential bill by about $7 each month or $84 annually.<br>• The current OREC provides average savings of about $11 each month or $130 annually. | • About $700 per year |

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

**DETAIL ON ENERGY PROPOSALS INCLUDED IN THE JANUARY 18th DECK**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 1a, 1b, and low GA Financing scenario), or more (e.g., about $5.5 bn in 2017 under high GA Financing scenario), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

Under the high GA Financing scenario, now discussed in the Appendix of the latest deck, net debt could rise by $65 Bn over time, as estimated by Energy, and the cost pressure could be up to $51 per month by 2047. There would be significant interest rate exposure to the fiscal impact and accumulated debt estimates. The size of the deficit and debt impacts could affect the Province's credit rating and cost of debt.

**Commented [GH1]:** This option has been moved to the appendix section, not sure if need to be mentioned.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
    - Option 1a: Moderate GA financing, paying $3.2 and $3.4 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
    - Option 1b: Moderate GA financing, paying $1.1 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
    - Option 3: Low / GA financing – paying $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off, with limits of no more than $2 billion above the true cost of GA.
    - Option 4: High / GA financing – paying $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively, with no limits above the true cost of GA.
- It should be noted that under any of these options the relief period is quite limited when compare to the period under where future ratepayers will have to pay the cost of the deferral. Chart 1a and 1b (slides 10 and 11) illustrate that the impact of the relief would not last beyond 2022 (1a) and 2024 (1b) whill the higher cost caused by the deferral would hit electricity bills until 2042 at the least.
- Impact of the Level of Financing on Large Industrial Electricity Consumers provided in the deck was based on previous scenarios. It should be updated using above scenarios.
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].
- Preliminary discussions between CEFD and OPCD staff suggest that there are material fiscal and reporting risk associated with this proposal.

OESP & RRRP ($0.51-0.62 bn in 2017 to $0.80-0.92 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Low Income Conservation Benefit Program

- A new low income conservation benefit program would build on existing programs.
  - Existing low income programs delivered by local distribution companies and IESO help qualified homeowners and social and/or assisted housing providers improve the energy efficiency of their homes.
  - With respect to a new program Energy notes that participants could receive incentives for conservation measures not currently covered, increased incentive amounts, and targeted education and awareness initiatives.

- Energy notes an illustrative budget of $60 million per year, but states that further analysis is required on costing and implementation details, including alignment with the existing conservation framework.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.

  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
  - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
  - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

**SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION –JANUARY 18 DECK**

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| Amortize and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| RRRP | | 457 | 469 | 479 | 493 |
| OESP – Enhance Benefit | | 162 | 225 | 279 | 323 |
| Low Income Conservation Program | | 60 | 60 | 60 | 60 |
| First Nations Rate | | 18 | 18 | 18 | 18 |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Enhanced RPP Rebate | 169 | 699 | 679 | 732 | 724 |
| **Proposed Program Total:[3]** | **229 + GA** | **1,636 + GA** | **1,691 + GA** | **1,808 + GA** | **1,858 + GA** |
| | | | | | |

1. Based on estimated / forecasted numbers [May have some variations from the January 18 deck.]
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

## Appendix: Options not currently recommended by Energy

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | • $260 million annually from 2017-18 to 2020-21. |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion. | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC]. |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.<br>o Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base<br>• Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan | |

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
    - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
    - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
    - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
    - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
    - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

| | |
|---|---|
| **From:** | Darren Scanlan |
| **To:** | John Kim |
| **Cc:** | Francisco Chinchon |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals.doc |
| **Date:** | Monday, December 12, 2016 4:18:17 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals_SIFBmarkup.doc<br>Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy_SIFBmarkup.pptx |

Hi John – I have added our initial markups to your latest staff note and have made a few markups to the deck (both attached). Sending to assist with the consolidation. Happy to discuss, but please let us know before sending anything to Ron. Francisco was able to take a quick look, but should be able to take a more thorough look once home. Saved here.

**From:** John Kim
**Sent:** Monday, December 12, 2016 4:02 PM
**To:** Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals.doc

Latest….asked Shajee to have a look but here it is.

**COMMERCIALLY SENSITIVE AND CONFIDENTIAL**

## Comments on Proposed Initiatives to Transform Ontario's Electricity Sector

The Ministry of Energy is providing an update on progress related to transforming the province's electricity sector by elaborating on the potential initiatives, as outlined in its deck.

**CONTEXT**

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e. meeting goals towards decarbonize) and modernize the electricity infrastructure (i.e. more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One in Hydro One transmission and distribution systems.

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2018 for eligible small businesses, farms and residential consumer and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month.

**COMMENTS**

Energy's proposals generally involve shifting some costs from the rate base to the tax base. A general comment on the proposals would be that while thee proposals may have a fairly limited impact, e.g. about $5-6/month for residential (less than 5% of the average monthly bill), the proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion), somewhat down from the impacts from an earlier deck ($1.3 billion to $1.9 billion).

Over the past five years, the fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,195 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt etirement Charge
NIERP – Northern Ontario Electricity Rate program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This includes shifting the cost of the Ontario Electricity Support Program (OESP), as well as an additional 50% increase, and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework and to transition costs to the new "green bank eneity" over time.

- The cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects. Incremental investments would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.) May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.

- This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
- Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):

- Ending the DRC early for Class B customers (commercial, small industrial) (about $0.45 billion/year to 2017-18)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |

| | | | | | |
|---|---|---|---|---|---|
| **NIERP** | 120 | 120 | 120 | 120 | 120 |
| **NOEC** | 25 | 25 | 25 | 25 | 25 |
| **OEPTC**[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| **1. OESP, RRRP, First Nation rate** | | 398 | 419 | 433 | 447 |
| **2. Conservation Programs through Tax Base** | 110 | 450 | 450 | 450 | 450 |
| **4. Departure Tax** | | TBD | TBD | TBD | TBD |
| **7. DRC Ended for Class B** | 110 | 450 | | | |
| **TOTAL** | **1,415** | **3,303** | **2,584** | **2,709** | **2,723** |

**Commented [DS1]:** Can add TBDs for a new Trillium Trust row, but just wanted to check in case you are updating / changing the order of items based on the latest deck

**Electricity Finance Branch, Corporate and Electricity Finance Division**
**Ontario Financing Authority**
**December 12, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8%  per cent rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured,  the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP),  which provides an opportunity to consider a range of policy changes to  how the Ontario energy sector operates.

# Broad Policy Themes / Rationale

- No longer use rate-base to pay for social programs by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.
- Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.
- Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" beyond the Moving Ontario Forward initiative to make certain investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties ~~and expansion of natural gas to rural areas~~, etc. (note that expanding access to natural gas is already included under Moving Ontario Forward.)
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" a single rate plan as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time.
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.16 | 2.31 | 2.41 | 2.49 | 2.54 | 2.58 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.13 | 0.13 | 0.14 | 0.14 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.88 | 3.08 | 3.21 | 3.33 | 3.39 | 3.44 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 2.82 | 3.05 | 2.47 | 2.56 | 2.13 | 2.14 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.10 | 0.10 | 0.11 | 0.11 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Taxpayer Funded Electricity Price Mitigation

| *($M)* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | | 398 | 419 | 433 | 447 |
| 2. Expand the OESP (i.e., 50% increase) | TBD | TBD | TBD | TBD | TBD |
| 3. Fund Conservation Programs Through The Tax-Base | 110 | 450 | 450 | 450 | 450 |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC efficiencies | - | - | - | - | - |
| c. OPG – Borrowing | - | - | - | - | - |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | 110 | 450 | - | - | - |
| 8. Cancel / Adjust FIT | - | - | - | - | - |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| 2. Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy

# Considerations / Outcomes

- The proposed initiatives provide the following opportunities to:
  - Lower the cost of electricity for all consumers;
  - Re-set how electricity programs and energy infrastructure is funded (i.e., shifting costs to the tax-base from rate-base);
  - Provide electricity consumers with greater choices (i.e., signal rate plan);
  - Provide system benefits (e.g., market renewal); and
  - Increase cost effectiveness and improve efficiency.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | John Kim |
| **Cc:** | Francisco Chinchon; Emily Kerr; Gavin He |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx |
| **Date:** | Thursday, January 19, 2017 12:37:22 PM |
| **Attachments:** | Comments on Energy Rate Mitigation Options_Jan 19-2017_v2.docx |

Further cleaned up.

Ron

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**From:** Ronald Kwan
**Sent:** January-19-17 12:34
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

And a clean version

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**From:** Ronald Kwan
**Sent:** January-19-17 12:32
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

Hi,

Some suggestions. Please review ASAP.

Ron

---

**From:** John Kim
**Sent:** January-19-17 11:30
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

Hi Ron,

Pls. see attached updated note.

Thanks,

John.

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Rate Mitigation Plan Options"

The Ministry of Energy (Energy) is providing potential price mitigation initiatives.

**CONTEXT**

- As outlined in Energy's deck, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g., GEIA renegotiation with Samsung consortium, decreasing FIT prices, etc.).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

**COMMENTS**

- A significant number of Energy's proposals involve shifting costs or risks from the rate base to the tax base. The fiscal exposure could be well over $2 billion in 2017-18.
- The largest impacts on rates and largest potential fiscal exposures are from the deferred recovery of Global Adjustment costs ($2 bn per year or more) and an enhanced, tax-base-funded 5% rebate for Regulated Price Plan (RPP) customers (about $700 million per year).
    - Significant fiscal exposure comes from proposals not yet fully costed by Energy (e.g., the Global Adjustment, with Energy to benefit from consulting with OPCD and KPMG on accounting).
    - Energy also presents other proposals where costs and impacts are not shown or "TBD".
    - Energy does not show OPG efficiencies as a fiscal risk in its table on slide 8. It is estimated at a $240 million per year exposure on slide 33.

- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,535** | **1,225** | **2,035** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**ENERGY'S BROAD POLICY THEMES / RATIONALES**

- In recognition of the costs borne by ratepayers related to the to decarbonizing and modernizing the province's electricity sector:
    1. Provide significant and immediate rate relief through cost deferral of the global adjustment (GA).
    2. Provide a greater focus on vulnerable consumers by funding electricity support programs, such as the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Protection, (RRRP) through the tax-base. In addition, provide greater support for lower income Ontarians by enhancing the OESP, etc.
    3. Empower energy agencies to increase cost effectiveness and improve efficiency by having – Independent Electricity System Operator (IESO) modernize Ontario's electricity market through electricity market renewal initiatives, the Ontario Energy Board (OEB) identify opportunities for future LDC cost reductions/efficiencies and work with Ontario Power Generation (OPG) to find further efficiencies in operations and pass on savings to ratepayers.
    4. Enhance the existing 8% rebate that went into effect January 1, 2017.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not fully address the fiscal impact/accounting treatment, or implementation<br>o Based on preliminary discussions with KPMG, Energy has identified key steps (presumably for there not to be a fiscal impact):<br>▪ need to be able to create an asset<br>▪ Need to identify an entity that could hold such an asset (e.g. OEFC, IESO or LDCs?)<br>o Energy is said to be working with LSB, IESO, MOF, TBS and external accountants on legislative, regulatory and accounting requirements<br>o Energy's deck clearly identify that under the current legal framework, the GA would not be able to recover interest costs of the deferral<br>• Likely will lead to significant annual fiscal impact and increase in net debt (illustrated as $9 Bn on slide 9, or $23 Bn on slides 11 & 12 scenarios; previously estimated by Energy to be up to $65 Bn, depending on | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | |
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by $0.83 based on current OESP charge.**<br><br>**Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈ $1.60 in 2017, increasing to ≈ $1.80 in 2022.** | • Would provide on-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households.<br>• There may be a risk that expanding OESP or RRRP may change the view of the federal government that it is not a taxable benefit. When OESP was created, TPD worked with Finance Canada and Energy to ensure that it was not considered a taxable benefit.<br>• RRRP expansion that subsidised high-cost distribution systems may create a disincentive effect on achieving efficiencies é cost reductions in those LDCs (or Toronto, as the benchmark). Energy and OEB would need to address this through the regulatory system or other measures such as eligibility conditions. | <u>OESP</u><br>• 2017-18: $162 M<br>• Increasing to $323 M in 2020-21.<br><br><u>Conservation</u><br>• 2017-18: $457 M<br>• Increasing to $493 M in 2020-21 |
| **Create a new low income conservation benefit program that would build on existing programs.** | • Conservation programs provide electricity system benefits. Fiscal-funding would result in a cross-subsidisation from tax-base.<br>• Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan. | • $60 million per year. |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Enhance Tax-base RPP Rebat by 5%, to 13%** | • This proposal would increase the funding requirement of the newly established Ontario Rebate for Electricity Consumers (OREC) by about $700 million per fiscal year, to reduce an average residential bill by about $7 each month or $84 annually.<br>• The current OREC provides average savings of about $11 each month or $130 annually. | • About $700 per year |

**DETAIL ON ENERGY PROPOSALS INCLUDED IN THE JANUARY 18th DECK**

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Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 1a, 1b, and low GA Financing scenario), or more (e.g., about $5.5 bn in 2017 under high GA Financing scenario), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

Under the high GA Financing scenario, now discussed in the Appendix of the latest deck, net debt could rise by $65 Bn over time, as estimated by Energy, and the cost pressure could be up to $51 per month by 2047. There would be significant interest rate exposure to the fiscal impact and accumulated debt estimates. The size of the deficit and debt impacts could affect the Province's credit rating and cost of debt.

Commented [GH1]: This option has been moved to the appendix section, not sure if need to be mentioned.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
    - Option 1a: Moderate GA financing, paying $3.2 and $3.4 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
    - Option 1b: Moderate GA financing, paying $1.1 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
    - Option 3: Low / GA financing – paying $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off, with limits of no more than $2 billion above the true cost of GA.
    - Option 4: High / GA financing – paying $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively, with no limits above the true cost of GA.
- It should be noted that under any of these options the relief period is quite limited when compare to the period under where future ratepayers will have to pay the cost of the deferral. Chart 1a and 1b (slides 10 and 11) illustrate that the impact of the relief would not last beyond 2022 (1a) and 2024 (1b) whill the higher cost caused by the deferral would hit electricity bills until 2042 at the least.
- Impact of the Level of Financing on Large Industrial Electricity Consumers provided in the deck was based on previous scenarios. It should be updated using above scenarios.
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].
- Preliminary discussions between CEFD and OPCD staff suggest that there are material fiscal and reporting risk associated with this proposal.

OESP & RRRP ($0.51-0.62 bn in 2017 to $0.80-0.92 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Low Income Conservation Benefit Program

- A new low income conservation benefit program would build on existing programs.
  - Existing low income programs delivered by local distribution companies and IESO help qualified homeowners and social and/or assisted housing providers improve the energy efficiency of their homes.
  - With respect to a new program Energy notes that participants could receive incentives for conservation measures not currently covered, increased incentive amounts, and targeted education and awareness initiatives.

- Energy notes an illustrative budget of $60 million per year, but states that further analysis is required on costing and implementation details, including alignment with the existing conservation framework.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.

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  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
  - Moving to “technology-agnostic” procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
  - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
  - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister’s Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG’s current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province’s fiscal plan (Energy estimates it at $240 million per year).

~~Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):~~
~~Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.~~

- ~~The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.~~
- ~~Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.~~

**SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION –JANUARY 18 DECK**

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| Amortize and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| RRRP | | 457 | 469 | 479 | 493 |
| OESP – Enhance Benefit | | 162 | 225 | 279 | 323 |
| ~~OESP – Expand Eligibility~~ | | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ |
| Low Income Conservation Program | | 60 | 60 | 60 | 60 |
| First Nations Rate | | 18 | 18 | 18 | 18 |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Enhanced RPP Rebate | 169 | 699 | 679 | 732 | 724 |
| Proposed Program Total:[3] | **229 + GA** | **1,636 + GA** | **1,691 + GA** | **1,808 + GA** | **1,858 + GA** |
| | | | | | |
| ~~EXISTING TAX-BASE FUNDED PROGRAMS~~ | | | | | |
| ~~OREC~~ | ~~300~~ | ~~1,100*~~ | ~~1,100*~~ | ~~1,200*~~ | ~~1,200*~~ |
| ~~Ending DRC~~ | ~~330~~ | ~~330~~ | ~~--~~ | ~~--~~ | ~~--~~ |
| ~~NIERP~~ | ~~120~~ | ~~120~~ | ~~120~~ | ~~120~~ | ~~120~~ |
| ~~NOEC~~ | ~~25~~ | ~~25~~ | ~~25~~ | ~~25~~ | ~~25~~ |
| ~~OEPTC[2]~~ | ~~450~~ | ~~460~~ | ~~470~~ | ~~481~~ | ~~481~~ |
| ~~Existing Program Total:~~ | ~~**1,225**~~ | ~~**2,035**~~ | ~~**1,715**~~ | ~~**1,826**~~ | ~~**1,826**~~ |

1. Based on estimated / forecasted numbers [May have some variations from the January 18 deck.]
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

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## Appendix: Options not currently recommended by Energy

| | | |
|---|---|---|
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • **Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects**<br>• **Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small**<br>• **May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle**<br>• **Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return**<br>• **Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].**<br>• **Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms.** | • **Up to $390 million annually from 2017-18 to 2020-21.** |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | • $260 million annually from 2017-18 to 2020-21. |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion. | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC]. |

- Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.
  - Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base
- Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset

by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).

- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | John Kim |
| **Cc:** | Francisco Chinchon; Emily Kerr; Gavin He |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx |
| **Date:** | Thursday, January 19, 2017 12:33:34 PM |
| **Attachments:** | Comments on Energy Rate Mitigation Options_Jan 19-2017.docx |

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And a clean version

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**From:** Ronald Kwan
**Sent:** January-19-17 12:32
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

Hi,

Some suggestions. Please review ASAP.

Ron

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**From:** John Kim
**Sent:** January-19-17 11:30
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

Hi Ron,

Pls. see attached updated note.

Thanks,

John.

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Rate Mitigation Plan Options"

The Ministry of Energy (Energy) is providing potential price mitigation initiatives.

## CONTEXT

- As outlined in Energy's deck, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g., GEIA renegotiation with Samsung consortium, decreasing FIT prices, etc.).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

- A significant number of Energy's proposals involve shifting costs or risks from the rate base to the tax base. The fiscal exposure could be well over $2 billion in 2017-18.
- The largest impacts on rates and largest potential fiscal exposures are from the deferred recovery of Global Adjustment costs ($2 bn per year or more) and an enhanced, tax-base-funded 5% rebate for Regulated Price Plan (RPP) customers (about $700 million per year).
    - Significant fiscal exposure comes from proposals not yet fully costed by Energy (e.g., the Global Adjustment, with Energy to benefit from consulting with OPCD and KPMG on accounting).
    - Energy also presents other proposals where costs and impacts are not shown or "TBD".
    - Energy does not show OPG efficiencies as a fiscal risk in its table on slide 8. It is estimated at a $240 million per year exposure on slide 33.

- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,535** | **1,225** | **2,035** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**ENERGY'S BROAD POLICY THEMES / RATIONALES**

- In recognition of the costs borne by ratepayers related to the to decarbonizing and modernizing the province's electricity sector:
    1. Provide significant and immediate rate relief through cost deferral of the global adjustment (GA).
    2. Provide a greater focus on vulnerable consumers by funding electricity support programs, such as the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Protection, (RRRP) through the tax-base. In addition, provide greater support for lower income Ontarians by enhancing the OESP, etc.
    3. Empower energy agencies to increase cost effectiveness and improve efficiency by having – Independent Electricity System Operator (IESO) modernize Ontario's electricity market through electricity market renewal initiatives, the Ontario Energy Board (OEB) identify opportunities for future LDC cost reductions/efficiencies and work with Ontario Power Generation (OPG) to find further efficiencies in operations and pass on savings to ratepayers.
    4. Enhance the existing 8% rebate that went into effect January 1, 2017.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not fully address the fiscal impact/accounting treatment, or implementation<br>o Based on preliminary discussions with KPMG, Energy has identified key steps (presumably for there not to be a fiscal impact):<br>▪ need to be able to create an asset<br>▪ Need to identify an entity that could hold such an asset (e.g. OEFC, IESO or LDCs?)<br>o Energy is said to be working with LSB, IESO, MOF, TBS and external accountants on legislative, regulatory and accounting requirements<br>o Energy's deck clearly identify that under the current legal framework, the GA would not be able to recover interest costs of the deferral<br>• Likely will lead to significant annual fiscal impact and increase in net debt (illustrated as $9 Bn on slide 9, or $23 Bn on slides 11 & 12 scenarios; previously estimated by Energy to be up to $65 Bn, depending on | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | |
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by $0.83 based on current OESP charge.**<br><br>**Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈ $1.60 in 2017, increasing to ≈ $1.80 in 2022.** | • Would provide on-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households.<br>• There may be a risk that expanding OESP or RRRP may change the view of the federal government that it is not a taxable benefit. When OESP was created, TPD worked with Finance Canada and Energy to ensure that it was not considered a taxable benefit.<br>• RRRP expansion that subsidised high-cost distribution systems may create a disincentive effect on achieving efficiencies é cost reductions in those LDCs (or Toronto, as the benchmark). Energy and OEB would need to address this through the regulatory system or other measures such as eligibility conditions. | <u>OESP</u><br>• 2017-18: $162 M<br>• Increasing to $323 M in 2020-21.<br><br><u>Conservation</u><br>• 2017-18: $457 M<br>• Increasing to $493 M in 2020-21 |
| **Create a new low income conservation benefit program that would build on existing programs.** | • Conservation programs provide electricity system benefits. Fiscal-funding would result in a cross-subsidisation from tax-base.<br>• Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan. | • $60 million per year. |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Enhance Tax-base RPP Rebat by 5%, to 13%** | • This proposal would increase the funding requirement of the newly established Ontario Rebate for Electricity Consumers (OREC) by about $700 million per fiscal year, to reduce an average residential bill by about $7 each month or $84 annually.<br>• The current OREC provides average savings of about $11 each month or $130 annually. | • About $700 per year |

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

**DETAIL ON ENERGY PROPOSALS INCLUDED IN THE JANUARY 18th DECK**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 1a, 1b, and low GA Financing scenario), or more (e.g., about $5.5 bn in 2017 under high GA Financing scenario), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

Under the high GA Financing scenario, now discussed in the Appendix of the latest deck, net debt could rise by $65 Bn over time, as estimated by Energy, and the cost pressure could be up to $51 per month by 2047. There would be significant interest rate exposure to the fiscal impact and accumulated debt estimates. The size of the deficit and debt impacts could affect the Province's credit rating and cost of debt.

**Commented [GH1]:** This option has been moved to the appendix section, not sure if need to be mentioned.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
    - Option 1a: Moderate GA financing, paying $3.2 and $3.4 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
    - Option 1b: Moderate GA financing, paying $1.1 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
    - Option 3: Low / GA financing – paying $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off, with limits of no more than $2 billion above the true cost of GA.
    - Option 4: High / GA financing – paying $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively, with no limits above the true cost of GA.
- It should be noted that under any of these options the relief period is quite limited when compare to the period under where future ratepayers will have to pay the cost of the deferral. Chart 1a and 1b (slides 10 and 11) illustrate that the impact of the relief would not last beyond 2022 (1a) and 2024 (1b) whill the higher cost caused by the deferral would hit electricity bills until 2042 at the least.
- Impact of the Level of Financing on Large Industrial Electricity Consumers provided in the deck was based on previous scenarios. It should be updated using above scenarios.
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].
- Preliminary discussions between CEFD and OPCD staff suggest that there are material fiscal and reporting risk associated with this proposal.

OESP & RRRP ($0.51-0.62 bn in 2017 to $0.80-0.92 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

<u>Low Income Conservation Benefit Program</u>

- A new low income conservation benefit program would build on existing programs.
  - Existing low income programs delivered by local distribution companies and IESO help qualified homeowners and social and/or assisted housing providers improve the energy efficiency of their homes.
  - With respect to a new program Energy notes that participants could receive incentives for conservation measures not currently covered, increased incentive amounts, and targeted education and awareness initiatives.

- Energy notes an illustrative budget of $60 million per year, but states that further analysis is required on costing and implementation details, including alignment with the existing conservation framework.

<u>Energy Agencies' Cost Effectiveness and Efficiencies</u>:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."

  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
  - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
  - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

<u>Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18)</u>:
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

**SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION –JANUARY 18 DECK**

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| Amortize and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| RRRP | | 457 | 469 | 479 | 493 |
| OESP – Enhance Benefit | | 162 | 225 | 279 | 323 |
| ~~OESP – Expand Eligibility~~ | | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ |
| Low Income Conservation Program | | 60 | 60 | 60 | 60 |
| First Nations Rate | | 18 | 18 | 18 | 18 |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Enhanced RPP Rebate | 169 | 699 | 679 | 732 | 724 |
| Proposed Program Total:[3] | **229 + GA** | **1,636 + GA** | **1,691 + GA** | **1,808 + GA** | **1,858 + GA** |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total: | **1,225** | **2,035** | **1,715** | **1,826** | **1,826** |

1. Based on estimated / forecasted numbers [May have some variations from the January 18 deck.]
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

## Appendix: Options not currently recommended by Energy

| | | |
|---|---|---|
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • **Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects**<br>• **Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small**<br>• **May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle**<br>• **Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return**<br>• **Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].**<br>• **Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms.** | • **Up to $390 million annually from 2017-18 to 2020-21.** |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | • $260 million annually from 2017-18 to 2020-21. |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion. | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC]. |

- Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.
  - Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base
- Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
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As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
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by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).

- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | John Kim |
| **Cc:** | Francisco Chinchon; Emily Kerr; Gavin He |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx |
| **Date:** | Thursday, January 19, 2017 12:32:21 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v14a_markup4.docx |

Hi,

Some suggestions. Please review ASAP.

Ron

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**From:** John Kim
**Sent:** January-19-17 11:30
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

Hi Ron,

Pls. see attached updated note.

Thanks,

John.

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "~~Proposed Initiatives to Transform Ontario's Electricity Sector~~Rate Mitigation Plan Options"

The Ministry of Energy (Energy) is providing ~~an update on progress related to transforming the province's electricity sector by elaborating on~~ potential price mitigation initiatives~~, as outlined in its decks~~.

**CONTEXT**

- As outlined in Energy's ~~update~~deck, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g., GEIA renegotiation with Samsung consortium, decreasing FIT prices, etc.).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

- ~~On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.~~

- ~~The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.~~

**COMMENTS**

- A significant number of Energy's proposals involve shifting costs or risks from the rate base to the tax base. The fiscal exposure could be well over $2 billion in 2017-18.
- ~~While the subset of proposals costed by Energy may have a fairly limited residential rate payer impact (e.g. about $6-7/month for residential, or less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (about potentially more than $2 billion in 2017-18 if including yet-to-be-costed items)~~ The largest impacts on rates and largest potential fiscal exposures are from the deferred recovery of Global Adjustment costs ($2 bn per year or more) and an enhanced, tax-base-funded 5% rebate for Regulated Price Plan (RPP) customers (about $700 million per year).
    - ~~Additional~~Significant fiscal exposure comes from proposals not yet fully costed by Energy (e.g., ~~conservation costs~~the Global Adjustment, with Energy to benefit from consulting with OPCD and KPMG on accounting).
    - Energy also presents other proposals where costs and impacts are not shown or "TBD".
    - Energy does not show OPG efficiencies as a fiscal risk in its table on slide 8. It is estimated at a $240 million per year exposure on slide 33.

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- ~~In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts (e.g., of about $5.5 Bn in calendar 2017) during the period that GA costs are deferred, depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.~~

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- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,535 | 1,225 | 2,035 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**ENERGY'S BROAD POLICY THEMES / RATIONALES**

- In recognition of the costs borne by ratepayers related to the to decarbonizing and modernizing the province's electricity sector:

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1. Provide significant and immediate rate relief through cost deferral of the global adjustment (GA).

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2. Provide a greater focus on vulnerable consumers by funding electricity support programs, such as the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Protection, (RRRP) through the tax-base. In addition, provide greater support for lower income Ontarians by enhancing the OESP, etc.
3. Empower energy agencies to increase cost effectiveness and improve efficiency by having – Independent Electricity System Operator (IESO) modernize Ontario's electricity market through electricity market renewal initiatives, the Ontario Energy Board (OEB) identify opportunities for future LDC cost reductions/efficiencies and work with Ontario Power Generation (OPG) to find further efficiencies in operations and pass on savings to ratepayers.
4. Enhance the existing 8% rebate that went into effect January 1, 2017.

~~A key theme / rationale cited by Energy is to no longer use the rate-base to pay for "social programs" by shifting the cost of OESP, RRRP and a proposed First Nation Rate to the tax-base.~~

- ~~Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.~~
- ~~Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.~~

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not fully address the fiscal impact/accounting treatment, or implementation<br>o Based on preliminary discussions with KPMG, Energy has identified key steps (presumably ~~-~~for there not to be a fiscal impact):<br>▪ ~~the~~ need to be able to create an asset ~~[to offset the creation of the liability]~~<br>▪ Need to identify ~~to be held by~~ an entity that could hold such an asset ~~yet to be determined,~~ (e.g. OEFC, IESO or LDCs?)<br>o Energy is said to be working with LSB, IESO, MOF, TBS and external accountants on legislative, regulatory and accounting requirements<br>o Energy's deck clearly identify that under the current legal framework, the GA would not be able to recover interest costs of the deferral<br>• Likely will lead to significant annual fiscal impact and increase in net debt (illustrated as $9 Bn on slide 9, or $23 Bn on slides 11 & 12 scenarios; previously estimated by Energy to be up to $~~66~~ 65 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |

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| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by ~~≈ $0.55 in 2017, increasing to ~ $1.45 in 2022.~~$0.83 based on current OESP charge.**<br><br>**Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>**Estimated to reduce average monthly residential bill by ≈ $~~1.55~~1.60 in 2017, increasing to ≈ $~~1.75~~1.80 in 2022.**<br>• | • Would provide on-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households.<br>• There may be a risk that expanding OESP or RRRP may change the view of the federal government that it is not a taxable benefit. When OESP was created, TPD worked with Finance Canada and Energy to ensure that it was not considered a taxable benefit.<br>• RRRP expansion that subsidised high-cost distribution systems may create a disincentive effect on achieving efficiencies é cost reductions in those LDCs (or Toronto, as the benchmark). Energy and OEB would need to address this through the regulatory system or other measures such as eligibility conditions. | OESP<br>• 2017-18: $162 M<br>• Increasing to $32~~23~~ M in 2020-21.<br><br>Conservation<br>• 2017-18: $~~666~~457 M<br>• Increasing to $~~719~~493 M in 2020-21 |
| ~~**Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.**~~<br>**Create a new low income conservation benefit program that would build on existing programs.** | ~~• Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.~~<br>~~• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.~~<br>~~o~~• Conservation programs provide electricity system benefits. Fiscal-funding would result in a cross-subsidisation from tax-base.<br>~~o~~• Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan. | • ~~[If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC]~~$60 million per year. |

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| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| ~~Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding~~ | • ~~Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects~~<br>• ~~Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small~~<br>• ~~May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle~~<br>• ~~Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return~~<br>• ~~Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].~~<br>• ~~Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms.~~ | • ~~Up to $390 million annually from 2017-18 to 2020-21.~~ |
| ~~Dedicate the Departure Tax~~ | • ~~In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".~~<br>• ~~The departure tax was not a fiscal windfall. It was net fiscally neutral – while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.~~<br>• ~~Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.~~<br>• ~~The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers.~~ | • ~~$260 million annually from 2017-18 to 2020-21.~~ |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| ~~Give consumers more choice by allowing to "opt into" alternate rate plan~~ | • ~~Start with the option of flat electricity rate option~~<br>• ~~OEB to develop more options over time~~ | • ~~No expected fiscal impact.~~ |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • ~~Provide more details regarding the Global Adjustment (GA)~~ | |
| ~~End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers~~ | • ~~Current legislated March 31, 2018 end of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt~~<br>• ~~Provides only temporary incremental mitigation, as DRC legislated to end.~~<br>• ~~Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported~~ | • ~~$450 M in 2017-18~~ |
| | • | • |
| ~~Tax Relief for Solar and Wind~~ | • ~~Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process~~<br>• ~~Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit~~ | • ~~Annual fiscal impact not yet determined.~~ |
| Enhance Tax-base RPP Rebat by 5%, to 13% | • This proposal would increase the funding requirement of the newly established Ontario Rebate for Electricity Consumers (OREC) by about $700 million per fiscal year, to reduce an average residential bill by about $7 each month or $84 annually.<br>• The current OREC provides average savings of about $11 each month or $130 annually. | • About $700 per year |

**DETAIL ON ENERGY PROPOSALS INCLUDED IN THE JANUARY 18th DECK**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 1a~~2~~, ~~&~~1b~~3~~, and low GA Financing scenario), or more (e.g., about $5.5 bn in 2017 under ~~option 4~~high GA Financing scenario), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

Under the high GA Financing scenario~~option 4~~, now discussed in the Appendix of the latest deck, net debt could rise by $6~~5~~6 Bn over time, as estimated by Energy, and the cost pressure could be up to $51 per month by 2047. There would be significant interest rate exposure to the fiscal impact and accumulated debt estimates. The size of the deficit and debt impacts could affect the Province's credit rating and cost of debt.

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- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - ~~o Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year~~
  - o Option 1a~~2~~: Moderate ~~short-term cost reductions~~GA financing, paying $3.2 and $3.4 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
  - o Option 1b: Moderate GA financing, paying $1.1 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
  - o Option 3: Low / GA financing – paying $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off, with limits of no more than $2 billion above the true cost of GA.~~Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA~~
  - o Option 4: High / GA financing – paying $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively, with no limits above the true cost of GA.~~Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years~~
- It should be noted that under any of these options the relief period is quite limited when compare to the period under where future ratepayers will have to pay the cost of the deferral. Chart 1a and 1b (slides 10 and 11) illustrate that the impact of the relief would not last beyond 2022 (1a) and 2024 (1b) whill the higher cost caused by the deferral would hit electricity bills until 2042 at the least.
- Impact of the Level of Financing on Large Industrial Electricity Consumers provided in the deck was based on previous scenarios. It should be updated using above scenarios.
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].
- Preliminary discussions between CEFD and OPCD staff suggest that there are material fiscal and reporting risk associated with this proposal.

OESP & RRRP ($0.5142-0.~~85~~62 bn in 2017 to $0.~~62~~80-~~1~~0.~~18~~92 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - o Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - o OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by

the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Low Income Conservation Benefit Program

- A new low income conservation benefit program would build on existing programs.
  - Existing low income programs delivered by local distribution companies and IESO help qualified homeowners and social and/or assisted housing providers improve the energy efficiency of their homes.
  - With respect to a new program Energy notes that participants could receive incentives for conservation measures not currently covered, increased incentive amounts, and targeted education and awareness initiatives.

- Energy notes an illustrative budget of $60 million per year, but states that further analysis is required on costing and implementation details, including alignment with the existing conservation framework.

~~Amortize Conservation Program Costs:~~

~~Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.~~

- ~~Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.~~
  - ~~Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.~~
  - ~~Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.~~
  - ~~Rate-regulated accounting is currently under review by international accounting standard-setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.~~

- ~~If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.~~

- ~~Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.~~
  - ~~Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.~~

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~~Expanding the scope of the Trillium Trust to invest in energy infrastructure:~~

~~The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).~~

- ~~Expanding access to natural gas is already included under Moving Ontario Forward.~~
- ~~Using the Trillium Trust for additional energy projects would require either~~
  - ~~squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or~~
  - ~~additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.~~
- ~~In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.~~
  - ~~Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).~~
- ~~Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).~~
  - ~~May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.~~
  - ~~This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.~~
- ~~Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.~~
- ~~Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.~~

~~Departure Tax:~~

~~As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.~~

- ~~This would have a dollar-for-dolar fiscal impact.~~
- ~~This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).~~
- ~~The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.~~
- ~~Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.~~
- ~~Having OEFC help implement this measure may require introducing changes to OEFC's objects.~~
- ~~This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.~~

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
    - If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):

Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate base to the tax base.

**SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION – JANUARY 16 DECK**

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Discussed Initiatives[2] | | | | | |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| Conservation Funding | | TBD | TBD | TBD | TBD |
| [Trillium Trust] | 100 | 390 | 390 | 390 | 390 |
| Departure Tax | 260 | 260 | 260 | 260 | 260 |
| DRC removal for Class B | 110 | 450 | | | |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total:[3] | 530 | 2,168 | 1,800 | 1,869 | 1,931 |
| | | | | | |
| Amortise and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total: | 1,225 | 2,035 | 1,715 | 1,826 | 1,826 |
| TOTAL (Excl. GA)[3] | 1,755 | 4,203 | 3,515 | 3,695 | 3,757 |

1. Based on estimated / forecasted numbers

~~2. OEPTC amounts in all years based on energy component of the rebate.~~
~~* Sourced from Energy PRRT submission~~
~~3. Total would be significantly larger with the TBDs crystalized.~~

## SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION –JANUARY 18 DECK

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21 |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| Amortize and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| RRRP | | 457 | 469 | 479 | 493 |
| OESP – Enhance Benefit | | 162 | 225 | 279 | 323 |
| ~~OESP – Expand Eligibility~~ | | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ |
| Low Income Conservation Program | | 60 | 60 | 60 | 60 |
| First Nations Rate | | 18 | 18 | 18 | 18 |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| **Enhanced RPP Rebate** | 169 | 699 | 679 | 732 | 724 |
| ~~**Tax Relief for Solar and Wind**~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ |
| Proposed Program Total:[3] | ~~60~~229 + GA | ~~937~~1,636 + GA | 1,~~012~~691 + GA | 1,~~076~~808 + GA | 1,~~134~~858 + GA |
| | | | | | |
| ~~**Amortise and Debt-Finance Global Adjustment Costs**~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total: | 1,225 | 2,035 | 1,715 | 1,826 | 1,826 |
| ~~**TOTAL (Excl. GA)[3]**~~ | ~~1,285~~ | ~~2,972~~ | ~~2,727~~ | ~~2,902~~ | ~~2,960~~ |

1. Based on estimated / forecasted numbers [May have some variations from the January 18 deck.]
2. OEPTC amounts in all years based on energy component of the rebate.
* Sourced from Energy PRRT submission
3. Total would be significantly larger with the TBDs crystalized.

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## Appendix: Options not currently recommended by Energy

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|---|---|---|
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • **Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects**<br>• **Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small**<br>• **May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle**<br>• **Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return**<br>• **Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].**<br>• **Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms.** | • **Up to $390 million annually from 2017-18 to 2020-21.** |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | • $260 million annually from 2017-18 to 2020-21. |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion. | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC]. |

- Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.
  - Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base
- Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan

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Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset

by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).

- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

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Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

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| **From:** | Emily Kerr |
| **To:** | Francisco Chinchon; John Kim |
| **Cc:** | Gavin He |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals v14a.docx |
| **Date:** | Thursday, January 19, 2017 11:01:48 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v14a_markup2.docx |

Hi,

I made some changes in the attached version of the note.

John – I will drop by to go over what I changed.

Emily

---

**From:** Francisco Chinchon
**Sent:** Thursday, January 19, 2017 9:14 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a.docx

Hi,

I freelanced a bit on the GA piece. Feel free to discard if you don't agree. I also moved the TT and DT sections to an appendix. I think is confusing to keep measures not being recommended in this deck in the main section.

Thanks,

Francisco

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**From:** John Kim
**Sent:** Thursday, January 19, 2017 8:23 AM
**To:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v14a.docx

Good morning. I quickly put an initial marker down so that it could be turned around reasonably quickly. Also saved in the folder.

Thanks,

John.

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

**CONTEXT**

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

**COMMENTS**

- A significant number of Energy's proposals involve shifting costs from the rate base to the tax base.
- While the subset of proposals costed by Energy may have a fairly limited residential rate payer impact (e.g. about $6-7/month for residential, or less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (~~about~~ potentially more than $2 billion in 2017-18 if including yet-to-be-costed items).
- Additional fiscal exposure comes from proposals not yet costed by Energy (e.g., conservation costs, with Energy consulting OPCD on accounting). Energy also presents other proposals where costs and impacts are "TBD".
- In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts (e.g., of about $5.5 Bn in calendar 2017) during the period that GA costs are deferred, depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

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- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,535 | 1,225 | 2,035 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**ENERGY'S BROAD POLICY THEMES / RATIONALES**

A key theme / rationale cited by Energy is to no longer use the rate-base to pay for "social programs" by shifting the cost of OESP, RRRP and a proposed First Nation Rate to the tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by ~~≈ $0.55 in 2017, increasing to ≈ $1.45 in 2022,~~$0.83 based on current OESP charge.**<br><br>**Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.** | • Would provide on-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households.<br>• There may be a risk that expanding OESP or RRRP may change the view of the federal government that it is not a taxable benefit. When OESP was created, TPD worked with Finance Canada and Energy to ensure that it was not considered a taxable benefit. | OESP<br>• 2017-18: $162 M<br>• Increasing to $32~~2~~3 M in 2020-21.<br><br>Conservation<br>• 2017-18: $~~666~~457 M |

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| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| • **Estimated to reduce average monthly residential bill by ≈ $~~1.55~~1.60 in 2017, increasing to ≈ $~~1.75~~1.80 in 2022.** | | • Increasing to $~~719~~493 M in 2020-21 |
| ~~**Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.**~~ Create a new low income conservation benefit program that would build on existing programs. | • ~~Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.~~<br>• ~~Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.~~<br>~~•~~ Conservation programs provide electricity system benefits. Fiscal-funding would result in a cross-subsidisation from tax-base.<br>~~•~~ Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan. | • ~~[If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC]~~$60 million per year. |
| ~~**Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding**~~ | • ~~Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects~~<br>• ~~Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small~~<br>• ~~May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle~~<br>• ~~Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return~~<br>• ~~Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].~~ | • ~~Up to $390 million annually from 2017-18 to 2020-21.~~ |

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| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | ~~• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms.~~ | |
| ~~**Dedicate the Departure Tax**~~ | ~~• In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".~~<br>~~• The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.~~<br>~~• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.~~<br>~~• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers.~~ | ~~• $260 million annually from 2017-18 to 2020-21.~~ |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding the Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • Current legislated March 31, 2018 end of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end.<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not fully address the fiscal impact/accounting treatment, or implementation<br>o Based on preliminary discussions with KPMG, Energy has identified the need to create an asset [to offset | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | the creation of the liability] to be held by an entity yet to be determined, e.g. OEFC, IESO or LDCs<br>o Energy is said to be working with LSB, IESO, MOF, TBS and external accountants on legislative, regulatory and accounting requirements<br>o Energy's deck clearly identify that under the current legal framework the GA would not be able to recover interest costs of the deferral<br>• Likely will lead to significant annual fiscal impact and increase in net debt (estimated by Energy to be up to $~~66~~ 65 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • Annual fiscal impact not yet determined. |
| **Enhance Tax-base RPP Rebat by 5%, to 13%** | • This proposal would increase the funding requirement of the newly established Ontario Rebate for Electricity Consumers (OREC) by about $700 million per fiscal year, to reduce an average residential bill by about $7 each month or $84 annually.<br>• The current OREC provides average savings of about $11 each month or $130 annually. | • About $700 per year |

**DETAIL ON ENERGY PROPOSALS INCLUDED IN THE JANUARY 18th DECK**

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Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.5142-0.8562 bn in 2017 to $0.6280-10.1892 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and

  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

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Low Income Conservation Benefit Program

- A new low income conservation benefit program would build on existing programs.
  - Existing low income programs delivered by local distribution companies and IESO help qualified homeowners and social and/or assisted housing providers improve the energy efficiency of their homes.
  - With respect to a new program Energy notes that participants could receive incentives for conservation measures not currently covered, increased incentive amounts, and targeted education and awareness initiatives.

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- Energy notes an illustrative budget of $60 million per year, but states that further analysis is required on costing and implementation details, including alignment with the existing conservation framework.

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~~Amortize Conservation Program Costs:~~

~~Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.~~

- ~~Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.~~
  - ~~Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.~~
  - ~~Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.~~
  - ~~Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.~~

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
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  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not proceeding due to cost barriers under the OEB's beneficiary pays principle.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset

~~by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).~~

- ~~The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.~~
- ~~Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.~~
- ~~Having OEFC help implement this measure may require introducing changes to OEFC's objects.~~
- ~~This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.~~

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.

- If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 1a~~2~~, ~~&~~1b~~3~~, and low GA Financing scenario), or more (e.g., about $5.5 bn in 2017 under ~~option 4~~high GA Financing scenario), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

Under the high GA Financing scenario~~option 4~~, now discussed in the Appendix of the latest deck, net debt could rise by $6~~5~~6 Bn over time, as estimated by Energy, and the cost pressure could be up to $51 per month by 2047. There would be significant interest rate exposure to the fiscal impact and accumulated debt estimates. The size of the deficit and debt impacts could affect the Province's credit rating and cost of debt.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - ~~Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year~~
  - Option 1a~~2~~: Moderate ~~short-term cost reductions~~GA financing, paying $3.2 and $3.4 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
  - Option 1b: Moderate GA financing, paying $1.1 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
  - Option 3: Low / GA financing – paying $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off, with limits of no more than $2 billion above the true cost of GA.~~Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA~~
  - Option 4: High / GA financing – paying $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively, with no limits above the true cost of GA.~~Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years~~
- It should be noted that under any of these options the relief period is quite limited when compare to the period under where future ratepayers will have to pay the cost of the deferral. Chart 1a and 1b (slides 10 and 11) illustrate that the impact of the relief would not last beyond 2022 (1a) and 2024 (1b) whill the higher cost caused by the deferral would hit electricity bills until 2042 at the least.

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**Commented [GH1]:** This option has been moved to the appendix section, not sure if need to be mentioned.

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- Impact of the Level of Financing on Large Industrial Electricity Consumers provided in the deck was based on previous scenarios. It should be updated using above scenarios.
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].
- Preliminary discussions between CEFD and OPCD staff suggest that there are material fiscal and reporting risk associated with this proposal.

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

**SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION –JANUARY 16 DECK**

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S ~~Recommended~~ Discussed Initiatives* | | | | | |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| Conservation Funding | | TBD | TBD | TBD | TBD |
| [Trillium Trust] | 100 | 390 | 390 | 390 | 390 |
| Departure Tax | 260 | 260 | 260 | 260 | 260 |
| DRC removal for Class B | 110 | 450 | | | |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total:[3] | **530** | **2,168** | **1,800** | **1,869** | **1,931** |
| | | | | | |
| Amortise and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total: | **1,225** | **2,035** | **1,715** | **1,826** | **1,826** |
| TOTAL (Excl. GA)[3] | 1,755 | 4,203 | 3,515 | 3,695 | 3,757 |

1. Based on estimated / forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

## SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION –JANUARY 18 DECK

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| Amortize and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| ~~OESP – Expand Eligibility~~ | | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ |
| Low Income Conservation Program | 15 | 60 | 60 | 60 | 60 |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total:[3] | **75** | **1,128** | **1,210** | **1,279** | **1,341** |
| | | | | | |
| ~~Amortise and Debt-Finance Global Adjustment Costs~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total: | **1,225** | **2,035** | **1,715** | **1,826** | **1,826** |
| TOTAL (Excl. GA)[3] | **1,300** | **3,163** | **2,925** | **3,105** | **3,167** |

1. Based on estimated / forecasted numbers [May have some variations from the January 18 deck.]
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

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## Appendix: Options not currently recommended by Energy

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| | | |
|---|---|---|
| Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | • $260 million annually from 2017-18 to 2020-21. |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion. | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC]. |

- Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.
  - Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base
- Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan

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Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
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  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
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  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
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by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).

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- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

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- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
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**From:** Francisco Chinchon
**To:** John Kim; Emily Kerr
**Cc:** Gavin He
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a.docx
**Date:** Thursday, January 19, 2017 9:13:37 AM
**Attachments:** Comments on Electricity Sector Transformation Proposals v14a_markup.docx

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Hi,

I freelanced a bit on the GA piece. Feel free to discard if you don't agree. I also moved the TT and DT sections to an appendix. I think is confusing to keep measures not being recommended in this deck in the main section.

Thanks,

Francisco

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**From:** John Kim
**Sent:** Thursday, January 19, 2017 8:23 AM
**To:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v14a.docx

Good morning. I quickly put an initial marker down so that it could be turned around reasonably quickly. Also saved in the folder.

Thanks,

John.

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

**CONTEXT**

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

**COMMENTS**

- A significant number of Energy's proposals involve shifting costs from the rate base to the tax base.
- While the subset of proposals costed by Energy may have a fairly limited residential rate payer impact (e.g. about $6-7/month for residential, or less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (~~about~~ potentially more than $2 billion in 2017-18 if including yet-to-be-costed items).
- Additional fiscal exposure comes from proposals not yet costed by Energy (e.g., conservation costs, with Energy consulting OPCD on accounting). Energy also presents other proposals where costs and impacts are "TBD".
- In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts (e.g., of about $5.5 Bn in calendar 2017) during the period that GA costs are deferred, depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

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- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,535 | 1,225 | 2,035 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**ENERGY'S BROAD POLICY THEMES / RATIONALES**

A key theme / rationale cited by Energy is to no longer use the rate-base to pay for "social programs" by shifting the cost of OESP, RRRP and a proposed First Nation Rate to the tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by ≈ $0.55 in 2017, increasing to ≈ $1.45 in 2022.**<br><br>**Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈** | • Would provide on-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households.<br>• There may be a risk that expanding OESP or RRRP may change the view of the federal government that it is not a taxable benefit. When OESP was created, TPD worked with Finance Canada and Energy to ensure that it was not considered a taxable benefit. | • 2017-18: $162 M<br>• Increasing to $322 M in 2020-21.<br><br>• 2017-18: $666 M<br>• Increasing to $719 M in 2020-21 |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **$1.55 in 2017, increasing to ≈ $1.75 in 2022.** | | |
| | | |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.<br>o Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC] |
| ~~**Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding**~~ | • ~~Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects~~<br>• ~~Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small~~<br>• ~~May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle~~<br>• ~~Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return~~<br>• ~~Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].~~<br>• ~~Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms.~~ | • ~~Up to $390 million annually from 2017-18 to 2020-21.~~ |
| ~~**Dedicate the Departure Tax**~~ | • ~~In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".~~ | • ~~$260 million annually from~~ |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | ~~• The departure tax was not a fiscal windfall. It was net fiscally neutral – while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.~~<br>~~• Repurposing the departure tax to provide rate mitigation would have a dollar-per-dollar fiscal impact and could trigger an increase in OEFC's stranded debt.~~<br>~~• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers.~~ | ~~2017-18 to 2020-21.~~ |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding the Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • Current legislated March 31, 2018 end of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end.<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not fully address the fiscal impact/accounting treatment, or implementation<br>o Based on preliminary discussions with KPMG, Energy has identified the need to create an asset [to offset the creation of the liability] to be held by an entity yet to be determined, e.g. OEFC, IESO or LDCs<br>o Energy is said to be working with LSB, IESO, MOF, TBS and external accountants on legislative, regulatory and accounting requirements<br>o Energy's deck clearly identify that under the current legal framework the GA would not be able to recover interest costs of the deferral<br>• Likely will lead to significant annual fiscal impact and increase in net debt (estimated by Energy to be up to $~~66~~ 65 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • Annual fiscal impact not yet determined. |
| **Enhance Tax-base RPP Rebat by 5%, to 13%** | • This proposal would increase the funding requirement of the newly established Ontario Rebate for Electricity Consumers (OREC) by about $700 million per fiscal year, to reduce an average residential bill by about $7 each month or $84 annually.<br>• The current OREC provides average savings of about $11 each month or $130 annually. | • About $700 per year |

**DETAIL ON ENERGY PROPOSALS INCLUDED IN THE JANUARY 18th DECK**

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Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

~~Expanding the scope of the Trillium Trust to invest in energy infrastructure:~~

~~The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).~~

- ~~Expanding access to natural gas is already included under Moving Ontario Forward.~~
- ~~Using the Trillium Trust for additional energy projects would require either~~
  - ~~squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or~~
  - ~~additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.~~
- ~~In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in service and amortized.~~
  - ~~Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).~~
- ~~Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase~~

~~growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).~~
  - ~~May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.~~
  - ~~This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.~~
- ~~Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.~~
- ~~Energy also suggests that investments could be made into projects that are currently not proceeding due to cost barriers under the OEB's beneficiary pays principle.~~

~~Departure Tax:~~

~~As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.~~
- ~~This would have a dollar-for-dolar fiscal impact.~~
- ~~This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).~~
- ~~The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.~~
- ~~Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.~~
- ~~Having OEFC help implement this measure may require introducing changes to OEFC's objects.~~
- ~~This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.~~

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
    - If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 1a~~2~~, ~~&~~1b~~3~~, and low GA Financing scenario), or more (e.g., about $5.5 bn in 2017 under ~~option 4~~high GA Financing scenario), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

Under the high GA Financing scenario~~option 4~~, now discussed in the Appendix of the latest deck, net debt could rise by $6~~5~~6 Bn over time, as estimated by Energy, and the cost pressure could be up to $51 per month by 2047. There would be significant interest rate exposure to the fiscal impact and accumulated debt estimates. The size of the deficit and debt impacts could affect the Province's credit rating and cost of debt.

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- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - ~~o Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year~~
  - o Option 1a~~2~~: Moderate ~~short-term cost reductions~~GA financing, paying $3.2 and $3.4 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
  - o Option 1b: Moderate GA financing, paying $1.1 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
  - o Option 3: Low / GA financing – paying $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off, with limits of no more than $2 billion above the true cost of GA.~~Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA~~
  - o Option 4: High / GA financing – paying $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively, with no limits above the true cost of GA.~~Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years~~
- It should be noted that under any of these options the relief period is quite limited when compare to the period under where future ratepayers will have to pay the cost of the deferral. Chart 1a and 1b (slides 10 and 11) illustrate that the impact of the relief would not last beyond 2022 (1a) and 2024 (1b) whill the higher cost caused by the deferral would hit electricity bills until 2042 at the least.
- Impact of the Level of Financing on Large Industrial Electricity Consumers provided in the deck was based on previous scenarios. It should be updated using above scenarios.
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].
- Preliminary discussions between CEFD and OPCD staff suggest that there are material fiscal and reporting risk associated with this proposal.

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

**SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION ~~–~~JANUARY 16 DECK**

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S ~~Recommended~~ Discussed Initiatives* | | | | | |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| Conservation Funding | | TBD | TBD | TBD | TBD |
| [Trillium Trust] | 100 | 390 | 390 | 390 | 390 |
| Departure Tax | 260 | 260 | 260 | 260 | 260 |
| DRC removal for Class B | 110 | 450 | | | |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total:[3] | **530** | **2,168** | **1,800** | **1,869** | **1,931** |
| | | | | | |
| Amortise and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total: | **1,225** | **2,035** | **1,715** | **1,826** | **1,826** |
| TOTAL (Excl. GA)[3] | 1,755 | 4,203 | 3,515 | 3,695 | 3,757 |

1. Based on estimated / forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

## SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION –JANUARY 18 DECK

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| Amortize and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| ~~OESP – Expand Eligibility~~ | | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ |
| Low Income Conservation Program | 15 | 60 | 60 | 60 | 60 |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total:[3] | **75** | **1,128** | **1,210** | **1,279** | **1,341** |
| | | | | | |
| ~~Amortise and Debt-Finance Global Adjustment Costs~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ | ~~TBD~~ |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total: | **1,225** | **2,035** | **1,715** | **1,826** | **1,826** |
| TOTAL (Excl. GA)[3] | **1,300** | **3,163** | **2,925** | **3,105** | **3,167** |

1. Based on estimated / forecasted numbers [May have some variations from the January 18 deck.]
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

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## Appendix: Options not currently recommended by Energy

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|---|---|---|
| Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | • $260 million annually from 2017-18 to 2020-21. |

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Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

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| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | John Kim; Francisco Chinchon; Emily Kerr |
| **Cc:** | Gavin He |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx |
| **Date:** | Monday, January 16, 2017 8:30:18 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v13 (CEFD).docx<br>Comments on Electricity Sector Transformation Proposals v12 (CEFD)_Markup.docx |

---

And a few points added under the GA option.

Ron

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**From:** Ronald Kwan
**Sent:** January-16-17 8:20 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Thanks John.

I saved a clean copy.

Ron

---

**From:** John Kim
**Sent:** January-16-17 8:11 AM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Corrected a couple more numbers in both tables.

Thanks,

John.

---

**From:** John Kim
**Sent:** Monday, January 16, 2017 6:52 AM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Went through the tables and double checked the numbers, also based on updated. (Sorry

about the messy check file but attached, as an fyi.)

Thanks,

John.

---

**From:** John Kim
**Sent:** January 16, 2017 6:21 AM
**To:** Ronald Kwan; Francisco Chinchon; Emily Kerr
**Cc:** Gavin He
**Subject:** Re: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Good morning. Just having a look now and did a file compare for everyone's convenience.

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** January 16, 2017 6:16 AM
**To:** Francisco Chinchon; John Kim; Emily Kerr
**Cc:** Gavin He
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi,

I made a couple more changes to the table at the end of the BN.

Ron

---

**From:** Ronald Kwan
**Sent:** January-16-17 6:06 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi All,

I made some additional changes. Revised version attached. Please review ASAP in the morning.

Thanks,
Ron

---

**From:** Emily Kerr
**Sent:** January-15-17 9:35 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Sorry, one more change in the attached.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 8:42 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi all, I added on the TT per Ron's comment.

Francisco

On Jan 15, 2017, at 6:56 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi,
>
> Just started to review. Looks good.
>
> On the table, I marked out some requests – split OESP and RRRP into separate rows, and add a 17-18 fiscal cost / exposure column (including commenting more on and adding in the fiscal risk of the OPG efficiencies related proposal). On the Trillium Trust, it might be fair to point out that Energy raises the prospect of investing in projects that would not otherwise be viewed by the OEB as projects that meet a system benefits test – so not really a rate saving if the projects would not have been done on the rate base. Really a tax-based subsidisation for other policy reasons.
>
> I'll review more later this evening.
>
> Thanks,
> Ron
>
> ---
>
> **From:** Gavin He
> **Sent:** January-15-17 4:40 PM
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
> **Subject:** RE: Rate Mitigation

Hi Ron,

Please find attached updated notes and Energy's deck with proposed edits and comments from SIFB, EFB, and SPFB.

The files are also saved under below folder:
S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Energy_Jan16

Thanks,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM

> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge
>
>
> Sent from my iPad

<Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup2.docx>

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

- A significant number of Energy's proposals involve shifting costs from the rate base to the tax base.
- While the subset of proposals costed by Energy may have a fairly limited residential rate payer impact (e.g. about $6-7/month for residential, or less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (about $2 billion in 2017-18).
- Additional fiscal exposure comes from proposals not yet costed by Energy (e.g., conservation costs, with Energy consulting OPCD on accounting). Energy also presents other proposals where costs and impacts are "TBD".
- In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts (e.g., of about $5.5 Bn in calendar 2017) during the period that GA costs are deferred, depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,535 | 1,225 | 2,035 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

## ENERGY'S BROAD POLICY THEMES / RATIONALES

A key theme / rationale cited by Energy is to no longer use the rate-base to pay for "social programs" by shifting the cost of OESP, RRRP and a proposed First Nation Rate to the tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by ≈ $0.55 in 2017, increasing to ≈ $1.45 in 2022.** | • Would provide on-bill benefits.<br><br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. | • 2017-18: $162 M<br><br>• Increasing to $322 M in 2020-21. |
| **Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈** | | • 2017-18: $666 M<br><br>• Increasing to $719 M in 2020-21 |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **$1.55 in 2017, increasing to ≈ $1.75 in 2022.** | | |
| | | |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.<br>o Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC] |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax". | • $260 million annually from |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | 2017-18 to 2020-21. |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding the Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • Current legislated March 31, 2018 end of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end.<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant annual fiscal impact and increase in net debt (estimated by Energy to be up to $66 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • Annual fiscal impact not yet determined. |

**DETAIL ON ENERGY PROPOSALS**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
    - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
    - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
    - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
    - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
    - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
    - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

<u>Departure Tax</u>:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset

by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).

- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.

- If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

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In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 2&3), or more (e.g., about $5.5 bn in 2017 under option 4), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

Under option 4, net debt could rise by $66 Bn over time, as estimated by Energy. There would be significant interest rate exposure to the fiscal impact and accumulated debt estimates. The size of the deficit and debt impacts could affect the Province's credit rating and cost of debt.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].

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Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

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- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.

- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

**SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION**

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
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| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total:[3] | **530** | **2,168** | **1,800** | **1,869** | **1,931** |
| | | | | | |
| Amortise and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
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| Existing Program Total: | **1,225** | **2,035** | **1,715** | **1,826** | **1,826** |
| TOTAL (Excl. GA)[3] | **1,755** | **4,203** | **3,515** | **3,695** | **3,757** |

1. Based on estimated / forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**January 16, 2017**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

- A significant number of Energy's proposals involve shifting costs from the rate base to the tax base.
- While the subset of proposals costed by Energy may have a fairly limited residential rate payer impact (e.g. about $6-7/month for residential, or less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (about $2 billion in 2017-18).
- Additional fiscal exposure comes from proposals not yet costed by Energy (e.g., conservation costs, with Energy consulting OPCD on accounting). Energy also presents other proposals where costs and impacts are "TBD".
- In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts (e.g., of about $5.5 Bn in calendar 2017) during the period that GA costs are deferred, depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,535 | 1,225 | 2,035 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

## ENERGY'S BROAD POLICY THEMES / RATIONALES

A key theme / rationale cited by Energy is to no longer use the rate-base to pay for "social programs" by shifting the cost of OESP, RRRP and a proposed First Nation Rate to the tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by ≈ $0.55 in 2017, increasing to ≈ $1.45 in 2022.** | • Would provide on-bill benefits.<br><br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. | • 2017-18: $162 M<br><br>• Increasing to $322 M in 2020-21. |
| **Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈** | | • 2017-18: $666 M<br><br>• Increasing to $719 M in 2020-21 |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **$1.55 in 2017, increasing to ≈ $1.75 in 2022.** | | |
| | | |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.<br>o Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC] |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax". | • $260 million annually from |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | 2017-18 to 2020-21. |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding the Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • Current legislated March 31, 2018 end of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end.<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant annual fiscal impact and increase in net debt (estimated by Energy to be up to $66 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • Annual fiscal impact not yet determined. |

**DETAIL ON ENERGY PROPOSALS**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
    - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
    - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
    - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
    - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
    - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
    - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

<u>Departure Tax</u>:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset

by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).

- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.

- If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

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**Corporate and Electricity Finance Division / Ontario Financing Authority**
**January 16, 2017**

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | John Kim; Francisco Chinchon; Emily Kerr |
| **Cc:** | Gavin He |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx |
| **Date:** | Monday, January 16, 2017 8:19:52 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v12 (CEFD).docx |

Thanks John.

I saved a clean copy.

Ron

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**From:** John Kim
**Sent:** January-16-17 8:11 AM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Corrected a couple more numbers in both tables.

Thanks,

John.

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**From:** John Kim
**Sent:** Monday, January 16, 2017 6:52 AM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Went through the tables and double checked the numbers, also based on updated. (Sorry about the messy check file but attached, as an fyi.)

Thanks,

John.

---

**From:** John Kim
**Sent:** January 16, 2017 6:21 AM
**To:** Ronald Kwan; Francisco Chinchon; Emily Kerr
**Cc:** Gavin He

**Subject:** Re: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Good morning.  Just having a look now and did a file compare for everyone's convenience.

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** January 16, 2017 6:16 AM
**To:** Francisco Chinchon; John Kim; Emily Kerr
**Cc:** Gavin He
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi,

I made a couple more changes to the table at the end of the BN.

Ron

---

**From:** Ronald Kwan
**Sent:** January-16-17 6:06 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi All,

I made some additional changes.  Revised version attached. Please review ASAP in the morning.

Thanks,
Ron

---

**From:** Emily Kerr
**Sent:** January-15-17 9:35 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Sorry, one more change in the attached.

---

**From:** Francisco Chinchon

**Sent:** Sunday, January 15, 2017 8:42 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi all, I added on the TT per Ron's comment.

Francisco

On Jan 15, 2017, at 6:56 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi,
>
> Just started to review. Looks good.
>
> On the table, I marked out some requests – split OESP and RRRP into separate rows, and add a 17-18 fiscal cost / exposure column (including commenting more on and adding in the fiscal risk of the OPG efficiencies related proposal). On the Trillium Trust, it might be fair to point out that Energy raises the prospect of investing in projects that would not otherwise be viewed by the OEB as projects that meet a system benefits test – so not really a rate saving if the projects would not have been done on the rate base. Really a tax-based subsidisation for other policy reasons.
>
> I'll review more later this evening.
>
> Thanks,
> Ron
>
> ---
>
> **From:** Gavin He
> **Sent:** January-15-17 4:40 PM
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
> **Subject:** RE: Rate Mitigation
>
> Hi Ron,
>
> Please find attached updated notes and Energy's deck with proposed edits and comments from SIFB, EFB, and SPFB.
>
> The files are also saved under below folder:
> S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Energy_Jan16
>
> Thanks,
> Gavin He
>
> -----Original Message-----

From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge
>
>
> Sent from my iPad

<Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup2.docx>

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

- A significant number of Energy's proposals involve shifting costs from the rate base to the tax base.
- While the subset of proposals costed by Energy may have a fairly limited residential rate payer impact (e.g. about $6-7/month for residential, or less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (about $2 billion in 2017-18).
- Additional fiscal exposure comes from proposals not yet costed by Energy (e.g., conservation costs, with Energy consulting OPCD on accounting). Energy also presents other proposals where costs and impacts are "TBD".
- In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts (e.g., of about $5.5 Bn in calendar 2017) during the period that GA costs are deferred, depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,535 | 1,225 | 2,035 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

## ENERGY'S BROAD POLICY THEMES / RATIONALES

A key theme / rationale cited by Energy is to no longer use the rate-base to pay for "social programs" by shifting the cost of OESP, RRRP and a proposed First Nation Rate to the tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by ≈ $0.55 in 2017, increasing to ≈ $1.45 in 2022.** | • Would provide on-bill benefits.<br><br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. | • 2017-18: $162 M<br><br>• Increasing to $322 M in 2020-21. |
| **Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈** | | • 2017-18: $666 M<br><br>• Increasing to $719 M in 2020-21 |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **$1.55 in 2017, increasing to ≈ $1.75 in 2022.** | | |
| | | |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.<br>o Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC] |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax". | • $260 million annually from |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | 2017-18 to 2020-21. |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding the Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • Current legislated March 31, 2018 end of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end.<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant annual fiscal impact and increase in net debt (estimated by Energy to be up to $66 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • Annual fiscal impact not yet determined. |

**DETAIL ON ENERGY PROPOSALS**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
    - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
    - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
    - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
    - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
    - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
    - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

<u>Departure Tax</u>:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset

by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).

- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.

- If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 2&3), or more (e.g., about $5.5 bn in 2017 under option 4), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

## SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| Conservation Funding | | TBD | TBD | TBD | TBD |
| [Trillium Trust] | 100 | 390 | 390 | 390 | 390 |
| Departure Tax | 260 | 260 | 260 | 260 | 260 |
| DRC removal for Class B | 110 | 450 | | | |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| **Proposed Program Total:[3]** | **530** | **2,168** | **1,800** | **1,869** | **1,931** |
| | | | | | |
| Amortise and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:** | **1,225** | **2,035** | **1,715** | **1,826** | **1,826** |
| **TOTAL (Excl. GA)[3]** | **1,755** | **4,203** | **3,515** | **3,695** | **3,757** |

1. Based on estimated / forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**January 16, 2017**

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Emily Kerr; Francisco Chinchon; Ronald Kwan |
| **Cc:** | Gavin He |
| **Subject:** | RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx |
| **Date:** | Thursday, January 19, 2017 1:29:19 PM |
| **Attachments:** | Comments on Energy Rate Mitigation Options_Jan 19-2017_v4.docx |

Accepted all and clean copy.

Thanks,

John.

---

**From:** Emily Kerr
**Sent:** Thursday, January 19, 2017 1:02 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

Hi,

I just made formatting changes on page 1 so that the footnotes of the table would be entirely on page 1. I also fixed a typo on page 3.

---

**From:** Francisco Chinchon
**Sent:** Thursday, January 19, 2017 12:46 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

I fixed a formatting glitch in the appendix and Gavin's comment is still there (not sure if the paragraph is to stay and the comment to go or the other way).

---

**From:** Ronald Kwan
**Sent:** Thursday, January 19, 2017 12:37 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

Further cleaned up.

Ron

---

**From:** Ronald Kwan

**Sent:** January-19-17 12:34
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

And a clean version

---

**From:** Ronald Kwan
**Sent:** January-19-17 12:32
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

Hi,

Some suggestions. Please review ASAP.

Ron

---

**From:** John Kim
**Sent:** January-19-17 11:30
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v14a_markup3.docx

Hi Ron,

Pls. see attached updated note.

Thanks,

John.

# Comments on Ministry of Energy's Draft "Rate Mitigation Plan Options"

The Ministry of Energy (Energy) is providing potential price mitigation initiatives.

## CONTEXT

- As outlined in Energy's deck, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).
- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g., GEIA renegotiation with Samsung consortium, decreasing FIT prices, etc.).
- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

- A significant number of Energy's proposals involve shifting costs or risks from the rate base to the tax base. The fiscal exposure could be well over $2 billion in 2017-18.
- The largest impacts on rates and largest potential fiscal exposures are from the deferred recovery of Global Adjustment costs ($2 bn per year or more) and an enhanced, tax-base-funded 5% rebate for Regulated Price Plan (RPP) customers (about $700 million per year).
    - Significant fiscal exposure comes from proposals not yet fully costed by Energy (e.g., the Global Adjustment, with Energy to benefit from consulting with OPCD and KPMG on accounting).
    - Energy also presents other proposals where costs and impacts are not shown or "TBD".
    - Energy does not show OPG efficiencies as a fiscal risk in its table on slide 8. It is estimated at a $240 million per year exposure on slide 33.
- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,535 | 1,225 | 2,035 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

## ENERGY'S BROAD POLICY THEMES / RATIONALES

- In recognition of the costs borne by ratepayers related to the to decarbonizing and modernizing the province's electricity sector:
    1. Provide significant and immediate rate relief through cost deferral of the global adjustment (GA).
    2. Provide a greater focus on vulnerable consumers by funding electricity support programs, such as the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Protection, (RRRP) through the tax-base. In addition, provide greater support for lower income Ontarians by enhancing the OESP, etc.
    3. Empower energy agencies to increase cost effectiveness and improve efficiency by having – Independent Electricity System Operator (IESO) modernize Ontario's electricity market through electricity market renewal initiatives, the Ontario Energy Board (OEB) identify opportunities for future LDC cost reductions/efficiencies and work with Ontario Power Generation (OPG) to find further efficiencies in operations and pass on savings to ratepayers.
    4. Enhance the existing 8% rebate that went into effect January 1, 2017.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not fully address the fiscal impact/accounting treatment, or implementation<br>o Based on preliminary discussions with KPMG, Energy has identified key steps (presumably for there not to be a fiscal impact):<br>▪ need to be able to create an asset<br>▪ Need to identify an entity that could hold such an asset (e.g. OEFC, IESO or LDCs?)<br>o Energy is said to be working with LSB, IESO, MOF, TBS and external accountants on legislative, regulatory and accounting requirements<br>o Energy's deck clearly identify that under the current legal framework, the GA would not be able to recover interest costs of the deferral<br>• Likely will lead to significant annual fiscal impact and increase in net debt (illustrated as $9 Bn on slide 9, or $23 Bn on slides 11 & 12 scenarios; previously estimated by Energy to be up to $65 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by $0.83 based on current OESP charge.**<br><br>**Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈ $1.60 in 2017, increasing to ≈ $1.80 in 2022.** | • Would provide on-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households.<br>• There may be a risk that expanding OESP or RRRP may change the view of the federal government that it is not a taxable benefit. When OESP was created, TPD worked with Finance Canada and Energy to ensure that it was not considered a taxable benefit.<br>• RRRP expansion that subsidised high-cost distribution systems may create a disincentive effect on achieving efficiencies and cost reductions in those LDCs (or Toronto, as the benchmark). Energy and OEB would need to address this through the regulatory system or other measures such as eligibility conditions. | <u>OESP</u><br>• 2017-18: $162 M<br>• Increasing to $323 M in 2020-21.<br><br><u>Conservation</u><br>• 2017-18: $457 M<br>• Increasing to $493 M in 2020-21 |
| **Create a new low income conservation benefit program that would build on existing programs.** | • Conservation programs provide electricity system benefits. Fiscal-funding would result in a cross-subsidisation from tax-base.<br>• Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan. | • $60 million per year. |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Enhance Tax-base RPP Rebat by 5%, to 13%** | • This proposal would increase the funding requirement of the newly established Ontario Rebate for Electricity Consumers (OREC) by about $700 million per fiscal year, to reduce an average residential bill by about $7 each month or $84 annually.<br>• The current OREC provides average savings of about $11 each month or $130 annually. | • About $700 per year |

## DETAIL ON ENERGY PROPOSALS INCLUDED IN THE JANUARY 18th DECK

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 1a, 1b, and low GA Financing scenario), or more (e.g., about $5.5 bn in 2017 under high GA Financing scenario), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

Under the high GA Financing scenario, now discussed in the Appendix of the latest deck, net debt could rise by $65 Bn over time, as estimated by Energy, and the cost pressure could be up to $51 per month by 2047. There would be significant interest rate exposure to the fiscal impact and accumulated debt estimates. The size of the deficit and debt impacts could affect the Province's credit rating and cost of debt.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
    - Option 1a: Moderate GA financing, paying $3.2 and $3.4 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
    - Option 1b: Moderate GA financing, paying $1.1 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
    - Option 3: Low / GA financing – paying $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off, with limits of no more than $2 billion above the true cost of GA.
    - Option 4: High / GA financing – paying $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively, with no limits above the true cost of GA.
- It should be noted that under any of these options the relief period is quite limited when compare to the period under where future ratepayers will have to pay the cost of the deferral. Chart 1a and 1b (slides 10 and 11) illustrate that the impact of the relief would not last beyond 2022 (1a) and 2024 (1b) whill the higher cost caused by the deferral would hit electricity bills until 2042 at the least.
- Impact of the Level of Financing on Large Industrial Electricity Consumers provided in the deck was based on previous scenarios. It should be updated using above scenarios.
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].
- Preliminary discussions between CEFD and OPCD staff suggest that there are material fiscal and reporting risk associated with this proposal.

OESP & RRRP ($0.51-0.62 bn in 2017 to $0.80-0.92 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Low Income Conservation Benefit Program

- A new low income conservation benefit program would build on existing programs.
  - Existing low income programs delivered by local distribution companies and IESO help qualified homeowners and social and/or assisted housing providers improve the energy efficiency of their homes.
  - With respect to a new program Energy notes that participants could receive incentives for conservation measures not currently covered, increased incentive amounts, and targeted education and awareness initiatives.

- Energy notes an illustrative budget of $60 million per year, but states that further analysis is required on costing and implementation details, including alignment with the existing conservation framework.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.

  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
  - Moving to “technology-agnostic” procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
  - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
  - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister’s Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG’s current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province’s fiscal plan (Energy estimates it at $240 million per year).

**SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION –JANUARY 18 DECK**

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY’S Recommended Initiatives* | | | | | |
| Amortize and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| RRRP | | 457 | 469 | 479 | 493 |
| OESP – Enhance Benefit | | 162 | 225 | 279 | 323 |
| Low Income Conservation Program | | 60 | 60 | 60 | 60 |
| First Nations Rate | | 18 | 18 | 18 | 18 |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Enhanced RPP Rebate | 169 | 699 | 679 | 732 | 724 |
| **Proposed Program Total:[3]** | **229 + GA** | **1,636 + GA** | **1,691 + GA** | **1,808 + GA** | **1,858 + GA** |
| | | | | | |

1. Based on estimated / forecasted numbers [May have some variations from the January 18 deck.]
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

## Appendix: Options not currently recommended by Energy

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | • $260 million annually from 2017-18 to 2020-21. |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion. | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC]. |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.<br>o Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base<br>• Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan | |

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
    - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
    - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
    - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
    - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
    - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | John Kim |
| **Subject:** | RE: Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v7_Markup.pptx |
| **Date:** | Tuesday, November 22, 2016 5:25:24 PM |
| **Attachments:** | Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v7_Markup.pptx |

Looks good. Thanks for updating the table with the 1.2B.

I made minor changes, adding '~' for the NOEC and OEPTC table amounts.

Saved in the same version, also re-attached.

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

**From:** John Kim
**Sent:** Tuesday, November 22, 2016 5:20 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v7_Markup.pptx

Made some edits….let me know what you think.

Ontario

MINISTRY OF
ENERGY

# Cost Shifts in Ontario's Electricity Sector

## Working Draft

November 2016

CONFIDENTIAL DRAFT

# Context

- Necessary investments in Ontario's electricity system have led to increased prices, prompting government to introduced a number of price mitigation programs for all consumer types.
  - In addition to existing rate mitigation programs, the 2016 Throne Speech announced a package of rate mitigation initiatives to address electricity prices for residential, commercial and industrial consumers.

- Ontario has a number of programs in place to manage residential electricity prices, including:
  - Ontario Electricity Support Program (OESP);
  - Rural or Remote Rate Protect (RRRP);
  - Northern Ontario Energy Credit (NOEC);
  - Ontario Energy and Property Tax Credit (OEPTC);
  - Ontario Rebate for Electricity Customers (OREC); and
  - Ending the Debt Retirement Charge (DRC) from residential bills.

- Ontario also has a number of programs in place to manage industrial electricity prices, including:
  - Industrial Conservation Initiative (ICI);
  - Industrial Electricity Incentive (IEI);
  - Industrial Accelerator Program (IAP);
  - Northern Industrial Electricity Rate Program (NIERP);
  - saveONenergy for Business Program; and
  - Demand Response.

# Context (cont'd)

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in Ontario's Electricity Sector

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in Ontario's Electricity Sector (cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

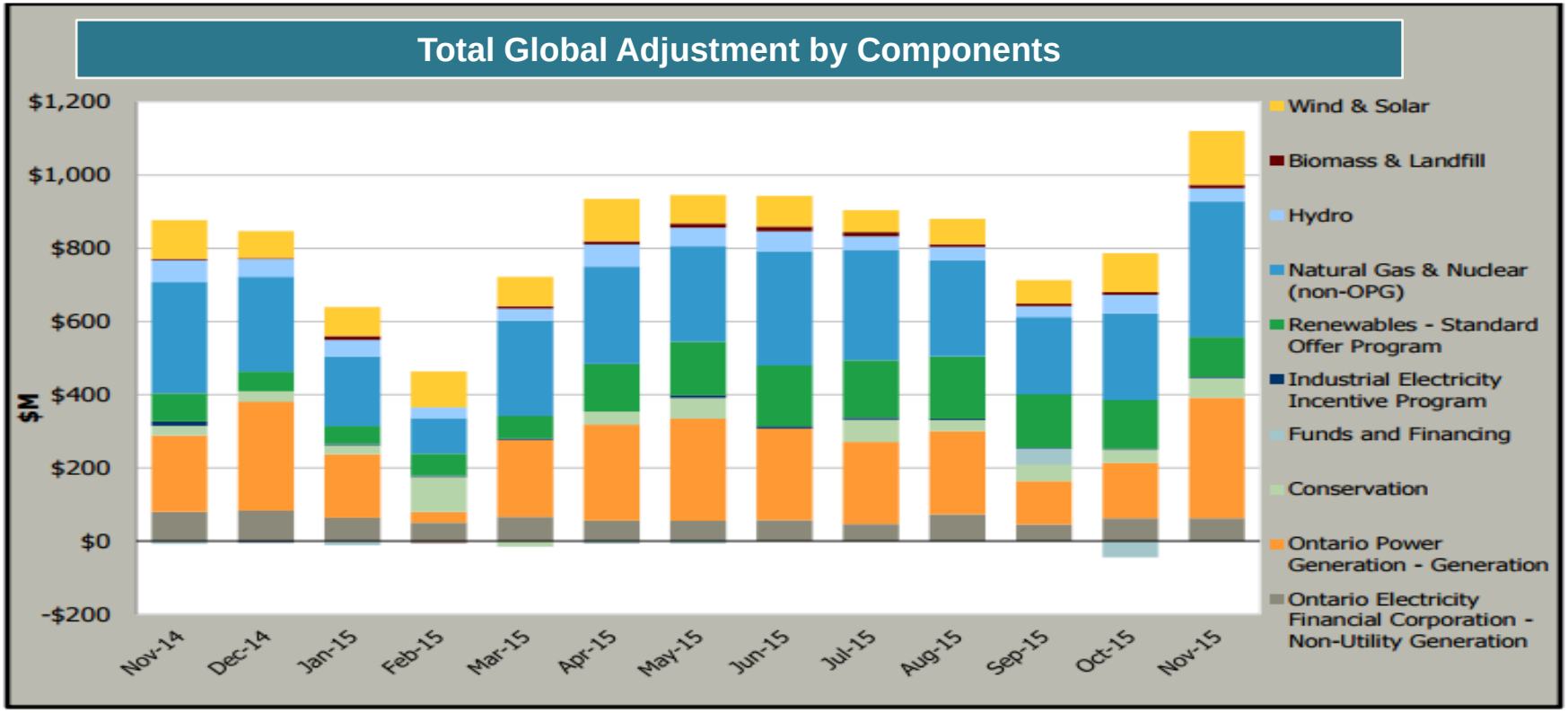
| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

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# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the province's finances.
  - Alternatively, electricity rate mitigation programs funded by the **rate base** shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

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# Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,200* |
| Ending DRC[2] | - | - | - | - | 75 | 300 | 300 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,195 | 2,105 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from November LRC Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

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# Additional Background on Taxpayer funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month, and provided a full 10 per cent benefit to almost all residential customers and most small retail businesses.<br><br>OCEB expired December 31, 2015, as planned. OCEB was put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. |
| **Ending DRC from Residential Bills** | ~300 | Jan 1, 2016 to Mar 31, 2018 | The government removed the Debt Retirement Charge (DRC) from residential electricity users' bills as of January 1, 2016.<br><br>This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST), an eight per cent savings. |
| **Northern Industrial Electricity Rate Program** | 120 | March 2010 | As announced in 2015 Budget, the government committed to ongoing support for northern industrials with $120 million allocated annually.<br><br>The Northern Industrial Electricity Rate (NIER) was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year. Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br><br>NIER was initially established as a three-year program in Budget 2010 and effective as of April 1, 2010, to provide an estimated $150 million per year to eligible large industrial companies in northern Ontario. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 Announcement | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445 | Budget 2010 Announcement | Delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families, and up to $1,148 for qualifying seniors. [1] |

1. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline - Taxpayer funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB.*
*The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*As part of its commitment to reduce electricity cost pressures, the government has removed the Debt Retirement Charge (DRC) from residential electricity users' bills beginning on January 1, 2016. This will save a typical residential user about $70 each year and will mean ending the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

**Northern Industrial Electricity Rate Program**

## History of Northern Industrial Relief

**November 2006**
*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**
*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**
*The government announced the NIER program, with a projected fiscal cost of $150 million per year, to provide electricity price rebates for qualifying large industrial facilities in Northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**
*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**
*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | John Kim |
| **Cc:** | Tomasz Bugajski; Emily Kerr; Shajee Kathirgamanathan |
| **Subject:** | RE: Cost Shifts in the Electricity Sector |
| **Date:** | Wednesday, November 23, 2016 3:53:44 AM |
| **Attachments:** | Cost Shifting - CEFD Slides-v8.pptx |

Hi John,

I made some edits (not marked) on the added CEFD slides (as excerpted).

Any way to estimate the 2017 costs and impacts of the ratepayer programs in the Energy slides?

Thanks,
Ron

---

**From:** John Kim
**Sent:** November-22-16 6:54 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** RE: Cost Shifts in the Electricity Sector

Hi Ron,

Pls. see attached with input from both branches. We have actual numbers from OEP on OEPTC. NOEC and NIER were PA figures even in the previous version.

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** Monday, November 21, 2016 6:26 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** RE: Cost Shifts in the Electricity Sector

Thanks.

Ron

---

**From:** John Kim

**Sent:** November-21-16 18:22
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** RE: Cost Shifts in the Electricity Sector

Sure, we will aim for another version tomorrow.

John.

---

**From:** Ronald Kwan
**Sent:** Monday, November 21, 2016 6:19 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Cost Shifts in the Electricity Sector

Thanks.

We should be able to get some historical year-by-year OEPTC and NOEC and NIER numbers.

DRC amount forgone I think was a little higher in the original submission. And the OREC amount in the LRC submission earlier this month is now at $1.2.

Can we do comments/markups of Energy's slides too?

Ron

---

**From:** Shajee Kathirgamanathan
**Sent:** November-21-16 18:12
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Cost Shifts in the Electricity Sector

Hi Ron,

EFB and SPFB developed some additional slides providing an overview of tax payer funded electricity price mitigation programs; fiscal impacts, overview and history/timeline.

File attached, also found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Cost Shifts\Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v5.pptx

Thanks,

Shajee

**Shajee Kathirgamanathan**
Senior Advisor
Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

-----Original Message-----
From: Ronald Kwan
Sent: Sunday, November 20, 2016 11:16 AM
To: John Kim <John.Kim@ofina.on.ca>
Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
Subject: Re: Cost Shifts in the Electricity Sector

Thanks John.

Ron

> On Nov 20, 2016, at 10:30 AM, John Kim <John.Kim@ofina.on.ca> wrote:
>
> Hi Ron,
>
> Sure, will provide you a draft tomorrow.
>
> Thanks,
>
> John.
>
> -----Original Message-----
> From: Ronald Kwan
> Sent: Sunday, November 20, 2016 10:27 AM
> To: John Kim <John.Kim@ofina.on.ca>
> Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> Subject: Re: Cost Shifts in the Electricity Sector
>
> Hi,
>
> As a first product, is a quick draft of a table on the cost of current rate migration fiscal costs doable for Monday?
>
> Ron

>
>> On Nov 19, 2016, at 9:08 PM, John Kim <John.Kim@ofina.on.ca> wrote:
>>
>> Hi Ron,
>>
>> Sorry, just saw the FYI and didn't realize there was a question on the approximate timeline.
>>
>> We should be able to expedite things if needed but I'd estimate middle of week would be certainly within the normal turnaround.
>>
>> Let us know if you have a turnaround in mind.
>>
>> Thanks,
>>
>> John.
>>
>> -----Original Message-----
>> From: Ronald Kwan
>> Sent: Friday, November 18, 2016 6:11 PM
>> To: John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
>> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
>> Subject: FW: Cost Shifts in the Electricity Sector
>> Importance: High
>>
>> Hi All,
>>
>> FYI.  I think we need to do our own version in order to provide better balance and a more complete picture.
>>
>> How long do you think it might take?
>>
>> Ron
>>
>> -----Original Message-----
>> From: Ronald Kwan
>> Sent: November-18-16 18:09
>> To: Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>
>> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
>> Subject: RE: Cost Shifts in the Electricity Sector
>>
>> Hi,
>>
>> While they list some tax-based programs that are not cost shifts, they do not list NIER nor the

recent 8% rebate, and they only show to 2016, prior to the latter and the expansion of RRRP. I would have thought it would be helpful to show those.
>>
>> On slide 5, it would be helpful to show, for context, the cost of electricity programs already on the tax base, such as historically OCEB and the 8% going-forward, as well as NIER, OEPTC, NOEC, and ending the DRC early too.
>>
>> Ron
>>
>> -----Original Message-----
>> From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
>> Sent: November-18-16 17:48
>> To: Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
>> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
>> Subject: FW: Cost Shifts in the Electricity Sector
>>
>> FYI both.
>>
>>
>> _____
>> From: Imbrogno, Serge (ENERGY)
>> Sent: Friday, November 18, 2016 5:26:11 PM (UTC-05:00) Eastern Time (US & Canada)
>> To: Orsini, Steve (CAB)
>> Cc: Bromm, William (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF)
>> Subject: Fw: Cost Shifts in the Electricity Sector
>>
>> Hi Steve,
>> The attached shows costs shifts within the electricity sector which are the result of rate mitigation programs which benefit some consumers. It also shows the total cost of these programs. This was produced in response to a request from Ed.
>> Serge

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# Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
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| OREC | - | - | - | - | - | 300 | 1,200* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,105** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from November LRC Submission

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- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
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- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

DRAFT

# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month, and provided a full 10 per cent benefit to almost all residential customers and most small retail businesses.<br><br>OCEB expired December 31, 2015, as planned. OCEB was put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. |
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1. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline – Taxpayer-funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

DRAFT

# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
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  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | John Kim |
| **Subject:** | RE: Cost Shifts in the Electricity Sector |
| **Date:** | Tuesday, November 22, 2016 3:43:19 PM |
| **Attachments:** | Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v7.pptx |

Updated, also included Usman's slides/updates.

File attached, also found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Cost Shifts\Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v7.pptx

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

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**Sent:** Tuesday, November 22, 2016 3:23 PM
**To:** John Kim <John.Kim@ofina.on.ca>
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**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

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**From:** Ronald Kwan
**Sent:** Monday, November 21, 2016 6:19 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
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**From:** Shajee Kathirgamanathan
**Sent:** November-21-16 18:12
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
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Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

-----Original Message-----
From: Ronald Kwan
Sent: Sunday, November 20, 2016 11:16 AM
To: John Kim <John.Kim@ofina.on.ca>
Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
Subject: Re: Cost Shifts in the Electricity Sector

Thanks John.

Ron

> On Nov 20, 2016, at 10:30 AM, John Kim <John.Kim@ofina.on.ca> wrote:
>
> Hi Ron,
>
> Sure, will provide you a draft tomorrow.
>
> Thanks,
>
> John.
>
> -----Original Message-----
> From: Ronald Kwan
> Sent: Sunday, November 20, 2016 10:27 AM
> To: John Kim <John.Kim@ofina.on.ca>
> Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>

> Subject: Re: Cost Shifts in the Electricity Sector
>
> Hi,
>
> As a first product, is a quick draft of a table on the cost of current rate migration fiscal costs doable for Monday?
>
> Ron
>
>> On Nov 19, 2016, at 9:08 PM, John Kim <John.Kim@ofina.on.ca> wrote:
>>
>> Hi Ron,
>>
>> Sorry, just saw the FYI and didn't realize there was a question on the approximate timeline.
>>
>> We should be able to expedite things if needed but I'd estimate middle of week would be certainly within the normal turnaround.
>>
>> Let us know if you have a turnaround in mind.
>>
>> Thanks,
>>
>> John.
>>
>> -----Original Message-----
>> From: Ronald Kwan
>> Sent: Friday, November 18, 2016 6:11 PM
>> To: John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
>> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
>> Subject: FW: Cost Shifts in the Electricity Sector
>> Importance: High
>>
>> Hi All,
>>
>> FYI.  I think we need to do our own version in order to provide better balance and a more complete picture.
>>
>> How long do you think it might take?
>>
>> Ron
>>
>> -----Original Message-----
>> From: Ronald Kwan
>> Sent: November-18-16 18:09

>> To: Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>
>> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
>> Subject: RE: Cost Shifts in the Electricity Sector
>>
>> Hi,
>>
>> While they list some tax-based programs that are not cost shifts, they do not list NIER nor the recent 8% rebate, and they only show to 2016, prior to the latter and the expansion of RRRP. I would have thought it would be helpful to show those.
>>
>> On slide 5, it would be helpful to show, for context, the cost of electricity programs already on the tax base, such as historically OCEB and the 8% going-forward, as well as NIER, OEPTC, NOEC, and ending the DRC early too.
>>
>> Ron
>>
>> -----Original Message-----
>> From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
>> Sent: November-18-16 17:48
>> To: Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
>> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
>> Subject: FW: Cost Shifts in the Electricity Sector
>>
>> FYI both.
>>
>>
>> _____
>> From: Imbrogno, Serge (ENERGY)
>> Sent: Friday, November 18, 2016 5:26:11 PM (UTC-05:00) Eastern Time (US & Canada)
>> To: Orsini, Steve (CAB)
>> Cc: Bromm, William (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF)
>> Subject: Fw: Cost Shifts in the Electricity Sector
>>
>> Hi Steve,
>> The attached shows costs shifts within the electricity sector which are the result of rate mitigation programs which benefit some consumers. It also shows the total cost of these programs. This was produced in response to a request from Ed.
>> Serge

Ontario

MINISTRY OF
ENERGY

# Cost Shifts in Ontario's Electricity Sector

## Working Draft

November 2016

CONFIDENTIAL DRAFT

# Context

- Necessary investments in Ontario's electricity system have led to increased prices, prompting government to introduced a number of price mitigation programs for all consumer types.
  - In addition to existing rate mitigation programs, the 2016 Throne Speech announced a package of rate mitigation initiatives to address electricity prices for residential, commercial and industrial consumers.

- Ontario has a number of programs in place to manage residential electricity prices, including:
  - Ontario Electricity Support Program (OESP);
  - Rural or Remote Rate Protect (RRRP);
  - Northern Ontario Energy Credit (NOEC);
  - Ontario Energy and Property Tax Credit (OEPTC);
  - Ontario Rebate for Electricity Customers (OREC); and
  - Ending the Debt Retirement Charge (DRC) from residential bills.

- Ontario also has a number of programs in place to manage industrial electricity prices, including:
  - Industrial Conservation Initiative (ICI);
  - Industrial Electricity Incentive (IEI);
  - Industrial Accelerator Program (IAP);
  - Northern Industrial Electricity Rate Program (NIERP);
  - saveONenergy for Business Program; and
  - Demand Response.

# Context (cont'd)

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in Ontario's Electricity Sector

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in Ontario's Electricity Sector (cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

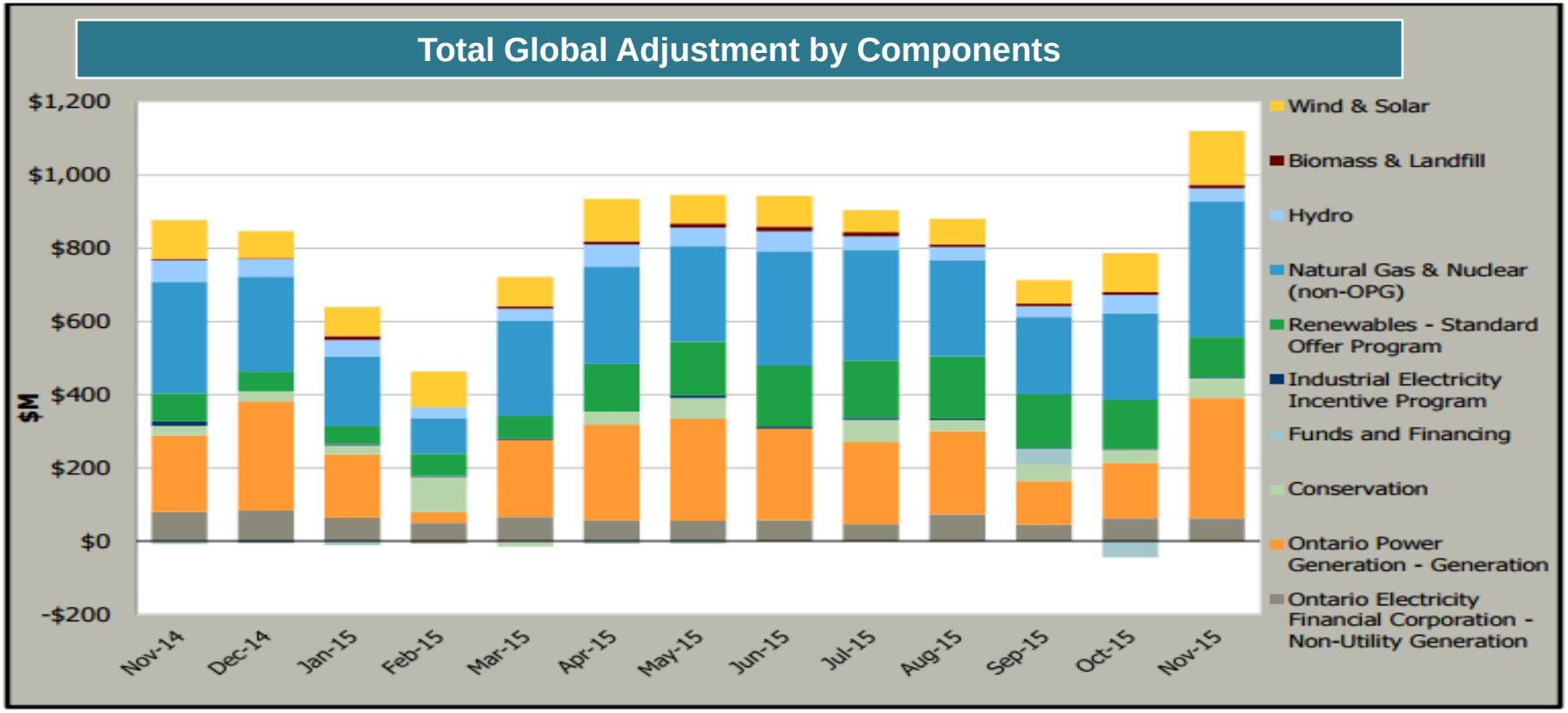
| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

DRAFT

# Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,200* |
| Ending DRC[2] | - | - | - | - | 75 | 300 | 300 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,195 | 2,105 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from November LRC Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

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# Additional Background on Taxpayer funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month, and provided a full 10 per cent benefit to almost all residential customers and most small retail businesses.<br><br>OCEB expired December 31, 2015, as planned. OCEB was put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. |
| **Ending DRC from Residential Bills** | ~300 | Jan 1, 2016 to Mar 31, 2018 | The government removed the Debt Retirement Charge (DRC) from residential electricity users' bills as of January 1, 2016.<br><br>This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,000 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST), an eight per cent savings. |
| **Northern Industrial Electricity Rate Program** | 120 | March 2010 | The Northern Industrial Electricity Rate (NIER) was extended in 2012 for an additional three-year term, effective April 1, 2013, and expiring March 31, 2016, with an allocation up to $120 million per year.<br><br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br><br>NIER was initially established as a three-year program in Budget 2010 and effective as of April 1, 2010, to provide an estimated $150 million per year to eligible large industrial companies in northern Ontario. |
| **Northern Ontario Energy Credit** | 25 | Budget 2010 Announcement | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | 445 | Budget 2010 Announcement | Delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families, and up to $1,148 for qualifying seniors. [1] |

1. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline - Taxpayer funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB.*
*The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*As part of its commitment to reduce electricity cost pressures, the government has removed the Debt Retirement Charge (DRC) from residential electricity users' bills beginning on January 1, 2016. This will save a typical residential user about $70 each year and will mean ending the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

**Northern Industrial Electricity Rate Program**

## History of Northern Industrial Relief

**November 2006**
*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**
*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**
*The government announced the NIER program, with a projected fiscal cost of $150 million per year, to provide electricity price rebates for qualifying large industrial facilities in Northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

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# Fiscal Implications of the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the provinces financial statements.
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  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.
  - Ontario Electricity Financial Corporation (OEFC), an agency of the Ministry of Finance, is consolidated line-by-line into the Province's accounts.
    - OEFC receives certain revenues from within the electricity sector, including the Debt Retirement Charge (DRC) and payments-in-lieu of taxes, to manage the debt and liabilities of the old Ontario Hydro, including the stranded portion of the debt.
    - ~~The Minister of Finance also has authority under the Electricity Act with respect to the DRC.~~

DRAFT

# Electricity Sector Revenues: Part of a "Closed System" via OEFC

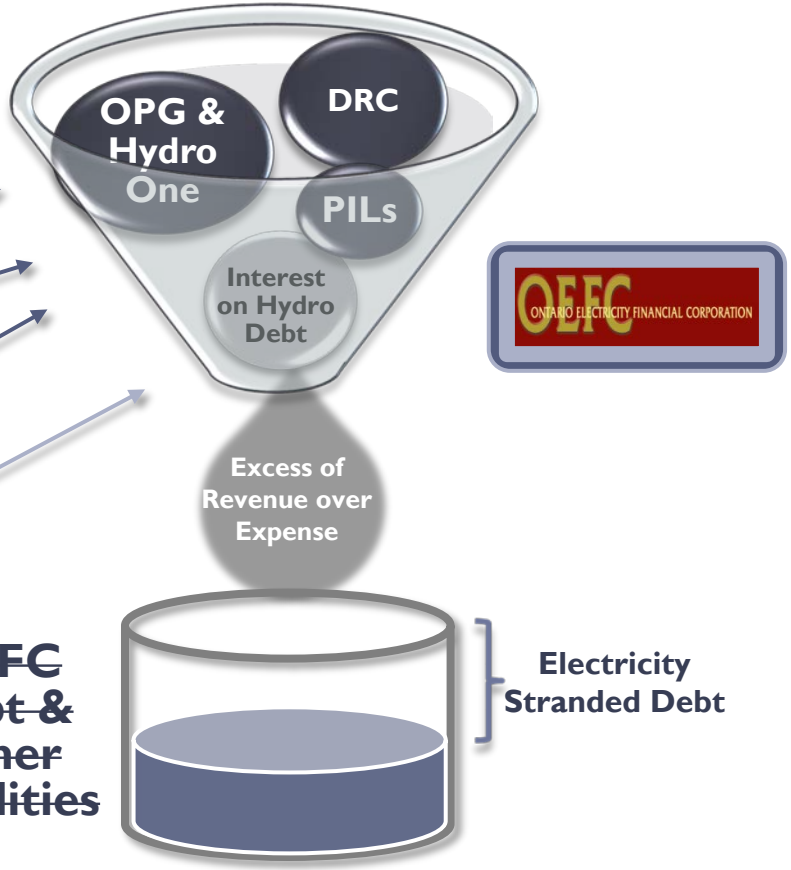
- OEFC manages certain dedicated Provincial electricity sector revenues and expenses, and services and pays down its electricity debt to reduce the stranded debt of the electricity sector

## Ontario Revenues

- Taxation Revenue
  - Personal Income Tax, Sales Tax, etc.
  - Electricity Payments-In-Lieu of Taxes (PILs)
  - Hydro One Provincial Corp Tax
- Federal Transfers
- Government Business Enterprises
  - OLG & LCBO
  - OPG & Hydro One
- Other Non-Tax Revenue
  - Electricity Debt Retirement Charge (DRC)

## Ontario Expenses

- Interest on Debt
  - Interest on Hydro Debt
  - Interest on Other Debt
- Education, Energy, Transportation, etc.



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**Subject:** RE: Cost Shifts in the Electricity Sector
**Date:** Tuesday, November 22, 2016 3:22:44 PM
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Senior Advisor
Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

-----Original Message-----
From: Ronald Kwan
Sent: Sunday, November 20, 2016 11:16 AM
To: John Kim <John.Kim@ofina.on.ca>
Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
Subject: Re: Cost Shifts in the Electricity Sector

Thanks John.

Ron

> On Nov 20, 2016, at 10:30 AM, John Kim <John.Kim@ofina.on.ca> wrote:
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> Hi Ron,
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> Sure, will provide you a draft tomorrow.
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> Thanks,
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>> Subject: Fw: Cost Shifts in the Electricity Sector
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Ontario

MINISTRY OF
ENERGY

# Cost Shifts in Ontario's Electricity Sector

## Working Draft

November 2016

CONFIDENTIAL DRAFT

# Context

- Necessary investments in Ontario's electricity system have led to increased prices, prompting government to introduced a number of price mitigation programs for all consumer types.
  - In addition to existing rate mitigation programs, the 2016 Throne Speech announced a package of rate mitigation initiatives to address electricity prices for residential, commercial and industrial consumers.

- Ontario has a number of programs in place to manage residential electricity prices, including:
  - Ontario Electricity Support Program (OESP);
  - Rural or Remote Rate Protect (RRRP);
  - Northern Ontario Energy Credit (NOEC); and
  - Ontario Energy and Property Tax Credit (OEPTC).

- Ontario also has a number of programs in place to manage industrial electricity prices, including:
  - Industrial Conservation Initiative (ICI);
  - Industrial Electricity Incentive (IEI);
  - Industrial Accelerator Program (IAP);
  - saveONenergy for Business Program; and
  - Demand Response.

# Context (cont'd)

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in Ontario's Electricity Sector

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in Ontario's Electricity Sector (cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

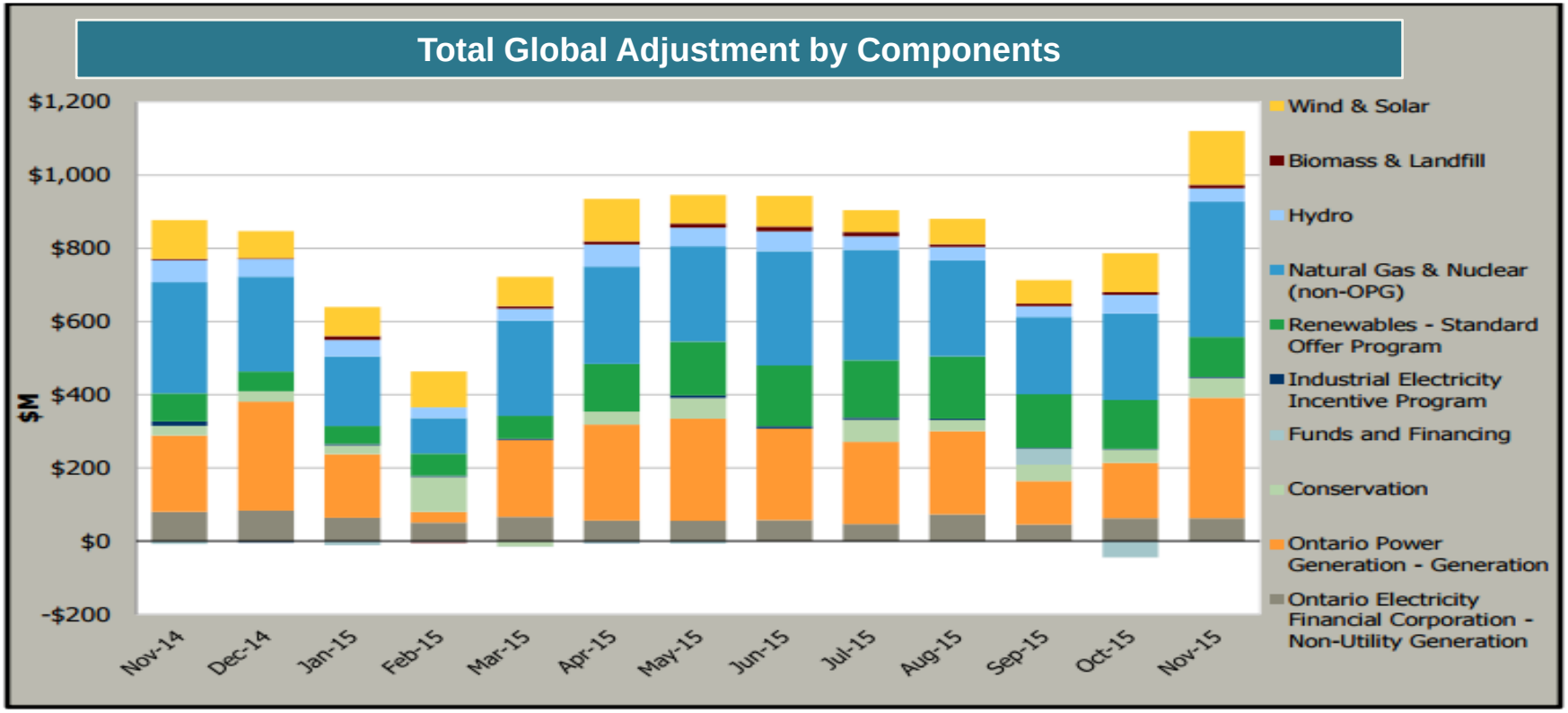
| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

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# Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,200* |
| Ending DRC[2] | - | - | - | - | 75 | 300 | 300 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,195 | 2,105 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from November LRC Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011 – 2017.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

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# Additional Background on Taxpayer funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month, and provided a full 10 per cent benefit to almost all residential customers and most small retail businesses.<br><br>OCEB expired December 31, 2015, as planned. OCEB was put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. |
| **Ending DRC from Residential Bills** | ~300 | Jan 1, 2016 to Mar 31, 2018 | The government removed the Debt Retirement Charge (DRC) from residential electricity users' bills as of January 1, 2016.<br><br>This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,000 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST), an eight per cent savings. |
| **Northern Industrial Electricity Rate Program** | 120 | March 2010 | The Northern Industrial Electricity Rate (NIER) was extended in 2012 for an additional three-year term, effective April 1, 2013, and expiring March 31, 2016, with an allocation up to $120 million per year.<br><br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br><br>NIER was initially established as a three-year program in Budget 2010 and effective as of April 1, 2010, to provide an estimated $150 million per year to eligible large industrial companies in northern Ontario. |
| **Northern Ontario Energy Credit** | 25 | Budget 2010 Announcement | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | 445 | Budget 2010 Announcement | Delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families, and up to $1,148 for qualifying seniors. [1] |

1. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline - Taxpayer funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB.*
*The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*As part of its commitment to reduce electricity cost pressures, the government has removed the Debt Retirement Charge (DRC) from residential electricity users' bills beginning on January 1, 2016. This will save a typical residential user about $70 each year and will mean ending the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

**Northern Industrial Electricity Rate Program**

## History of Northern Industrial Relief

**November 2006**
*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**
*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**
*The government announced the NIER program, with a projected fiscal cost of $150 million per year, to provide electricity price rebates for qualifying large industrial facilities in Northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**
*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**
*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

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# Fiscal Implications of the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the provinces financial statements.
- Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the province's finances.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.
  - Ontario Electricity Financial Corporation (OEFC), an agency of the Ministry of Finance, is consolidated line-by-line into the Province's accounts.
    - OEFC receives certain revenues from within the electricity sector, including the Debt Retirement Charge (DRC) and payments-in-lieu of taxes, to manage the debt and liabilities of the old Ontario Hydro, including the stranded portion of the debt.
    - ~~The Minister of Finance also has authority under the Electricity Act with respect to the DRC.~~

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# Electricity Sector Revenues: Part of a "Closed System" via OEFC

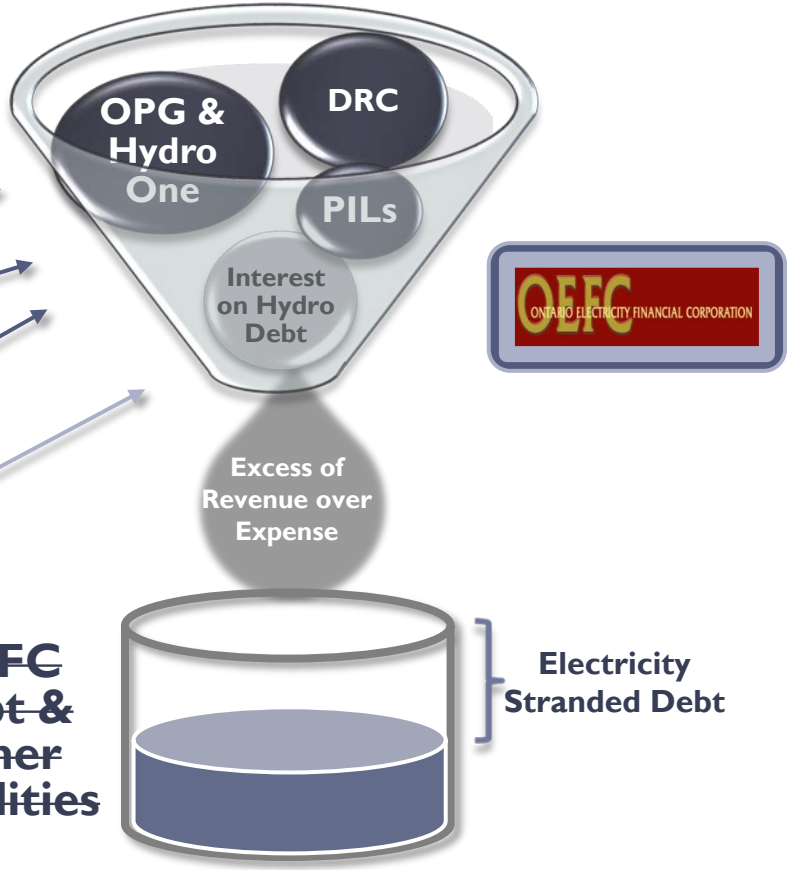
- OEFC manages certain dedicated Provincial electricity sector revenues and expenses, and services and pays down its electricity debt to reduce the stranded debt of the electricity sector

## Ontario Revenues

- Taxation Revenue
  - Personal Income Tax, Sales Tax, etc.
  - Electricity Payments-In-Lieu of Taxes (PILs)
  - Hydro One Provincial Corp Tax
- Federal Transfers
- Government Business Enterprises
  - OLG & LCBO
  - OPG & Hydro One
- Other Non-Tax Revenue
  - Electricity Debt Retirement Charge (DRC)

## Ontario Expenses

- Interest on Debt
  - Interest on Hydro Debt
  - Interest on Other Debt
- Education, Energy, Transportation, etc.



| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | John Kim |
| **Subject:** | RE: Cost Shifts in the Electricity Sector |
| **Date:** | Tuesday, November 22, 2016 9:52:25 AM |

Sure, I'll give him a call.

Though, I'm not sure why Ron has an issue with the NIER, NOEC numbers; those were from Public Accounts.

Will call Bruno for the OEPTC numbers.

Thanks,
Shajee

**Shajee Kathirgamanathan**
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---

**From:** John Kim
**Sent:** Monday, November 21, 2016 6:31 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** FW: Cost Shifts in the Electricity Sector

Tomorrow, could you do the additional setup slide and the requests in Ron's email?

Could you also give Bruno Amara a call and ask to see if he has the NOEC and OEPTC figures?

---

**From:** Ronald Kwan
**Sent:** Monday, November 21, 2016 6:26 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
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Thanks.

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Thanks.

We should be able to get some historical year-by-year OEPTC and NOEC and NIER numbers.

DRC amount forgone I think was a little higher in the original submission. And the OREC amount in the LRC submission earlier this month is now at $1.2.

Can we do comments/markups of Energy's slides too?

Ron

---

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Hi Ron,

EFB and SPFB developed some additional slides providing an overview of tax payer funded electricity price mitigation programs; fiscal impacts, overview and history/timeline.

File attached, also found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Cost Shifts\Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v5.pptx

Thanks,
Shajee

**Shajee Kathirgamanathan**

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**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** RE: Cost Shifts in the Electricity Sector

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| **Subject:** | RE: Cost Shifts in the Electricity Sector |
| **Date:** | Monday, November 21, 2016 6:11:35 PM |
| **Attachments:** | Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v5.pptx |

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Ontario

MINISTRY OF
ENERGY

# Cost Shifts in Ontario's Electricity Sector

## Working Draft

November 2016

CONFIDENTIAL DRAFT

# Context

- Necessary investments in Ontario's electricity system have led to increased prices, prompting government to introduced a number of price mitigation programs for all consumer types.
  - In addition to existing rate mitigation programs, the 2016 Throne Speech announced a package of rate mitigation initiatives to address electricity prices for residential, commercial and industrial consumers.

- Ontario has a number of programs in place to manage residential electricity prices, including:
  - Ontario Electricity Support Program (OESP);
  - Rural or Remote Rate Protect (RRRP);
  - Northern Ontario Energy Credit (NOEC); and
  - Ontario Energy and Property Tax Credit (OEPTC).

- Ontario also has a number of programs in place to manage industrial electricity prices, including:
  - Industrial Conservation Initiative (ICI);
  - Industrial Electricity Incentive (IEI);
  - Industrial Accelerator Program (IAP);
  - saveONenergy for Business Program; and
  - Demand Response.

# Context (cont'd)

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in Ontario's Electricity Sector

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in Ontario's Electricity Sector (cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

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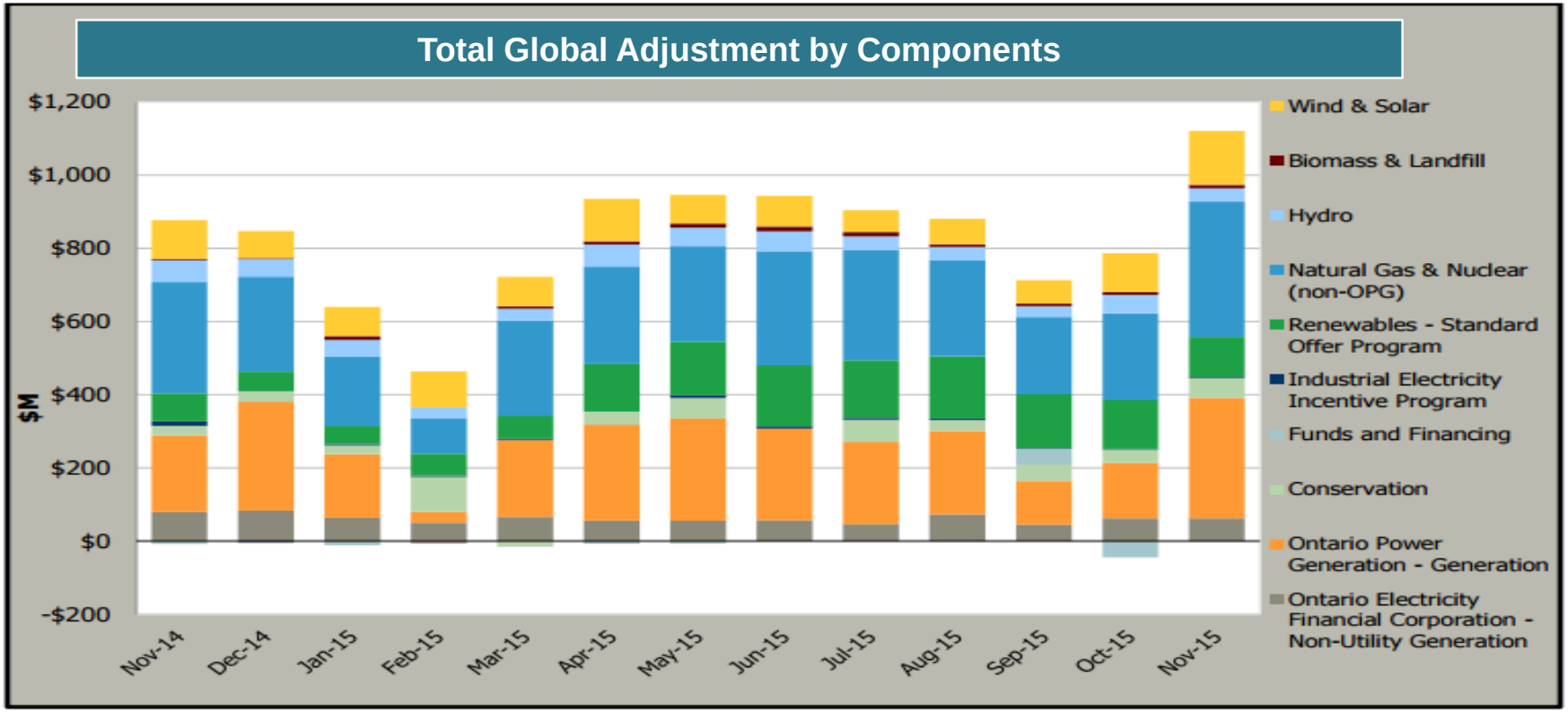
# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,000 |
| Ending DRC[2] | - | - | - | - | 75 | 300 | 300 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[2] | 445 | 445 | 445 | 445 | 445 | 445 | 445 |
| TOTAL | 1,621 | 1,583 | 1,591 | 1,654 | 1,526 | 1,190 | 1,890 |

1. 2016-17 onwards based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on estimates of Energy component of the rebate.

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011 – 2017.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1,190 million.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $1.9 billion.

DRAFT

# Additional Background on Taxpayer funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month, and provided a full 10 per cent benefit to almost all residential customers and most small retail businesses.<br><br>OCEB expired December 31, 2015, as planned. OCEB was put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. |
| **Ending DRC from Residential Bills** | ~300 | Jan 1, 2016 to Mar 31, 2018 | The government removed the Debt Retirement Charge (DRC) from residential electricity users' bills as of January 1, 2016.<br><br>This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,000 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST), an eight per cent savings. |
| **Northern Industrial Electricity Rate Program** | 120 | March 2010 | The Northern Industrial Electricity Rate (NIER) was extended in 2012 for an additional three-year term, effective April 1, 2013, and expiring March 31, 2016, with an allocation up to $120 million per year.<br><br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br><br>NIER was initially established as a three-year program in Budget 2010 and effective as of April 1, 2010, to provide an estimated $150 million per year to eligible large industrial companies in northern Ontario. |
| **Northern Ontario Energy Credit** | 25 | Budget 2010 Announcement | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | 445 | Budget 2010 Announcement | Delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families, and up to $1,148 for qualifying seniors. [1] |

1. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

DRAFT

# Timeline - Taxpayer funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB.*
*The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

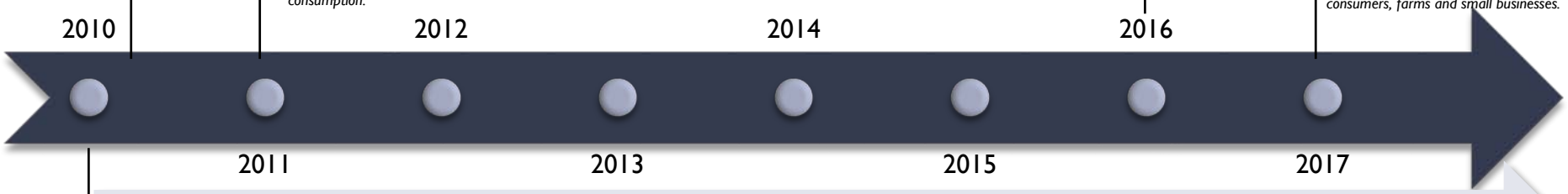
*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills**

*As part of its commitment to reduce electricity cost pressures, the government has removed the Debt Retirement Charge (DRC) from residential electricity users' bills beginning on January 1, 2016. This will save a typical residential user about $70 each year and will mean ending the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*




**Northern Industrial Electricity Rate Program**

## History of Northern Industrial Relief

**November 2006**
*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**
*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**
*The government announced the NIER program, with a projected fiscal cost of $150 million per year, to provide electricity price rebates for qualifying large industrial facilities in Northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**
*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**
*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

| | |
|---|---|
| **From:** | Emily Kerr |
| **To:** | Shajee Kathirgamanathan |
| **Cc:** | John Kim |
| **Subject:** | RE: Cost Shifts in the Electricity Sector |
| **Date:** | Monday, November 21, 2016 4:48:19 PM |
| **Attachments:** | Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v2-Table_Markup.pptx |

Hi,

I made some changes in the attached. Would you want to include a table showing the taxpayer funded amounts annually, similar to the table Energy has on slide 5? I have included a draft in the attached.

---

**From:** Shajee Kathirgamanathan
**Sent:** Monday, November 21, 2016 3:26 PM
**To:** Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** FW: Cost Shifts in the Electricity Sector

Hi Emily,

We drafted a table to outline a list of electricity price mitigation programs with fiscal impacts. I'm still working on a timeline, will have that ready shortly. In the meantime just wanted to share this with you.

Please see file attached or found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Cost Shifts\Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v2-Table.pptx

If you have any comments/issues please let us know.

Thanks,
Shajee

Shajee Kathirgamanathan
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

-----Original Message-----
From: John Kim
Sent: Sunday, November 20, 2016 10:31 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>

Subject: RE: Cost Shifts in the Electricity Sector

Hi Ron,

Sure, will provide you a draft tomorrow.

Thanks,

John.

-----Original Message-----
From: Ronald Kwan
Sent: Sunday, November 20, 2016 10:27 AM
To: John Kim <John.Kim@ofina.on.ca>
Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
Subject: Re: Cost Shifts in the Electricity Sector

Hi,

As a first product, is a quick draft of a table on the cost of current rate migration fiscal costs doable for Monday?

Ron

> On Nov 19, 2016, at 9:08 PM, John Kim <John.Kim@ofina.on.ca> wrote:
>
> Hi Ron,
>
> Sorry, just saw the FYI and didn't realize there was a question on the approximate timeline.
>
> We should be able to expedite things if needed but I'd estimate middle of week would be certainly within the normal turnaround.
>
> Let us know if you have a turnaround in mind.
>
> Thanks,
>
> John.
>
> -----Original Message-----
> From: Ronald Kwan
> Sent: Friday, November 18, 2016 6:11 PM
> To: John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>

> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> Subject: FW: Cost Shifts in the Electricity Sector
> Importance: High
>
> Hi All,
>
> FYI.  I think we need to do our own version in order to provide better balance and a more complete picture.
>
> How long do you think it might take?
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> Ron
>
> -----Original Message-----
> From: Ronald Kwan
> Sent: November-18-16 18:09
> To: Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>
> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> Subject: RE: Cost Shifts in the Electricity Sector
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> On slide 5, it would be helpful to show, for context, the cost of electricity programs already on the tax base, such as historically OCEB and the 8% going-forward, as well as NIER, OEPTC, NOEC, and ending the DRC early too.
>
> Ron
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> -----Original Message-----
> From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
> Sent: November-18-16 17:48
> To: Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> Subject: FW: Cost Shifts in the Electricity Sector
>
> FYI both.
>
>
> _____

> From: Imbrogno, Serge (ENERGY)
> Sent: Friday, November 18, 2016 5:26:11 PM (UTC-05:00) Eastern Time (US & Canada)
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF)
> Subject: Fw: Cost Shifts in the Electricity Sector
>
> Hi Steve,
> The attached shows costs shifts within the electricity sector which are the result of rate mitigation programs which benefit some consumers. It also shows the total cost of these programs. This was produced in response to a request from Ed.
> Serge

Ontario

MINISTRY OF
ENERGY

# Cost Shifts in Ontario's Electricity Sector

## Working Draft

November 2016

CONFIDENTIAL DRAFT

# Context

- Necessary investments in Ontario's electricity system have led to increased prices, prompting government to introduced a number of price mitigation programs for all consumer types.
  - In addition to existing rate mitigation programs, the 2016 Throne Speech announced a package of rate mitigation initiatives to address electricity prices for residential, commercial and industrial consumers.

- Ontario has a number of programs in place to manage residential electricity prices, including:
  - Ontario Electricity Support Program (OESP);
  - Rural or Remote Rate Protect (RRRP);
  - Northern Ontario Energy Credit (NOEC); and
  - Ontario Energy and Property Tax Credit (OEPTC).

- Ontario also has a number of programs in place to manage industrial electricity prices, including:
  - Industrial Conservation Initiative (ICI);
  - Industrial Electricity Incentive (IEI);
  - Industrial Accelerator Program (IAP);
  - saveONenergy for Business Program; and
  - Demand Response.

# Context (cont'd)

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in Ontario's Electricity Sector

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in Ontario's Electricity Sector (cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

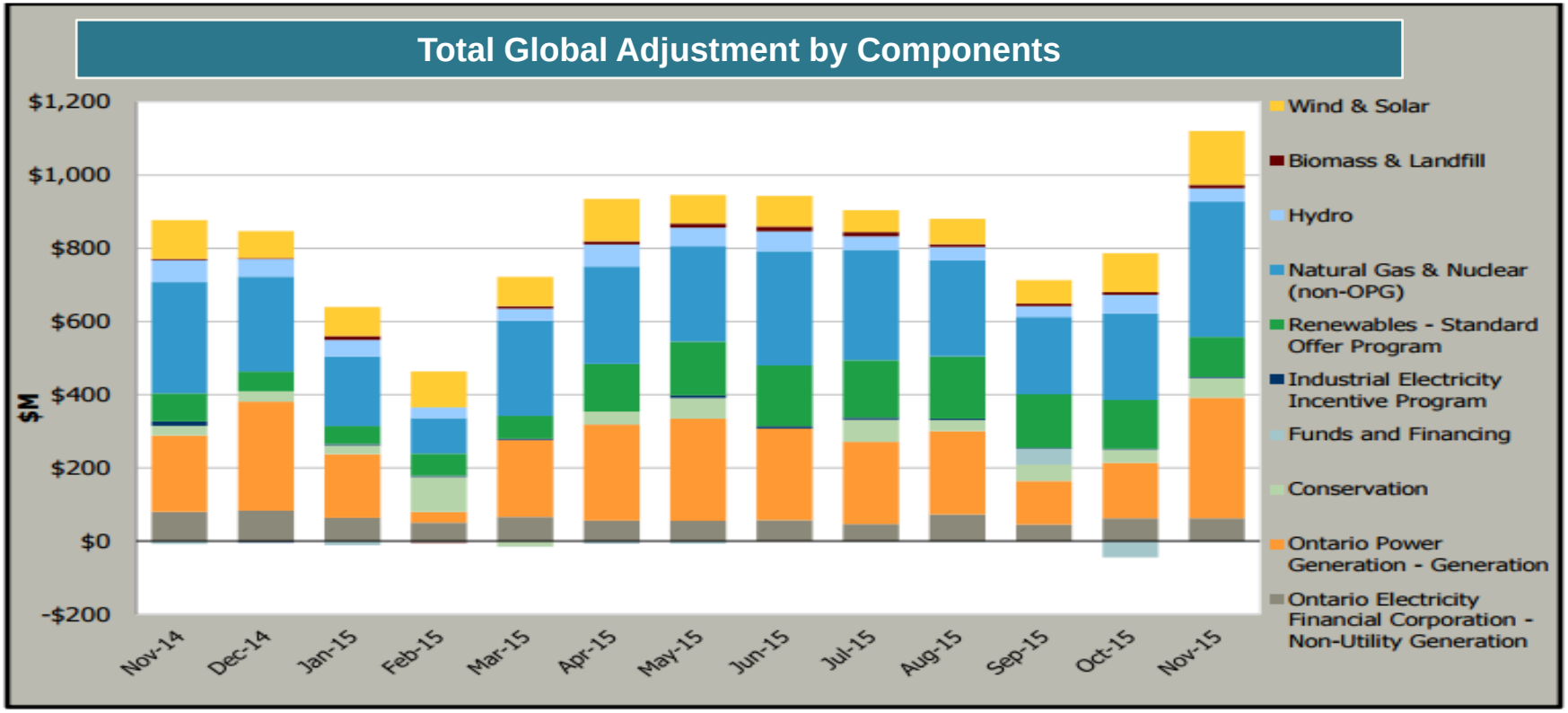
| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|
| **OCEB** | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | N/A | N/A |
| **OREC** | N/A | N/A | N/A | N/A | N/A | N/A | 1,000 |
| **Ending DRC** | | | | | | 300 | 300 |
| **NIERP** | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| **NOEC** | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| **OEPTC** | 445 | 445 | 445 | 445 | 445 | 445 | 445 |
| **Total** | **1,590** | **1,590** | **1,590** | **1,590** | **1,590** | **890** | **1,890** |

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011 – 2017.
- From 2011 – 2015 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016, the fiscal impact due to electricity price mitigation programs is estimated at approximately $900 million.
- In 2017, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $1.9 billion.

DRAFT

# Additional Background on Taxpayer funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month, and provided a full 10 per cent benefit to almost all residential customers and most small retail businesses.<br><br>~~OCEB was a responsible way of helping Ontario families through the transition to a more reliable and cleaner electricity system, with the monthly cap balancing the fiscal implications of providing electricity relief.~~<br><br>~~Ontario Clean Energy Benefit (~~OCEB~~)~~ expired December 31, 2015, as ~~part of the originally~~ planned. OCEB was ~~also~~ put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. |
| **Ending DRC from Residential Bills** | ~300 | Jan 1, 2016 to Mar 31, 2018 | ~~As part of its commitment to reduce electricity cost pressures,~~ The government ~~has~~ removed the Debt Retirement Charge (DRC) from residential electricity users' bills as of January 1, 2016.<br><br>This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,000 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST), an eight per cent savings. |
| **Northern Industrial Electricity Rate Program** | 120 | March 2010 | The Northern Industrial Electricity Rate (NIER) was extended in 2012 for an additional three-year term, effective April 1, 2013, and expiring March 31, 2016, with an allocation up to $120 million per year.<br><br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br><br>NIER was initially established as a three-year program in Budget 2010 and effective as of April 1, 2010, to provide an estimated $150 million per year to eligible large industrial companies in northern Ontario. |
| **Northern Ontario Energy Credit** | 25 | Budget 2010 Announcement | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
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**From:** John Kim
**To:** Ronald Kwan
**Cc:** Emily Kerr; Shajee Kathirgamanathan; Tomasz Bugajski
**Subject:** RE: Cost Shifts in the Electricity Sector
**Date:** Sunday, November 20, 2016 10:30:50 AM

---

Hi Ron,

Sure, will provide you a draft tomorrow.

Thanks,

John.

-----Original Message-----
From: Ronald Kwan
Sent: Sunday, November 20, 2016 10:27 AM
To: John Kim <John.Kim@ofina.on.ca>
Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
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> Subject: FW: Cost Shifts in the Electricity Sector
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> FYI both.
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> From: Imbrogno, Serge (ENERGY)
> Sent: Friday, November 18, 2016 5:26:11 PM (UTC-05:00) Eastern Time (US & Canada)
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> Cc: Bromm, William (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF)
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**From:** Shajee Kathirgamanathan
**To:** John Kim; Emily Kerr
**Subject:** RE: Cost Shifts in the Electricity Sector
**Date:** Wednesday, November 23, 2016 11:43:35 AM
**Attachments:** Cost Shift - Calculations.xlsx

---

Hi Emily, John,

Please see attached, my attempt at quantifying the cost shifts into 2017 from the programs. Only substantial change is RRRP which becomes into effect. All other programs are essentially copied from the prior year.

File also found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Cost Shifts\Cost Shift - Calculations.xlsx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Wednesday, November 23, 2016 7:52 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** FW: Cost Shifts in the Electricity Sector

This looks great….a bit of a win. Could you take a look at Ron's request?

---

**From:** Ronald Kwan
**Sent:** Wednesday, November 23, 2016 3:54 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Cost Shifts in the Electricity Sector

Hi John,

I made some edits (not marked) on the added CEFD slides (as excerpted).

Any way to estimate the 2017 costs and impacts of the ratepayer programs in the Energy slides?

Thanks,
Ron

**From:** John Kim
**Sent:** November-22-16 6:54 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** RE: Cost Shifts in the Electricity Sector

Hi Ron,

Pls. see attached with input from both branches. We have actual numbers from OEP on OEPTC. NOEC and NIER were PA figures even in the previous version.

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** Monday, November 21, 2016 6:26 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** RE: Cost Shifts in the Electricity Sector

Thanks.

Ron

---

**From:** John Kim
**Sent:** November-21-16 18:22
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** RE: Cost Shifts in the Electricity Sector

Sure, we will aim for another version tomorrow.

John.

---

**From:** Ronald Kwan
**Sent:** Monday, November 21, 2016 6:19 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>

**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Cost Shifts in the Electricity Sector

Thanks.

We should be able to get some historical year-by-year OEPTC and NOEC and NIER numbers.

DRC amount forgone I think was a little higher in the original submission. And the OREC amount in the LRC submission earlier this month is now at $1.2.

Can we do comments/markups of Energy's slides too?

Ron

---

**From:** Shajee Kathirgamanathan
**Sent:** November-21-16 18:12
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Cost Shifts in the Electricity Sector

Hi Ron,

EFB and SPFB developed some additional slides providing an overview of tax payer funded electricity price mitigation programs; fiscal impacts, overview and history/timeline.

File attached, also found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Cost Shifts\Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v5.pptx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Senior Advisor
Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

-----Original Message-----
From: Ronald Kwan
Sent: Sunday, November 20, 2016 11:16 AM
To: John Kim <John.Kim@ofina.on.ca>

Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
Subject: Re: Cost Shifts in the Electricity Sector

Thanks John.

Ron

> On Nov 20, 2016, at 10:30 AM, John Kim <John.Kim@ofina.on.ca> wrote:
>
> Hi Ron,
>
> Sure, will provide you a draft tomorrow.
>
> Thanks,
>
> John.
>
> -----Original Message-----
> From: Ronald Kwan
> Sent: Sunday, November 20, 2016 10:27 AM
> To: John Kim <John.Kim@ofina.on.ca>
> Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> Subject: Re: Cost Shifts in the Electricity Sector
>
> Hi,
>
> As a first product, is a quick draft of a table on the cost of current rate migration fiscal costs doable for Monday?
>
> Ron
>
>> On Nov 19, 2016, at 9:08 PM, John Kim <John.Kim@ofina.on.ca> wrote:
>>
>> Hi Ron,
>>
>> Sorry, just saw the FYI and didn't realize there was a question on the approximate timeline.
>>
>> We should be able to expedite things if needed but I'd estimate middle of week would be certainly within the normal turnaround.
>>
>> Let us know if you have a turnaround in mind.
>>
>> Thanks,

>>
>> John.
>>
>> -----Original Message-----
>> From: Ronald Kwan
>> Sent: Friday, November 18, 2016 6:11 PM
>> To: John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
>> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
>> Subject: FW: Cost Shifts in the Electricity Sector
>> Importance: High
>>
>> Hi All,
>>
>> FYI. I think we need to do our own version in order to provide better balance and a more complete picture.
>>
>> How long do you think it might take?
>>
>> Ron
>>
>> -----Original Message-----
>> From: Ronald Kwan
>> Sent: November-18-16 18:09
>> To: Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>
>> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
>> Subject: RE: Cost Shifts in the Electricity Sector
>>
>> Hi,
>>
>> While they list some tax-based programs that are not cost shifts, they do not list NIER nor the recent 8% rebate, and they only show to 2016, prior to the latter and the expansion of RRRP. I would have thought it would be helpful to show those.
>>
>> On slide 5, it would be helpful to show, for context, the cost of electricity programs already on the tax base, such as historically OCEB and the 8% going-forward, as well as NIER, OEPTC, NOEC, and ending the DRC early too.
>>
>> Ron
>>
>> -----Original Message-----
>> From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
>> Sent: November-18-16 17:48
>> To: Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Ronald Kwan

<Ronald.Kwan@ofina.on.ca>
>> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
>> Subject: FW: Cost Shifts in the Electricity Sector
>>
>> FYI both.
>>
>>
>> _____
>> From: Imbrogno, Serge (ENERGY)
>> Sent: Friday, November 18, 2016 5:26:11 PM (UTC-05:00) Eastern Time (US & Canada)
>> To: Orsini, Steve (CAB)
>> Cc: Bromm, William (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF)
>> Subject: Fw: Cost Shifts in the Electricity Sector
>>
>> Hi Steve,
>> The attached shows costs shifts within the electricity sector which are the result of rate mitigation programs which benefit some consumers. It also shows the total cost of these programs. This was produced in response to a request from Ed.
>> Serge

## Cost Shift Impacts - Residential Bill

### 750 kWh/month Toronto Hydro Customer

| $/month | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.9 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | | | | | | 0.84 |
| Conservation | 1.85 | 1.92 | 2 | 1.58 | 2.43 | 2.45 |
| IEI | | | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **2.74** | **6.81** | **6.13** | **8.21** | **4.35** |

## Cost Shift Impacts - Industrial Bill

### Typical Class A Consumer

| $/MWh | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.2 | 1.1 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | | | | | | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | | | 0.07 | 0.08 | 0.09 | 0.1 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

### Cost of Programs

| $M | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | | | | | | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | | | 15 | 16 | 18 | 19 |
| **Total** | **1007** | **1110** | **1264** | **1142** | **1507** | **1674** |

### Demand Assumption

| TWh, % | 2011 | 2012 | 2013 | 2014 | 2015* | 2016 |
|---|---|---|---|---|---|---|
| Total (TWh) | | | | | 141 | |
| RPP (%) | | | | | 41% | |
| RPP (TWh) | | | | | 58 | |
| Class B (%) | | | | | 40% | |
| Class B (TWh) | | | | | 57 | |
| Class A (%) | | | | | 18% | |
| Class A (TWh) | | | | | 26 | |

**Source: Electricity Price Mitigation Cab Sub - Slide 2*

***Source: 2017 Total Demand from IESO 18 Month Outlook, Table 3.1.1*

| | 2017 | |
|---|---|---|
| | 4.77 | *Assume 2017 same as 2016* |
| | 1.56 | |
| | 0.86 | |
| | 2.45 | *Assume 2017 same as 2016* |
| | 0.12 | *Assume 2017 same as 2016* |
| | **9.76** | |

| | 2017 | |
|---|---|---|
| | -33.92 | *Assume 2017 same as 2016* |
| | 2.08 | |
| | 1.15 | |
| | 2.02 | *Assume 2017 same as 2016* |
| | 0.10 | *Assume 2017 same as 2016* |
| | **-28.57** | |

| | 2017 | |
|---|---|---|
| | 893 | *Assume 2017 same as 2016 since ICI Expansion will take into effect in 2018* |
| | 285 | *Source: Electricity Price Mitigation Cab Sub - 'Increasing RRRP by 110M'* |
| | 158 | *Assume 2017 same as 2016* |
| | 428 | *Assume 2017 same as 2016* |
| | 19 | *Assume 2017 same as 2016* |
| | **1783** | |

| | 2017** |
|---|---|
| | 137 |
| | 41% |
| | 56 |
| | 40% |
| | 55 |
| | 18% |
| | 25 |

Table 3.1.1: Monthly Peak and Energy Demand

| Forecasted Peak and Energy Demand | | | | | | |
|---|---|---|---|---|---|---|
| | Peak Demand (MW) | | | Energy Demand (GWh) | | |
| Month | Current Forecast | Previous Forecast | Weather Corrected Actual | Current Forecast | Previous Forecast | Weather Corrected Actual |
| Jan-12 | 22,160 | 22,311 | 22,144 | 13,280 | 13,426 | 13,066 |
| Feb-12 | 21,814 | 21,970 | 20,713 | 12,203 | 12,342 | 11,542 |
| Mar-12 | 20,709 | 20,813 | 20,575 | 12,265 | 12,376 | 11,986 |
| Apr-12 | 18,745 | 18,839 | 19,170 | 10,867 | 10,965 | 10,842 |
| May-12 | 19,038 | 19,134 | 19,809 | 10,944 | 11,043 | 11,028 |
| Jun-12 | 22,569 | 22,769 | 22,571 | 11,398 | 11,439 | 11,415 |
| Jul-12 | 23,298 | 23,409 | 23,745 | 12,319 | 12,345 | 12,872 |
| Aug-12 | 22,957 | 23,120 | 22,797 | 12,419 | 12,441 | 12,366 |
| Sep-12 | 20,506 | 20,801 | 20,514 | 10,811 | 10,909 | 10,923 |
| Oct-12 | 18,346 | 18,471 | 18,870 | 11,200 | 11,249 | 11,188 |
| Nov-12 | 20,572 | 20,720 | 20,180 | 11,630 | 11,647 | 11,733 |
| Dec-12 | 21,693 | 21,693 | 20,614 | 12,612 | 12,612 | 12,388 |
| 2012 | 23,298 | 23,409 | 23,745 | 141,947 | 142,795 | 141,348 |
| Jan-13 | 22,014 | 22,087 | 22,808 | 13,314 | 13,414 | 13,165 |
| Feb-13 | 21,774 | 21,813 | 21,451 | 11,820 | 11,848 | 11,701 |
| Mar-13 | 20,635 | 20,655 | 20,557 | 12,283 | 12,235 | 11,823 |
| Apr-13 | 18,492 | 18,511 | 18,558 | 11,018 | 10,974 | 10,997 |
| May-13 | 19,101 | 19,112 | 18,498 | 10,932 | 10,888 | 10,658 |
| Jun-13 | 22,499 | 22,559 | 22,324 | 11,406 | 11,303 | 11,176 |
| Jul-13 | 23,213 | 23,275 | 24,256 | 12,480 | 12,365 | 12,554 |
| Aug-13 | 22,360 | 22,418 | 22,892 | 12,228 | 12,114 | 12,090 |
| Sep-13 | 20,513 | 20,405 | 20,604 | 11,015 | 10,950 | 10,800 |
| Oct-13 | 18,388 | 18,347 | 18,888 | 11,279 | 11,260 | 11,217 |
| Nov-13 | 20,326 | 20,278 | 20,086 | 11,687 | 11,540 | 11,740 |
| Dec-13 | 21,395 | 21,395 | 22,047 | 12,700 | 12,700 | 12,532 |
| 2013 | 23,213 | 23,275 | 24,256 | 142,163 | 141,591 | 140,452 |
| Jan-14 | 22,320 | 22,282 | 22,119 | 13,356 | 13,460 | 13,302 |
| Feb-14 | 20,964 | 21,036 | 21,541 | 11,748 | 11,802 | 11,727 |
| Mar-14 | 19,906 | 19,976 | 20,654 | 12,055 | 12,104 | 11,983 |
| Apr-14 | 17,649 | 17,587 | 18,476 | 10,731 | 10,789 | 10,922 |
| May-14 | 18,964 | 19,049 | 18,705 | 10,790 | 10,851 | 10,634 |
| Jun-14 | 22,470 | 22,435 | 20,350 | 11,346 | 11,346 | 11,051 |
| Jul-14 | 22,949 | 23,025 | 21,993 | 12,360 | 12,360 | 12,145 |
| Aug-14 | 21,403 | 21,483 | 21,651 | 11,993 | 11,993 | 11,803 |
| Sep-14 | 19,023 | 18,933 | 19,374 | 10,580 | 10,662 | 10,714 |
| Oct-14 | 18,639 | 18,589 | 18,358 | 11,127 | 11,340 | 10,934 |
| Nov-14 | 20,302 | 20,336 | 19,807 | 11,497 | 11,730 | 11,275 |
| Dec-14 | 21,238 | 21,118 | 21,322 | 12,769 | 12,722 | 12,363 |
| 2014 | 22,949 | 23,025 | 22,119 | 140,353 | 141,159 | 138,854 |
| Jan-15 | 22,294 | 22,149 | 21,531 | 12,843 | 13,069 | 12,843 |
| Feb-15 | 20,132 | 21,017 | 20,132 | 11,468 | 11,529 | 11,468 |
| Mar-15 | 20,070 | 19,841 | 20,070 | 11,570 | 11,857 | 11,570 |
| Apr-15 | 18,900 | 18,121 | 18,900 | 10,547 | 10,542 | 10,547 |
| May-15 | 18,033 | 19,370 | 18,033 | 10,401 | 10,636 | 10,401 |
| Jun-15 | 20,472 | 22,318 | 20,472 | 10,782 | 11,467 | 10,782 |
| Jul-15 | 22,559 | 22,878 | 22,559 | 12,083 | 12,174 | 12,083 |
| Aug-15 | 22,055 | 21,431 | 22,055 | 11,788 | 11,821 | 11,788 |
| Sep-15 | 19,206 | 18,485 | 19,206 | 10,866 | 10,513 | 10,866 |
| Oct-15 | 18,256 | 18,339 | 18,256 | 10,779 | 11,150 | 10,779 |
| Nov-15 | 21,188 | 20,306 | 21,188 | 11,334 | 11,595 | 11,334 |
| Dec-15 | 20,155 | 21,041 | 20,155 | 12,083 | 12,717 | 12,083 |
| 2015 | 22,559 | 22,878 | 22,559 | 136,543 | 139,069 | 136,543 |
| Jan-16 | 21,158 | 22,360 | 21,158 | 12,620 | 12,982 | 12,620 |
| Feb-16 | 20,195 | 20,985 | 20,195 | 11,593 | 11,807 | 11,593 |
| Mar-16 | 20,153 | 20,075 | 20,153 | 11,532 | 11,765 | 11,532 |
| Apr-16 | 18,292 | 17,508 | 18,292 | 10,440 | 10,356 | 10,440 |
| May-16 | 19,663 | 19,338 | 19,663 | 10,198 | 10,687 | 10,198 |
| Jun-16 | 21,183 | 22,316 | 21,183 | 11,039 | 11,379 | 11,039 |
| Jul-16 | 22,214 | 22,600 | 22,214 | 12,191 | 11,902 | 12,191 |
| Aug-16 | 22,043 | 21,440 | 22,043 | 12,337 | 11,772 | 12,337 |
| Sep-16 | 18,289 | 18,302 | | 10,402 | 10,424 | |
| Oct-16 | 18,079 | 18,166 | | 10,948 | 10,932 | |
| Nov-16 | 20,296 | 20,406 | | 11,524 | 11,489 | |
| Dec-16 | 20,888 | 20,913 | | 12,431 | 12,370 | |
| 2016 | 22,214 | 22,600 | 22,214 | 137,255 | 137,864 | 91,951 |
| Jan-17 | 21,981 | 22,201 | | 12,859 | 12,879 | |
| Feb-17 | 21,043 | 21,078 | | 11,333 | 11,359 | |
| Mar-17 | 20,179 | 20,265 | | 11,859 | 11,883 | |
| Apr-17 | 17,905 | 18,009 | | 10,321 | 10,388 | |
| May-17 | 19,128 | 19,170 | | 10,530 | 10,563 | |
| Jun-17 | 22,300 | 22,269 | | 11,135 | 11,143 | |
| Jul-17 | 22,591 | 22,680 | | 11,983 | 11,992 | |
| Aug-17 | 22,358 | 22,413 | | 12,097 | 12,102 | |
| Sep-17 | 19,354 | 19,418 | | 10,482 | 10,506 | |
| Oct-17 | 18,184 | 18,282 | | 10,953 | 10,948 | |
| Nov-17 | 20,451 | 20,545 | | 11,413 | 11,390 | |
| Dec-17 | 20,950 | 21,036 | | 12,306 | 12,259 | |
| 2017 | 22,591 | 22,680 | | 137,271 | 137,410 | |

Note: Last Forecast is the most recent or last forecast made for the month.  Previous Forecast is the second  last forecast for the month.

**From:** Gavin He
**To:** John Kim
**Subject:** RE: Decks
**Date:** Tuesday, January 24, 2017 11:55:48 PM
**Attachments:** Rate Mitigation Plan Options 20170124__Clean1_EFB_v1.pptx

---

Hi John,

Just skimmed through the slides. There are no material change for GA debt financing section, and I added some general comments on slide 18-19 on the delivery charge relief option.

The other deck is an expanded version of the delivery charge relief option, and didn't get a chance to review it in details.

Not sure if much can be done at this point, since the meeting is at 10:00 a.m. tomorrow.

Regards,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Tuesday, January 24, 2017 10:36 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Subject:** FW: Decks

Hi,

See attached. Key comments are welcome.

Thanks,
Ron

---

**From:** Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
**Sent:** January-24-17 10:32 PM
**To:** Ghiassi, Ali (MOF) <Ali.Ghiassi@ontario.ca>; Elizabeth Mendes (MOF) <Elizabeth.Mendes@ontario.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>; Ronald Jaikaran (MOF) <Ronald.Jaikaran@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
**Cc:** David McLean (MOF) <David.McLean@ontario.ca>
**Subject:** FW: Decks

FYI all. Attached are the two Energy decks for FPC tomorrow. Note a second attachment which provides background and analysis on distribution costs and

pressures.

---

**From:** Imbrogno, Serge (ENERGY)
**Sent:** Tuesday, January 24, 2017 10:15:17 PM (UTC-05:00) Eastern Time (US & Canada)
**To:** Orsini, Steve (CAB); Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
**Cc:** Bromm, William (CAB)
**Subject:** Decks

Hi,

Decks for tomorrow's meeting. My MO is still reviewing and they may have some edits.

Serge

Ontario

MINISTRY OF
ENERGY

# Rate Mitigation Plan Options

## Working Draft

January 2017

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity costs for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants) and suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings).

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Options

- In recognition of the costs borne by ratepayers related to decarbonizing and modernizing the province's electricity sector, options for further rate mitigation include:

  1. Global Adjustment (GA) Financing

  2. Delivery Rate Relief

  3. Other Electricity Support Programs Funded Through the Tax-base:
     - Ontario Electricity Support Program (OESP);
     - Low-Income Conservation; and
     - First Nations Rate.

- As an alternative to the GA financing, in addition to Delivery Rate Relief and Other Electricity Support Programs Funded Through the Tax-base, other mitigation measures could be pursued, including:

  1. Enhanced Tax-based RPP Rebate (5%)

  2. Contract Renegotiations
     - Contract Extensions – Wind and Solar; and
     - Clean Energy Supply (CES) Contracts.

  3. Amortization of Conservation Expenses

# Proposed Options – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|---|
| 1. Global Adjustment (GA) Financing (Moderate) | - | 17.49 | 15.01 | 12.49 | 14.91 | 6.32 | 4.03 | Immediate |
| 2.. Delivery Rate Relief | - | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 3. Electricity Support Programs Funded through the Tax-Base | | | | | | | | |
| a. Ontario Electricity Support Program (OESP)* | - | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | Immediate |
| b. Low-Income Conservation | - | - | - | - | - | - | - | N/A |
| c. First Nations Rate | - | - | - | - | - | - | - | N/A |

**Other Options to Consider:**

| *$/750kWh* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|---|
| 1. Enhanced Tax-based RPP Rebate (5%) | - | 7.04 | 7.17 | 7.31 | 7.77 | 7.61 | 7.83 | Immediate |
| 2. Contract Renegotiations | | | | | | | | |
| a. Contract Extensions – Wind and Solar | - | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| b. Clean Energy Supply Contract | - | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 3. Conservation Amortization | - | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |

***Note**: Savings based on currently approved OESP rate set by OEB.
**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Class B includes small-medium enterprises (SMEs).

# Proposed Options – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|---|
| 1. Global Adjustment (GA) Financing (Moderate) | - | 17.49 | 15.01 | 12.49 | 14.91 | 6.32 | 4.03 | Immediate |
| 2.. Delivery Rate Relief | - | - | - | - | - | - | - | N/A |
| 3. Electricity Support Programs | | | | | | | | |
| a. Ontario Electricity Support Program (OESP)* | - | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | Immediate |
| b. Low-Income Conservation | - | - | - | - | - | - | - | N/A |
| c. First Nations Rate | - | - | - | - | - | - | - | N/A |

**Other Options to Consider:**

| *$/750kWh* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|---|
| 1. Enhanced Tax-based RPP Rebate (5%) | - | - | - | - | - | - | - | N/A |
| 2. Contract Renegotiations | | | | | | | | |
| a. Contract Extensions – Wind and Solar | - | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| b. Clean Energy Supply Contract | - | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 3. Conservation Amortization | - | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |

***Note:** Savings based on current OESP charge as set by OEB.

# Fiscal Impacts

| *$M* | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| 1. Global Adjustment (GA) Financing (Moderate) | TBC | TBC | TBC | TBC | TBC |
| 2.. Delivery Rate Relief | TBD | TBD | TBD | TBD | TBD |
| 3. Electricity Support Programs | | | | | |
| a. Ontario Electricity Support Program (OESP)* | - | 162 | 225 | 279 | 323 |
| b. Low-Income Conservation | - | 60 | 60 | 60 | 60 |
| c. First Nations Rate | - | 18 | 18 | 18 | 18 |

**Other Options to Consider:**

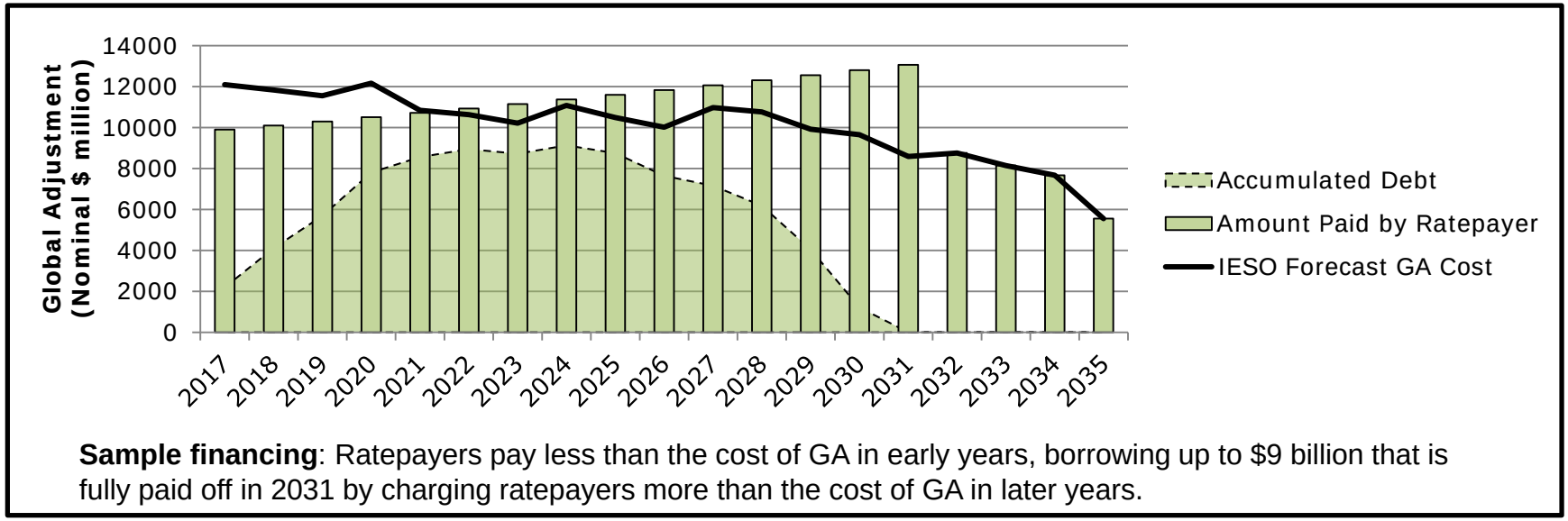
| *$M* | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|---|---|---|---|---|---|
| 1. Enhanced Tax-based RPP Rebate (5%) | 169 | 699 | 679 | 732 | 724 |
| 2. Alternative to GA Financing – Contract Renegotiations | | | | | |
| a. Contract Extensions – Wind and Solar | - | - | - | - | - |
| b. Clean Energy Supply Contract | - | - | - | - | - |
| 3. Conservation Amortization | - | - | - | - | - |

***Note:** Includes costs of program expansion and various assumptions as detailed on relevant slides.
****Note:** Risk to fiscal plan of up to $240 million annually (foregone net income) if OPG is unable to reach more aggressive operational efficiency targets.

**Source:** Ministry of Finance, Energy

# 1. Global Adjustment (GA) Financing

- It is proposed that the amount of global adjustment (GA) paid by ratepayers in each year over the forecast period is set at a fixed amount and money is borrowed to make up the remainder of the GA cost in each year.
- Starting on January 1, 2017, the amount of GA paid by ratepayers is set at a value lower than the true cost of GA in 2017 and is increased according to a pre-defined schedule until the debt has been paid off.
- GA costs will be “smoothed” over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected actual cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- All analysis is based on forecasts from Independent Electricity System Operator (IESO), assumes a 5% annual borrowing interest rate and an inflation rate of 2% per year.

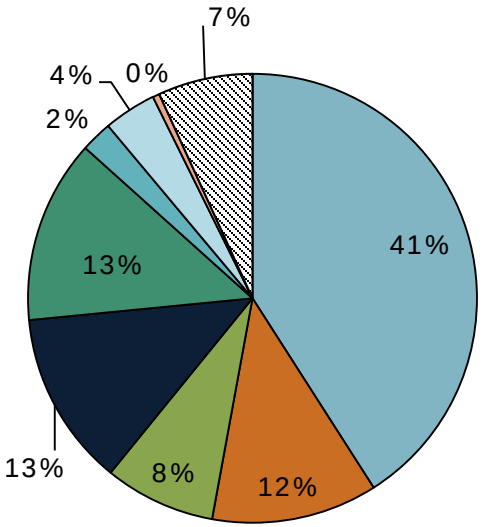



**Sample financing**: Ratepayers pay less than the cost of GA in early years, borrowing up to $9 billion that is fully paid off in 2031 by charging ratepayers more than the cost of GA in later years.

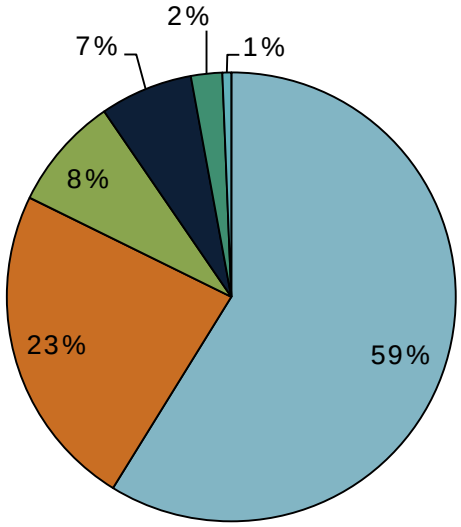
# 1. GA Financing – Cost Breakout

- The allocation of GA costs in 2016 is compared to the proportion of generation in the graph below.
- This cost breakdown will evolve over time as 2,181 MW of contracted generation comes online in the coming years.

**2016 GA Cost: $12.3 billion**




**2016 Generation: 155 TWh**




| | GA ($M) | Gen. (TWh) |
|---|---|---|
| Nuclear | 5,053 | 91 |
| Hydro | 1,473 | 36 |
| Natural Gas | 985 | 13 |
| Wind | 1,552 | 10 |
| Solar | 1,630 | 3 |
| Biomass, Landfill and Byproduct | 278 | 1 |
| Conservation | 467 | |
| IEI Program | 60 | |
| OEFC* | 842 | |

*OEFC indicates the cost of generator contracts managed by the OEFC which include contracts for natural gas, hydro and biomass generators.
** Conservation measures, not quantified here, serve to reduce Ontario energy demand. Actual electricity generation would be larger than 155 TWh in the absence of conservation programs.

# 1. GA Financing – Options

1a. Moderate / GA Financing

- The amount of GA paid by ratepayers in 2017 is lowered by $3.1 and $3.3 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively.
- Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

1b. Moderate / GA Financing with Delayed Increase

- The starting GA payment from all ratepayers in 2017 is lowered by $1.1 and $1.4 billion, ratepayer payments *decrease* in the short term to keep residential bills relatively flat, then increases at 3% each year – up to a maximum of $2 billion above the true cost of GA – until the borrowed money is paid back over a 25 and 30 year financing period respectively.

Low / GA Financing (see in Appendix)

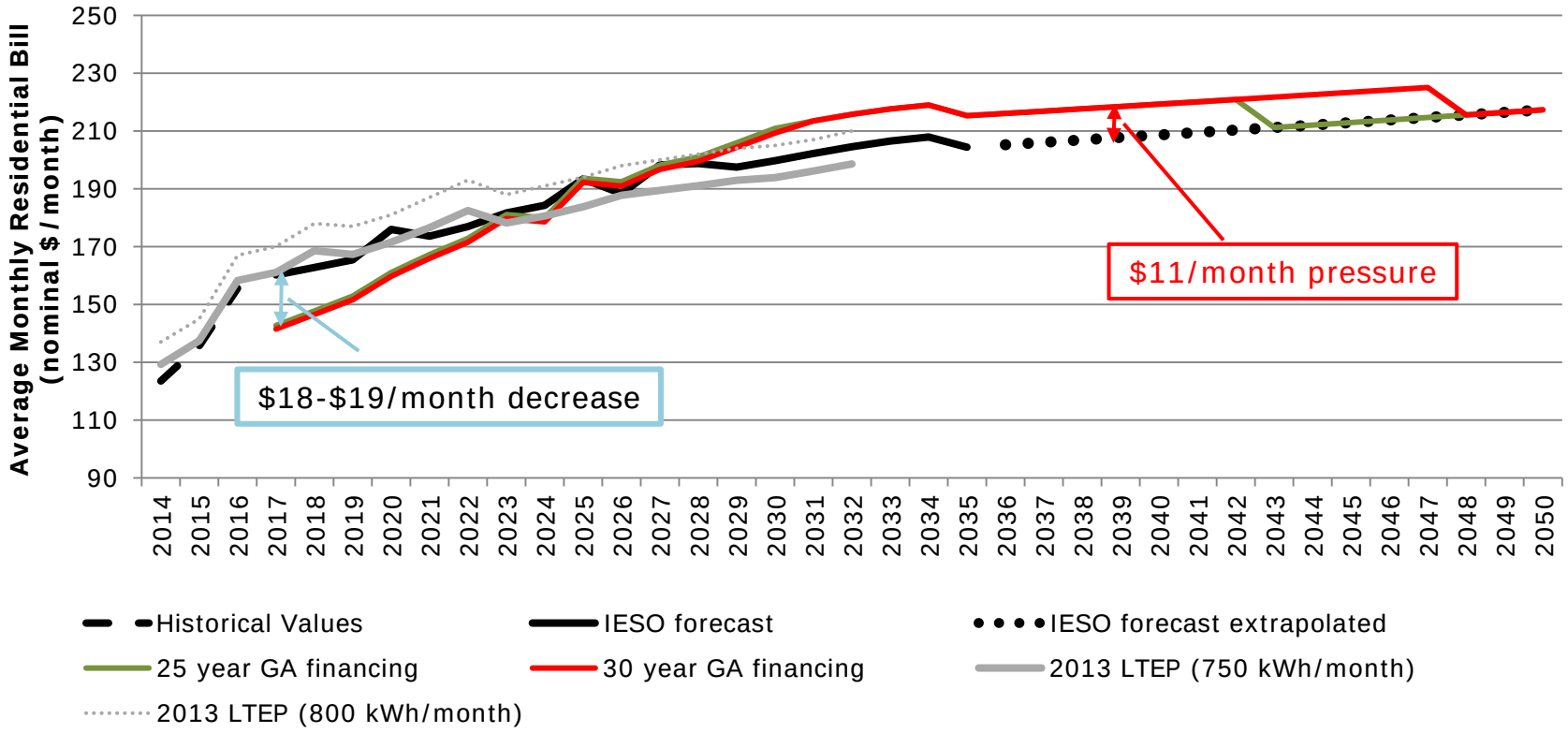
- The amount of GA paid by ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off.
- Future GA over-payments above the true cost of GA are capped at $2 billion to limit electricity cost increases in any given year.

High / GA Financing (see in Appendix)

- The amount of GA paid by ratepayers in 2017 is lowered by $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively.
- No limit is placed on the amount charged to ratepayers above the true cost of GA.

# 1a. Moderate / GA Financing – Impact on Residential Electricity Bills

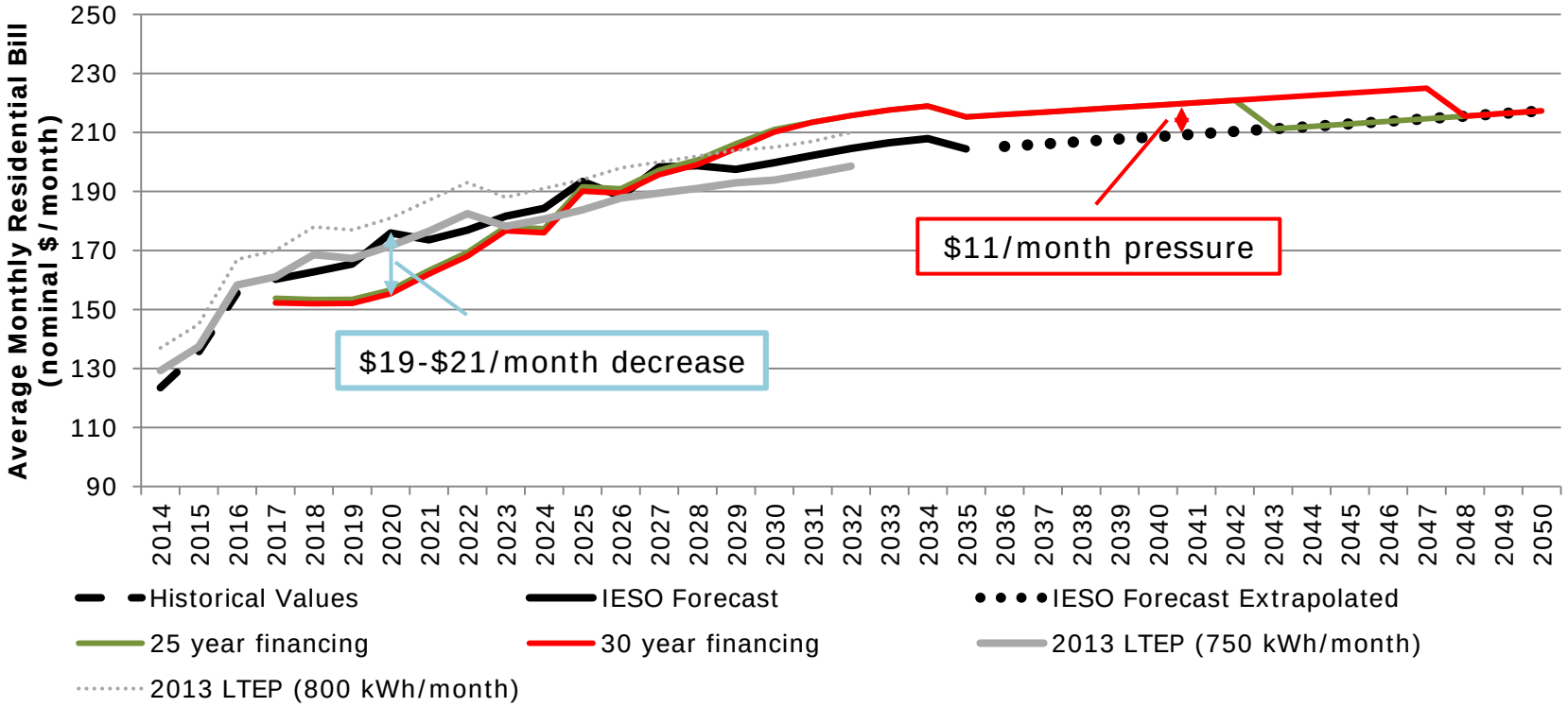
- In this scenario, the starting GA payment from all ratepayers in 2017 is lowered by $3.1 billion (green line) and $3.3 billion (red line) and increases at 2% each year – up to a cap of no more than $2 billion more than the true cost of GA in any year – until the borrowed money is paid back in 25 and 30 years respectively.




- By **borrowing up to $19-$23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $17-$19/month** at the cost of **increased future electricity bills over 14-19 years of up to $11/month** above the true cost of electricity production.

# 1b. Moderate / GA Financing with Delayed Increase in Payments – Impact on Residential Electricity Bills

- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $1.1 billion (green line) and $1.4 billion (red line), ratepayer payments *decrease* in the short term to keep residential bills relatively flat, then increases at 3% each year – up to a maximum of $2 billion above the true cost of GA – until the borrowed money is paid back over a 25 and 30 year financing period respectively.




- By **borrowing up to $19-$23 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $19-$21/month** at the cost of **increased future electricity bills over 14-19 years of up to $11/month** above the true cost of electricity production.

# 1. GA Financing – Accounting (cont'd)

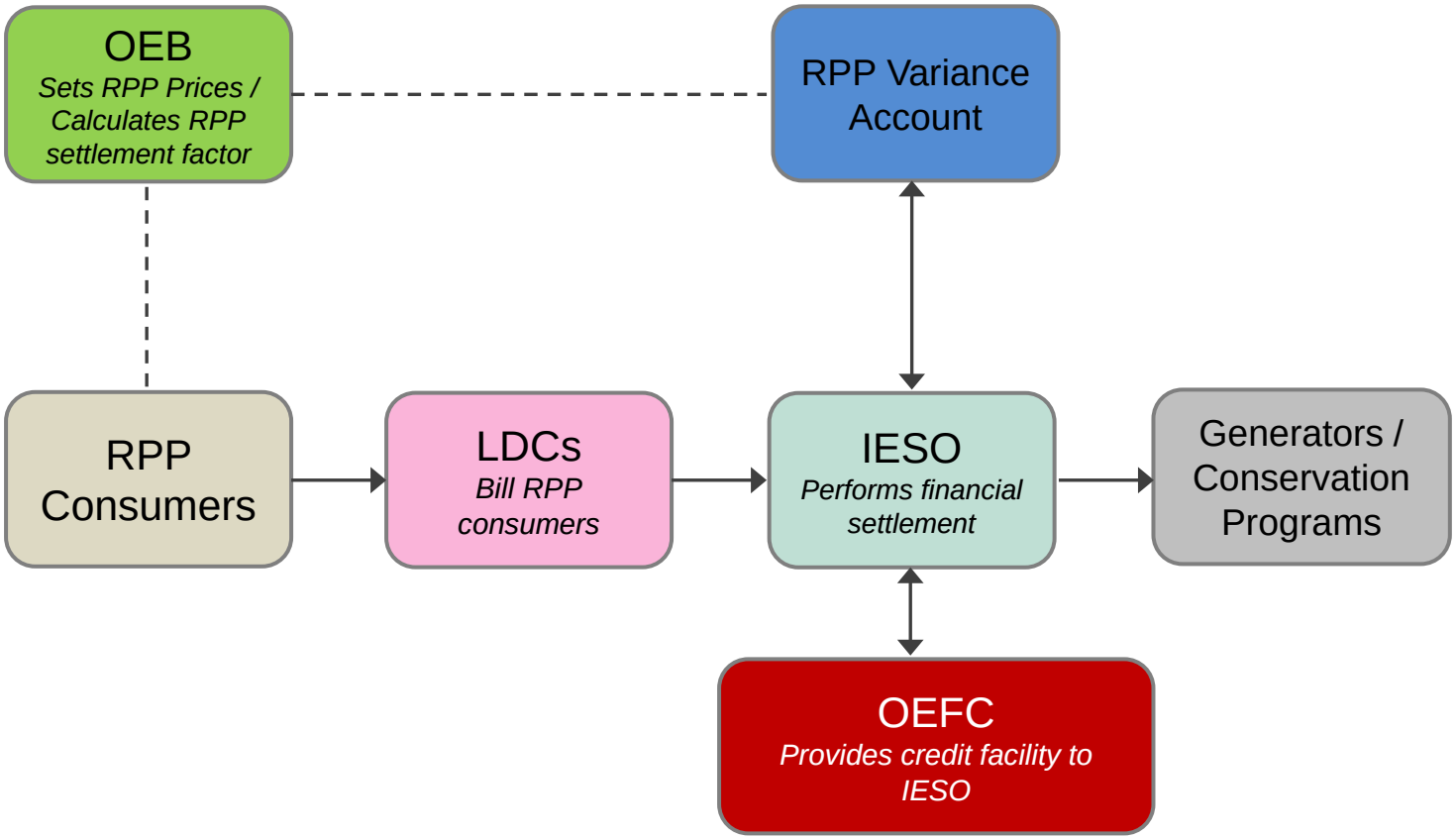
**Considerations**

- ENERGY continues to work with LSB, IESO, MOF/OFA, TBS and external accountants to identify legislative, regulatory, borrowing and accounting requirements associated with GA financing option.
  - Ongoing analysis on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk (i.e., consolidation).
  - Historically electricity sector financing has been conducted by the Ontario Financing Authority (i.e., managing OEFC's stranded debt and borrowing on behalf of IESO).
  - The significant amount of additional Provincial borrowing needed to finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating and overall borrowing capacity.
  - The Auditor General (AG) may comment on the appropriateness of financing the Global Adjustment and/or on the need to consolidate any financing on the Province's books.

- Discussions have broadly focused on:
  - Consolidation risks;
  - Creating an "asset" (and confirm that it meets accounting requirements);
  - Identifying who will hold the asset(s), this could include:
    - Province (e.g., OEFC, etc);
    - IESO;
    - LDCs; or
    - New entity.
  - Determine the source of the financing (e.g., third party, OFA, IO, etc)
  - Exploring different recovery / administrative options (e.g., DRC, RPP, etc)

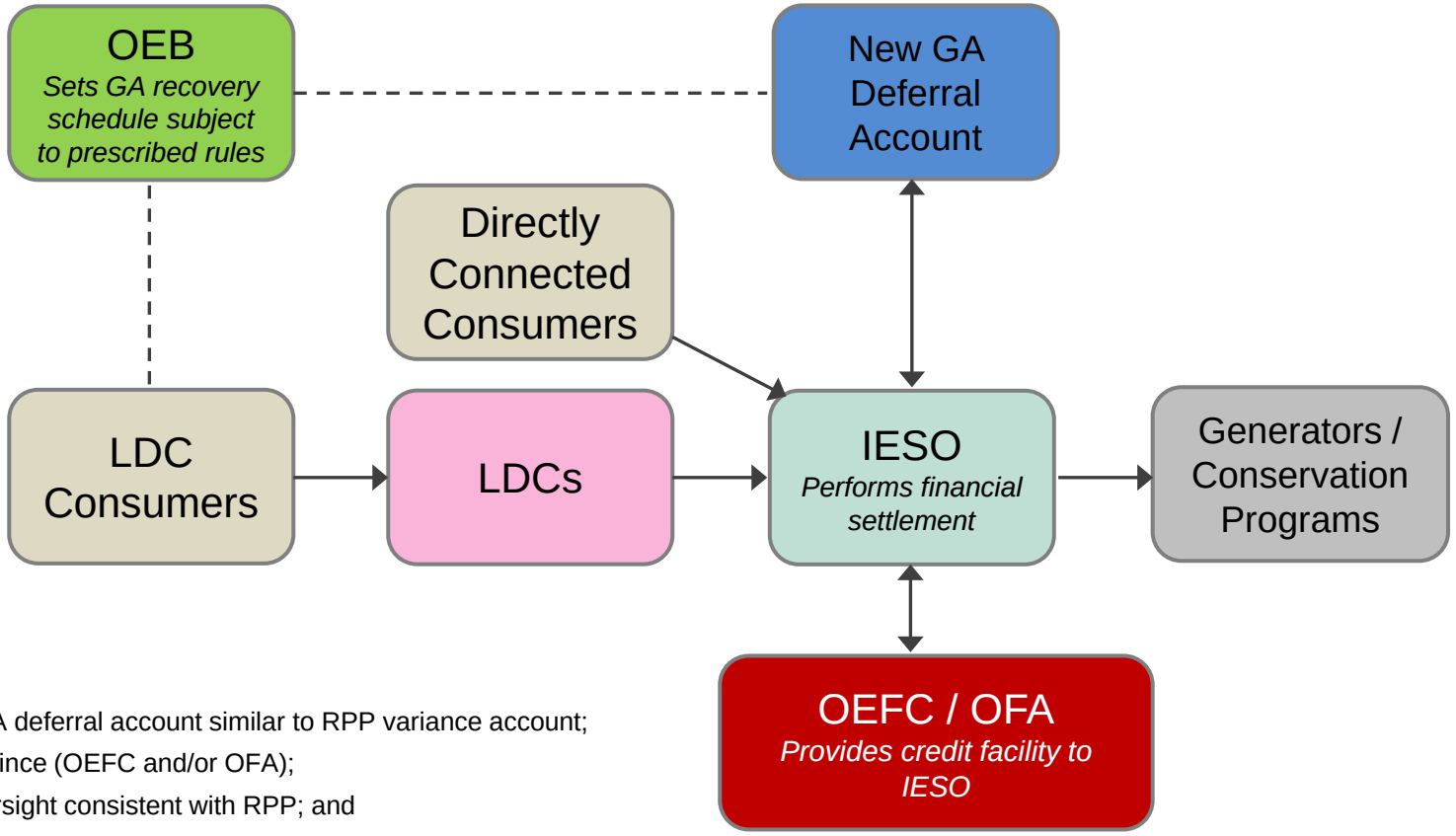
# 1. GA Financing – Current Regulated Price Plan (RPP) Variance Recovery

- The diagram outlines current Regulated Price Plan (RPP) structure and related flow of funds.



# 1. GA Financing – Recovery Approach (Option 1)

- The diagram outlines an option that is a variation on the current RPP approach.

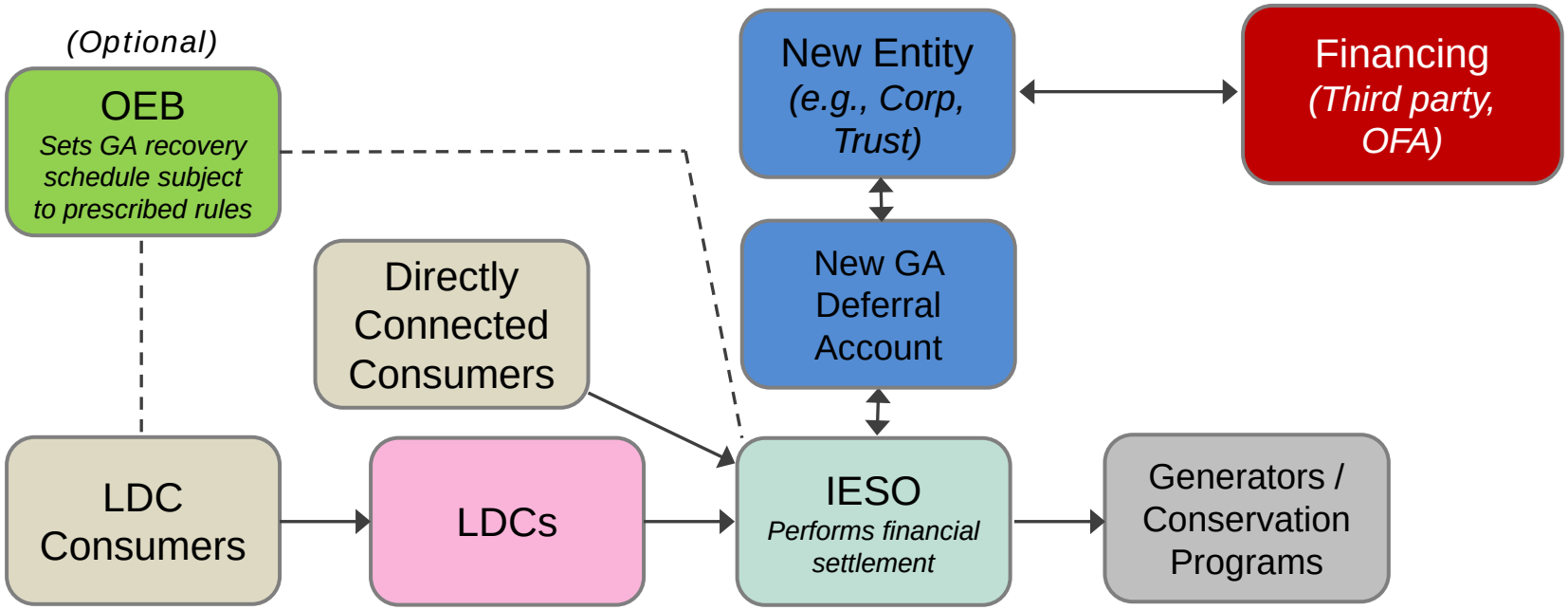



**Key Assumptions**

- Establish an new GA deferral account similar to RPP variance account;
- Financing from Province (OEFC and/or OFA);
- OEB regulatory oversight consistent with RPP; and
- GA Financing available to all consumers.

# 1. GA Financing – Recovery Approach (Option 2)

- The diagram outlines an alternative approach that introduces a new arms-length entity.




**Key Assumptions**

- GA Financing available to all consumers;
- Establish a new arms-length entity (e.g., corporation, trust, etc.) with trustees or a board of either public sector employees or stakeholders / bondholders;
- Purpose of the entity in legislation is to recover deferred GA amounts over 25-30 years from electricity consumers (i.e., ensure guaranteed repayment);
- Financing either through OFA or could be independent or from Province (TBD); and
- Set up outside of the OEB construct (i.e., not regulated). Alternatively, light touch regulatory oversight similar to RPP.

# 1. GA Financing – Considerations (cont'd)

**Considerations**

*Legal:*

- Legislation would be required to authorize the financing proposal.
  - Amendments to the *Electricity Act, 1998* (EA) could authorize the financing of certain costs within or part of the GA. However, whether any other legislation requires amendment is not known at this time.
  - The GA regime currently provides that "true costs" represent the true costs of making payments to generators or counter parties to contracts, not the incurring of discretionary financing or interest costs.
  - Considerations such as the need to analyze legal risks or the need to address costs retroactively (if the proposal requires a January 1, 2017 start) could add to the legal and drafting complexity. Further legal analysis is required.

# 2. Delivery Charge Relief – Background

- The **Delivery** line on a typical consumer bill accounts for roughly 25-35% of the total bill before taxes.
- Delivery covers the costs of getting electricity from generating stations across the province to homes and businesses and combines three cost components of the electricity sector into one line item charge:
  - **Transmission:** The costs of moving electricity across high voltage lines from generating stations to the distribution system. This cost is recovered through a variable charge that is approved by the OEB.
  - **Distribution:** The costs of moving electricity from the transmission system to homes and businesses. Depending on the LDC, distribution costs makes up about 60% to 80% of the Delivery line.
    - This cost is currently recovered through both a variable charge and fixed charge, approved by the OEB. Distribution rates are moving to a fully-fixed charge over next 5 years.
  - **Line Loss:** The costs to recover electricity that is lost as heat when its delivered over a power line, as well as power theft. Each LDC is assigned by the OEB a specific line-loss adjustment factor to reflect their loses particular to their assets. This factor is multiplied against the monthly electricity cost to determine the monthly cost.
- To help mitigate delivery costs, the Province has expanded the Rural or Remote Protection Program (RRRP) to further reduce distribution costs for rural customers across the province.
  - Starting on January 1 2017, 330,000 Hydro One low density (R2 class) customers will receive $60.50 per month in RRRP to bring their total Delivery line costs to roughly $95 for 1,000 kWh/month.

SAMPLE MONTHLY BILL STATEMENT

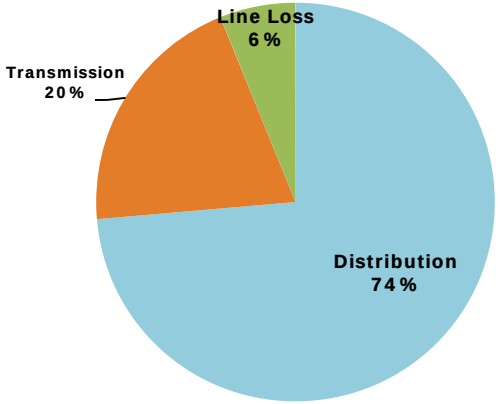
**Anytown Hydro-Electric Limited**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

| Your Electricity Charges | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| HST | 18.07 |
| **8% Provincial Rebate** | (11.12) |
| **Total Amount** | **$145.95** |

**Cost breakdown of Delivery Line for an Average Residential Bill***




* Toronto Hydro Bill @ 750Kwhs

# 2. Delivery Charge Relief – Proposed Program Overview

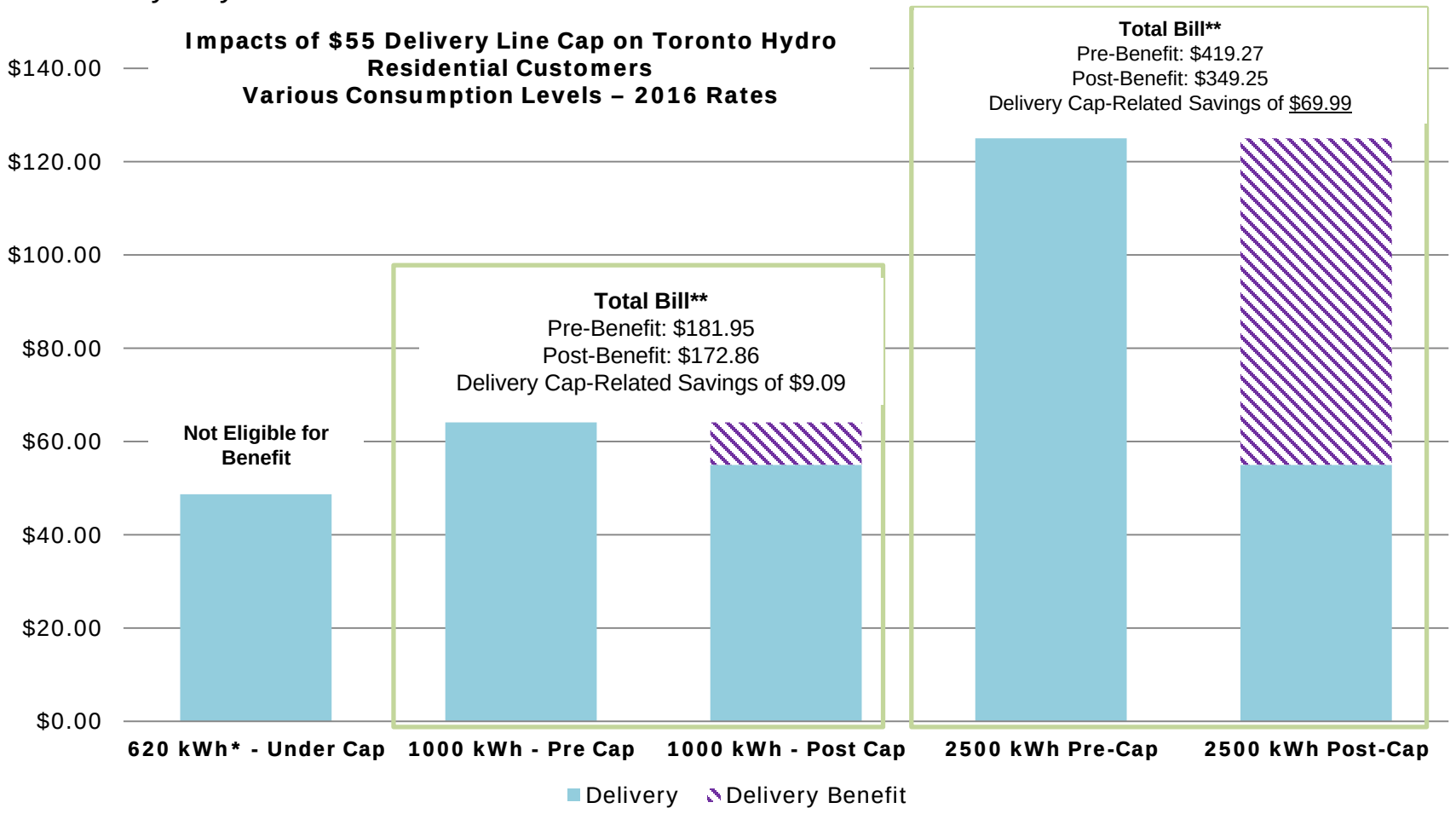
- To provide further relief for customers across the province, the province could create a ‘customer-specific’ program that would cap the delivery line cost.
- The proposed program would limit the amount an LDC can bill consumers for Delivery at a to-be-determined reasonable cost. Delivery costs that exceed the cap would be covered by support from the fiscal plan.
- The proposed program would target customers within the LDC territory based on their Delivery cost.
  - Delivery costs vary month to month and LDCs will need to keep track of the customers who will receive the receive the additional support.
- Eligibility for increased protection would be based solely on delivery charges above the established threshold and therefore would not be specific to any one LDC. All LDCs must be prepared to offer the program to some of their customers

**Considerations**

- Costs and ratepayer impacts depend on the number of customers within each LDC whose delivery charges exceed the cap.
  - Costs will fluctuate seasonally and will have year-over-year changes, creating uncertainty in forecasting. Ministry is preparing case study analysis.
- There may be implementation challenges for some LDCs and could take them up to 6 months to implement the program.
- Capping delivery charges may impact OEB rate-setting processes and create disincentives towards utility productivity and performance improvements.

# 2. Delivery Charge Relief – Proposed Program Overview (cont'd)

- Below is an example of a Toronto Hydro customer at different consumption levels and the level of subsidy they would receive.




*620kWh is the average Toronto Hydro residential consumption level. ENERGY estimates 17.5% of Toronto Hydro consumers average >1000kWh/month.

** Includes Electricity, Delivery, and Regulatory Charges. Excludes HST and 8% rebate.



Ontario

MINISTRY OF ENERGY

# 3a. Ontario Electricity Support Program (OESP) Expansion

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills.
- The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices.
- OESP funding is collected from a charge levied on all electricity ratepayers. Based on current level of program up-take and funding collection, OESP program benefits could be increased across the board by 50%. This would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year);
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year); and
  - Indigenous and Métis consumers would also see benefit increases at the same level as those with electric heat and medical devices.
    - The Ministry is also considering options to support a “Delivery” line credit for Indigenous consumers. This would cost ~$18 million/year (Option 2d on slide 8) and would save Indigenous consumers between $75 and $100/month.
- Greater focus and support can be placed on lower income Ontarians by funding OESP through the tax base. This would also reduce costs for all consumers as a result of eliminating the OESP charge.
  - Average residential customer savings: $0.83/month; and
  - Average industrial customer savings: $1.10/MWh.

# 3a. OESP Expansion – Fiscal Impacts

- Table below shows estimate of program costs up to 2022:

| Year | OESP Status Quo($M) | +50%($M) | TOTAL ($M) |
|---|---|---|---|
| 2017 | $108 | $54 | **$162** |
| 2018 | $150 | $75 | **$225** |
| 2019 | $186 | $93 | **$279** |
| 2020 | $215 | $108 | **$323** |
| 2021 | $243 | $122 | **$365** |
| 2022 | $272 | $136 | **$408** |

- 2017 program costs are based at current program sign-up rate – 30% of eligible consumers. Cost projections assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
- At the time of program design, it was estimated that 40-50% participation would be high for an application-based program delivered through electricity bills. However OESP can be enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).
- OEB is currently exploring options for simplifying the OESP process, including exploring options with MCSS on auto-enrollment options, discussing options to eliminate wet signature consent forms with the federal government, and working with partners to do open houses to better reach vulnerable consumers.

# 3a. OESP Expansion – Considerations

- **Framework:** New legislation would be required to establish and define the parameters of a tax-based OESP. This may reveal additional considerations, including possible assessment as a tax credit.
- **Implementation:** Financial flow-through mechanisms would need to be considered in consultation with IESO and LDCs. Likely to be modeled after processes used for the Ontario Rebate for Electricity Consumers (OREC).
- **Alternative Delivery:** If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible, and could expand coverage to the ~142,000 low-income households that do not receive an electricity bill.
- **Transition to Social Assistance:** Moving OESP to the taxbase can be a transitional step in folding this program into a reform of social and disability assistance programs and enhancement of MCSS' Social Assistance Management System moving forward.
- **Additional Enhancements:** The enhanced credit could be expanded to include additional eligibility categories of customers. For example, a new "Low Density Consumer" category could be introduced that provides Hydro One R2 and/or R1 customers (highest distribution rates) who are already OESP eligible with the enhanced credit.
- **Variance Account:** The OEB has been collecting program funding in excess of program costs and has accrued a positive balance. This balance must be addressed when moving to the tax base.

# 3b. Low Income Conservation Benefit Program

- Existing low income programs delivered by LDCs and IESO help qualified homeowners and social and/or assisted housing providers improve the energy efficiency of their homes.
  - Programs include the Home Assistance Program and the Retrofit Program (Social Housing Stream).
- A new Low Income Conservation Benefit Program would build on existing programs.
  - Participants could receive incentives for conservation measures not currently covered (e.g. air conditioning, heat pumps (electric heated homes)).
  - Increased incentive amounts (e.g., under the existing Retrofit Program, incentives cover up to 50% of the total cost of the energy efficiency upgrade).
  - Targeted education and awareness initiatives.
- The new program would be delivered through LDCs and/or IESO.
- The new program would coordinate with CCAP initiatives.
- The budget estimate below is illustrative and assumes annual program budgets three times the 2015 spending for the Home Assistance Program.

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| Proposed Budget ($ Million) | $60 | $60 | $60 | $60 | $60 | $60 |

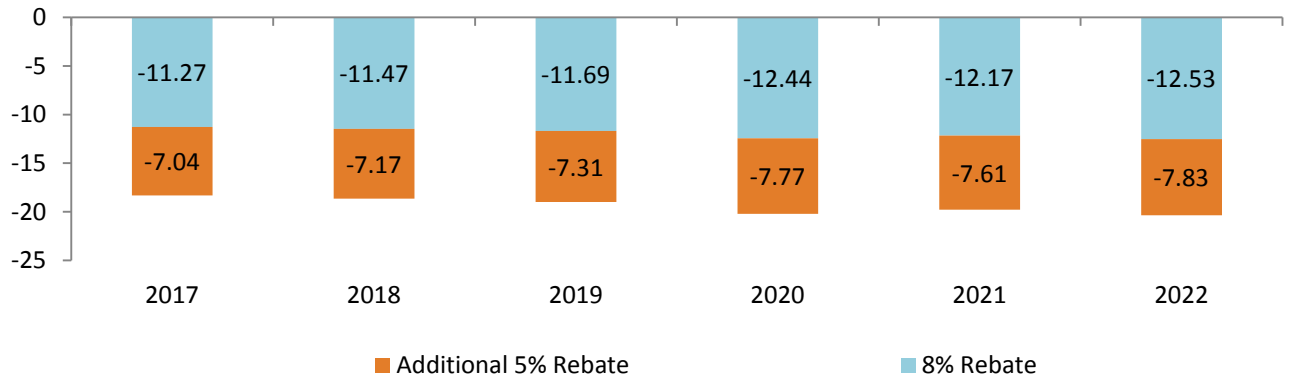
- Further analysis is required on costing and implementation details, including alignment with the Conservation First Framework.

# Other Options to Consider

# 1. Enhanced Tax-Base RPP Rebate (5%)

- Enhancing the rebate by a further 5% on the amount before tax provides an average savings of about $7 each month or $84 annually for a typical residential electricity consumer.
- As of January 1, 2017, electricity consumers eligible for the Regulated Price Plan (RPP) receive an 8% rebate equivalent to the provincial portion of HST on their pre-tax bill.
- The eligibility criteria for the 8% rebate is as follows:
  - Consumers with a demand of 50 kW or less;
  - Consumers with a demand of 250,000 kWh/year or less;
  - Farms;
  - Multi-unit residential buildings and other facilities used as residential rental units;
  - Dwellings;
  - Condominiums; and
  - Co-operatives with housing units.

**Benefit for a Typical Residential RPP Consumer**
*in $/750-kWh month*



# 1. Enhanced Tax-Base RPP Rebate (5%) (cont'd)

**Considerations**

- Amendments would be required related to the *Ontario Rebate for Electricity Consumers Act, 2016.*
- The Act authorizes the making of regulations to reimburse electricity vendors for amounts credited to consumers' accounts under the Act. The Act authorizes the making of other regulations to put in place mechanisms needed to implement the financial assistance.
- The rebate could be made retroactive to January 1, 2017. Similar to the current 8% rebate, electricity consumers would receive a retroactive payment once the local distributor begins issuing the rebates if the distributor needs more time to adjust its billing systems.

**Fiscal Cost of an Enhanced Rebate**
*in $millions*

| Cost ($M) | 2016-2017 | 2017-2018 | 2018-2019 | 2019-2020 | 2020-2021 | 2021-2022 |
|---|---|---|---|---|---|---|
| **Cost of 8% rebate** | 271 | 1,119 | 1,086 | 1,171 | 1,159 | 1,208 |
| **Cost of 13% rebate** | 440 | 1,818 | 1,764 | 1,903 | 1,884 | 1,963 |
| **Cost of incremental 5% rebate** | 169 | 699 | 679 | 732 | 724 | 755 |

# 2a. Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the contract holders agreeing to a lower price in the near term.
- Since extending the contracts would lock in an additional 10 years of GHG emissions free generation to support electrification of transportation and other sectors, consideration could be given to funding the contract extensions with future cap and trade proceeds.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period; discussions/consultation may be required in advance of this potential option moving forward.

# 2a. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- The Province is not a party to the contracts and has never been involved in the negotiation of the contracts themselves. IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is also required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

- Extending contract terms would reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

# 2a. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.
- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.
- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
- **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 Million | $582 Million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# 2a. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - **Illustrative Example:** New contract for 27 years at $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 Million | $632 Million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# 2a. Extend Length of Existing Wind / Solar Contracts (cont'd)

- Below are illustrative estimates of potential GA savings if all contracts for large FIT and GEIA wind and solar projects in commercial operation are renegotiated according to the approaches illustrated above.
- Estimates are for large (10 MW or greater) FIT 1 and GEIA wind and solar projects in commercial operation, totalling about 2,700 MW of wind and about 900 MW of solar capacity. A 10 year contract extension is assumed at a price of:
  - **For Wind:** LRP I low weighted wind price of $64.5/MWh
  - **For Solar:** LRP I low weighted solar price of $141.5/MWh

**Potential Approach 1:**

| | **Current Contracts*** | **New Extended Contracts** |
|---|---|---|
| Total Value (NPV 2017) | $23.3 Billion | $23.1 Billion |
| Average Annual Contract Value (First 5 Years) | $1.6 Billion | $1.4 Billion |
| *Figures assume projects remain operational after contract expiry at the LRP I low weighted price inflated to the year of contract expiry, as per OPO assumptions . | | |

**Potential Approach 2:**

| | **Current Contracts** | **New Extended Contracts** |
|---|---|---|
| Total Value (NPV 2017) | $23.3 Billion | $25.6 Billion |
| Average Annual Contract Value (First 5 Years) | $ 1.6 Billion | $0.8 Billion |

**Source**: Figures reflect IESO contract data current as of Sept 2016. Also includes two Phase III solar projects (100 MW combined) that came online in late 2016 not included in Sept 2016 IESO contract data.

# 2a. Extend Length of Existing Wind / Solar Contracts (cont'd)

- Contract re-negotiations could be piloted with large wind and solar contract holders.
- For example, the top 5 contract holders by portfolio value (online projects 10 MW and larger) include:

| Contract Holder | Technology | # of Contracts | Capacity (MW) | Estimated Value (NPV 2017) |
|---|---|---|---|---|
| Samsung* | Wind & Solar | 7 | 899 | $5.0 Billion |
| NextERA | Wind | 6 | 534 | $2.7 Billion |
| Northland Power | Wind & Solar | 15 | 290 | $1.8 ~~2~~ Billion |
| Pattern / Capital Power | Wind | 1 | 270 | $1.4 ~~5~~ Billion |
| ENGIE | Wind | 4 | 265 | $1.2 Billion |
| All Other | Wind & Solar | 76 | 1398 | $8.1 Billion |
| **Total** | **Wind & Solar** | **109** | **3654** | **$20.2 Billion** |

Source: IESO contract data current as of Sept 2016.
*Includes two Phase III solar projects (100 MW combined) that came online in late 2016 not included in Sept 2016 IESO contract data.

# 2b. Clean Energy Supply (CES) Contracts

- There are 13 natural gas facilities operating under Clean Energy Supply (CES) contracts. Given the current excess capacity, some of these facilities could be renegotiated to reduce output in the near term.

- In conjunction, OPG could seek to negotiate outright purchases of certain Ontario gas assets. Given the current excess capacity in electricity supply in Ontario, OPG can seek to negotiate outright purchases of certain Ontario gas assets and reposition them such that ratepayers would pay only for the "current need" component:
  - Contract terms would be renegotiated with the Province to temporarily idle the facilities;
  - Variable expenditures would be largely avoided with the facilities only incurring fixed costs; and
  - Plant life would be extended to a period post-2024 when additional power would be required.

- OPG has estimated monthly residential bill reductions of $2.37 to $4.00 from 2017 to 2019 if such an approach was taken for Ontario's gas portfolio.

- Natural targets would be assets that OPG either jointly owns (e.g., Portland, Brighton Beach) or operate on OPG's site with acquisition funding coming from Provincial borrowing.
  - Although OPG could also look beyond its facilities to the broader natural gas fleet in Ontario.

**Considerations**

- This proposal would reduce GHGs and provide some near-term cost benefits through lower staffing and maintenance costs:
  - Contract terms would be renegotiated with to temporarily idle the facilities;
  - Variable expenditures would be largely avoided with the facilities only incurring fixed costs; and
  - Plant life would be extended to a period post-2024 when additional power would be required.

- It will likely be challenging to find a willing seller and/or to negotiate a favourable price:
  - Sellers that are approached are in a strong position to extract value from OPG/the Province; and
  - Similarly, OPG's negotiating position would be weakened if this was viewed as part of the broader rate mitigation strategy.

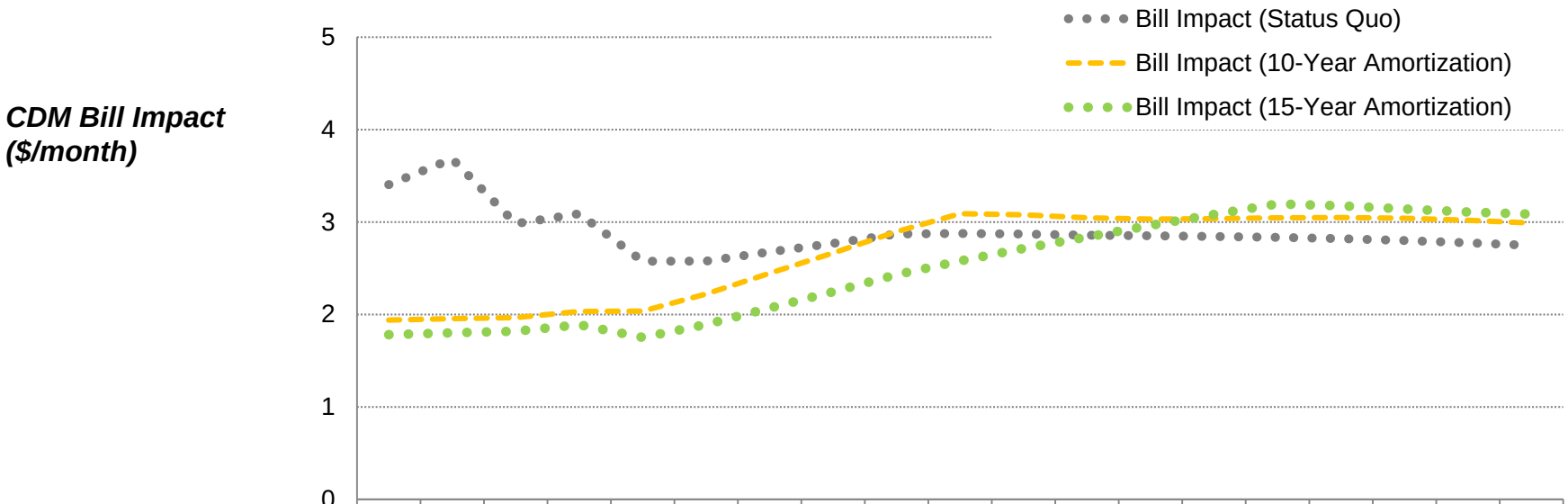
- In the past, OPG and IESO's contract renegotiations have been contentious and lengthy.

# 3. Amortize Conservation Program Costs

- This option would not be pursued if the Global Adjustment (GA) was financed (Option 1).
- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized. This would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs).
  - The time period over which costs could be amortized would be over the lifetime of funded CDM measures.
  - ENERGY would work with IESO to determine the appropriate lifetime period – the graph on the next slide, which illustrates residential bill impacts, presents two cases: **10-year and 15-year measure lifetimes**.
- In both cases, amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020. Over time the benefit would decrease and turn into a cost (higher electricity rates than would otherwise occur), as interest charges begin to grow. Estimated interest charges are as follows (a 3% interest rate is assumed; increases in interest rates could result in higher overall interest charges):
  - $712 million ($2016) – Amortizing eligible 2017-2035 CDM costs for 10-year period; and
  - $1.3 billion ($2016) – Amortizing eligible 2017-2035 CDM costs for 15-year period .
- Legislative changes would be needed to allow recovery of interest payments from ratepayers, or these costs could be recovered from the Consolidated Revenue Fund (CRF, or taxes).
- An alternative that could be explored would be to pay for CDM costs, or for a portion of these, from the tax-base (*see Appendix for more detail on tax funding option*).

# 3. Amortize Conservation Program Costs (cont'd)

## Conservation Residential Bill Impact – Status Quo, 10-Year and 15-Year Amortization




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bill Impact (Status Quo) | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | 2.68 | 2.77 | 2.87 | 2.88 | 2.87 | 2.86 | 2.85 | 2.84 | 2.83 | 2.82 | 2.80 | 2.78 | 2.75 |
| Bill Impact (10-Year Amortization) | 1.94 | 1.95 | 1.97 | 2.03 | 2.04 | 2.22 | 2.45 | 2.67 | 2.90 | 3.09 | 3.08 | 3.05 | 3.03 | 3.04 | 3.04 | 3.05 | 3.04 | 3.02 | 2.99 |
| Bill Impact (15-Year Amortization) | 1.78 | 1.80 | 1.82 | 1.89 | 1.75 | 1.89 | 2.07 | 2.25 | 2.43 | 2.58 | 2.71 | 2.84 | 2.96 | 3.08 | 3.20 | 3.18 | 3.14 | 3.11 | 3.09 |

Source: IESO; Ministry of Energy

**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10 of 15-year borrowing rate of 3.0%.

# 3. Amortize Conservation Program Costs (cont'd)

**Considerations**

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 3. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- ENERGY has received an opinion on the proposal to amortize CDM costs from IESO's external auditor.
  - Ernst and Young indicated that an argument could be made to support the recognition of the costs as an asset as the costs meet essential asset characteristics, as prescribed by PSAB.

- ENERGY staff have developed a note to seek an opinion from the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.

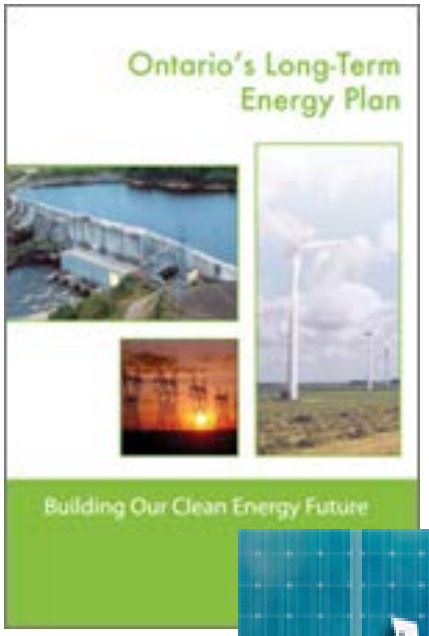
- If there is a desire to pursue this option, ENERGY would seek a formal opinion from the OPC on whether CDM costs could be amortized according to rate-regulated accounting standards, ENERGY would send its note along with IESO external auditor's opinion to OPC.
  - In 2013 when this option had been explored, staff at the OPC agreed with the view that amortized conservation costs can be considered as assets, but noted that the Auditor General may disagree with considering amortized conservation costs as assets.

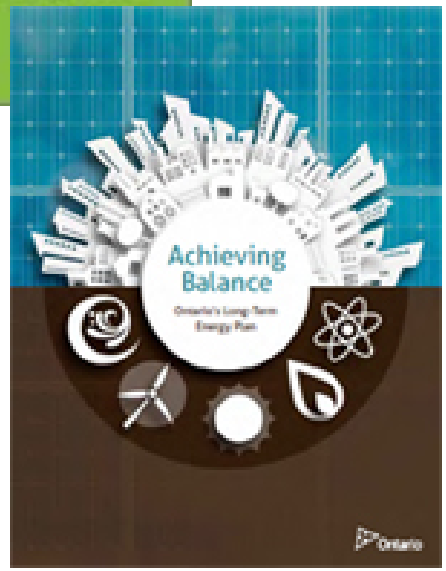
- Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# Long-Term Energy Plan

# Longer-Term Energy Plan – Overview

- The Long-Term Energy Plan (LTEP) is the energy sector's roadmap, with a focus on integrated policy and setting the direction for Ontario's energy future.
- The 2013 LTEP included content on both Ontario's electricity as well as fuels sub-sectors. The next LTEP will integrate the electricity and fuels sub-sectors to provide a complete picture of Ontario's energy system.
- Developing the LTEP is a highly collaborative process in which ENERGY and IESO directly engage with stakeholders, indigenous communities and the public.
- The Ministry sought stakeholder as well as public feedback through in-person engagement sessions, online tools, and an Environmental Registry posting.
- The Ministry is currently developing the next LTEP, and is targeting a tentative April 2017 release date.



# LTEP – Process and Timeline

**Jan - Feb**
Policy Development

- Ministry staff to review engagement feedback and to provide recommendations for DMO/ MO and Minister on LTEP policies and themes.

**Feb - March**
Modeling

- Additional modelling to inform potential initiatives and themes will be made to IESO/other modelers to update outlooks.
- Policy decisions may be adjusted based on modeling outcomes.

**March**
Plan development

- Ministry will prepare LTEP submission and IESO/OEB implementation directives for Cabinet Approval.

**Early April**
Cabinet Approval

- Cabinet approves LTEP document; as well as IESO/OEB implementation directives

*Writer to work alongside and participate in briefings and theme development.*

**Early – Mid April**
Finalize and produce document

- Layout/ graphics/ translation of final document
- Ministry staff provide final review

**End April**
Publish LTEP and implementation directives

- Final LTEP published on ENERGY website
- Minister issues Cabinet-approved implementation directives to IESO & OEB
- LTEP lockup

**May – July**
Implementation Plan Development

- IESO and OEB develop implementation plans based on directives

**Aug – Sept 2017**
Implementation Plan Approval

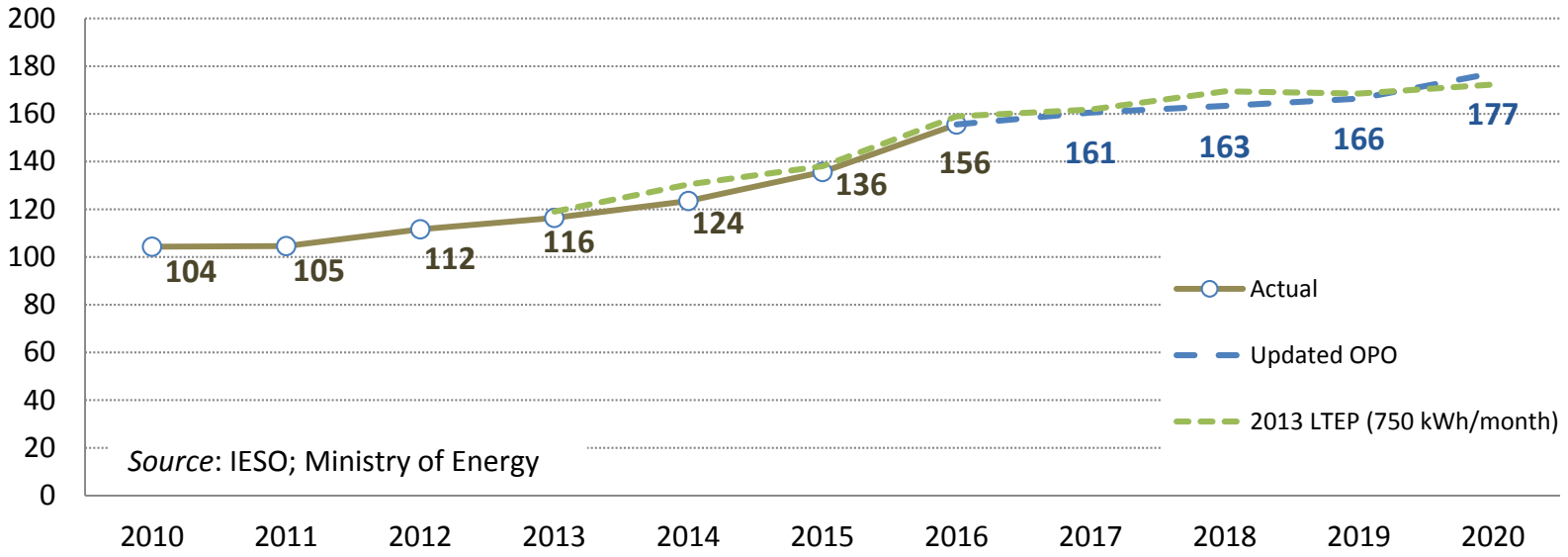
- Implementation plans submitted to Minister of Energy for approval

# Appendix

# Context – Residential Electricity Prices

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast in $/month*

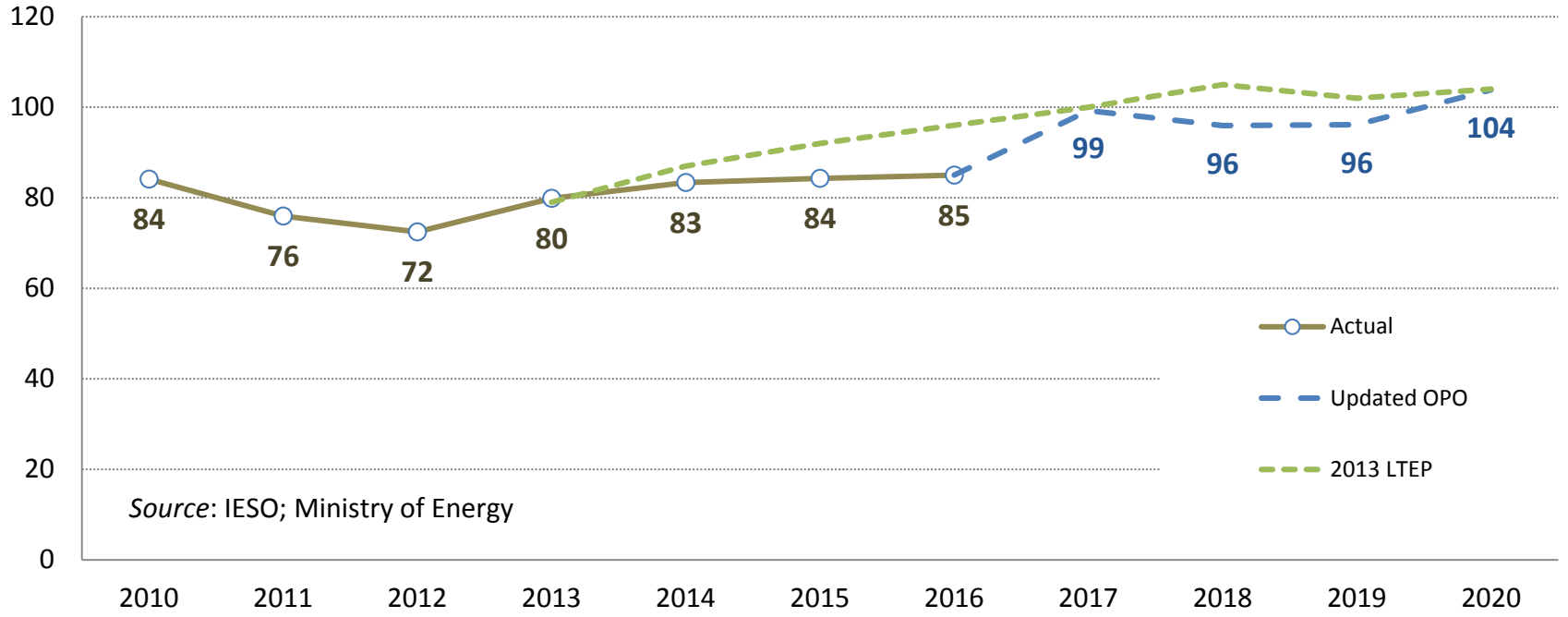



**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Context – Large Industrial Electricity Prices

- Industrial electricity prices continue to be a concern for many businesses.
  - **Note:** The typical industrial electricity price is currently below the 2013 LTEP forecast.

**Typical Class A Electricity Prices**
*Historical and Forecast in $/MWh*




**Note**: The 2013 LTEP forecast for industrial reflects a transmission connected Class A electricity consumer. The updated OPO forecast above includes ICI expansion and RRRP expansion.

# Global Adjustment (GA) Financing

- The global adjustment (GA) is comprised of costs for regulated and contracted generation, as well as conservation.
- Some contracted generation assets are expected to have a useful life that extends beyond the term of their current financial contracts (typically 20-years).
- Similarly, conservation costs are recovered through the GA on an annual basis while conservation initiatives provide benefits to the electricity system over the course of many years.
- Since the GA only includes costs related to the contractual life of these assets, there may be an opportunity to recognize the longer-term benefit of these assets to the electricity system and “bring forward” that benefit for ratepayers today, while deferring some of the current costs.
- An indicative GA financing proposal is presented that lowers ratepayers costs over the short term by borrowing money but increases costs over the long term when GA costs are forecast to be lower.
- **Note:** Not all generating assets will continue operations at the end of their contract term. Regulatory constraints (i.e., nuclear licences) or low demand conditions (i.e., as experienced with current expiring NUGs) would mean that some generators will shutdown at the expiry of their contract. Future ratepayers would be paying for these assets that are no longer producing power.

# GA Financing – Considerations

**Considerations**

- Borrowing money to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.
  - Deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" in the sector. **Note:** the Debt Retirement Charge (DRC) was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

- The GA financing proposal involves borrowing large amounts of money over a long period of time (16-30 years, depending on the scenario) to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on electricity rates. A long-term interest rate of 5% is assumed for this analysis.

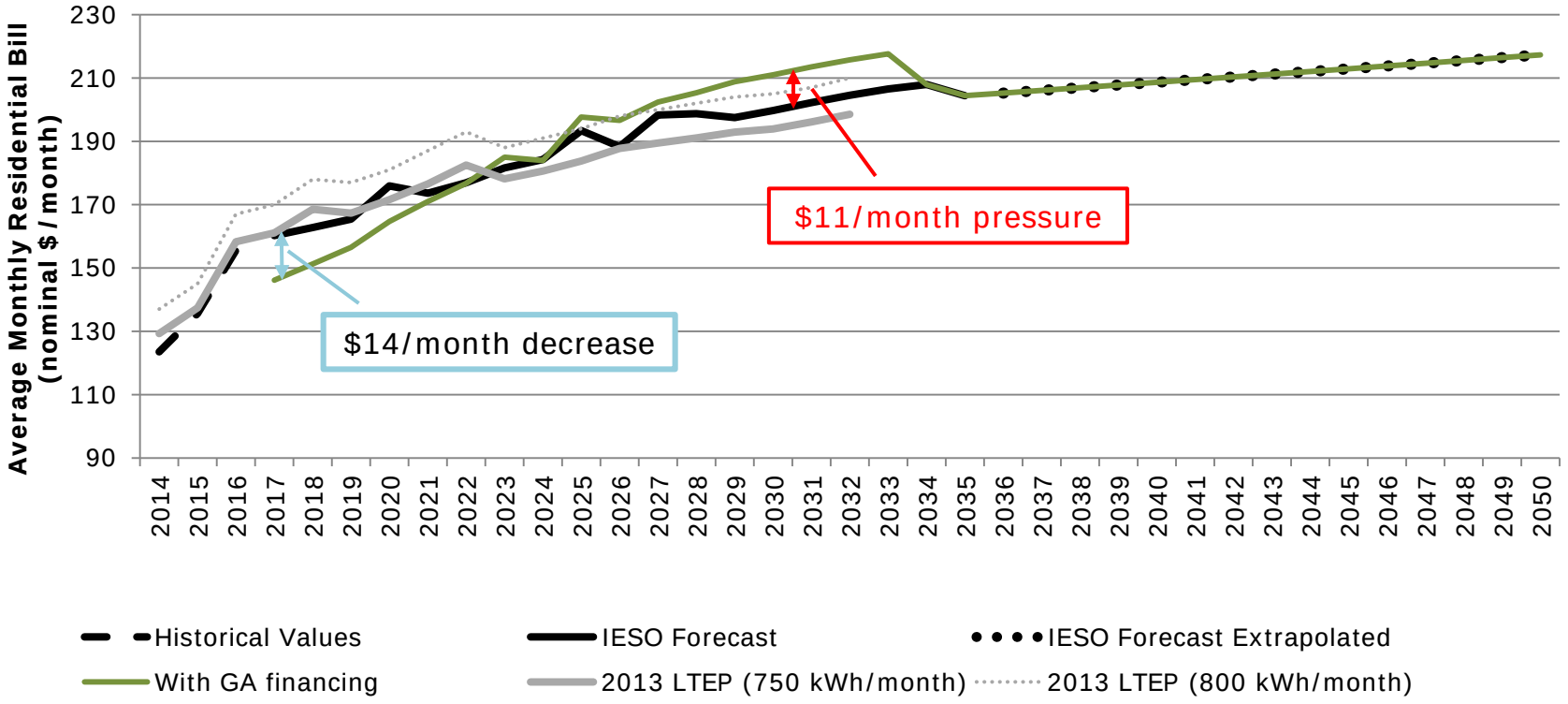
- GA and HOEP provide a natural hedge against each other – when one goes up, the other goes down – keeping total electricity costs relatively stable and predictable. Smoothing only the GA would lead to greater price volatility for consumers unless the schedule and amount of ratepayer payments was defined relative to the actual cost of GA.

- Some Class A consumers pay limited GA and would receive little benefit under the financing proposal. These consumers also currently pay very low rates. In addition, in recognition that Class B electricity consumers pay the majority of GA costs, could limit GA cost reductions through financing to Class B consumers only.

- Should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumption, further increasing future costs for individual ratepayers.

# Low / GA Financing – Impact on Residential Electricity Bills

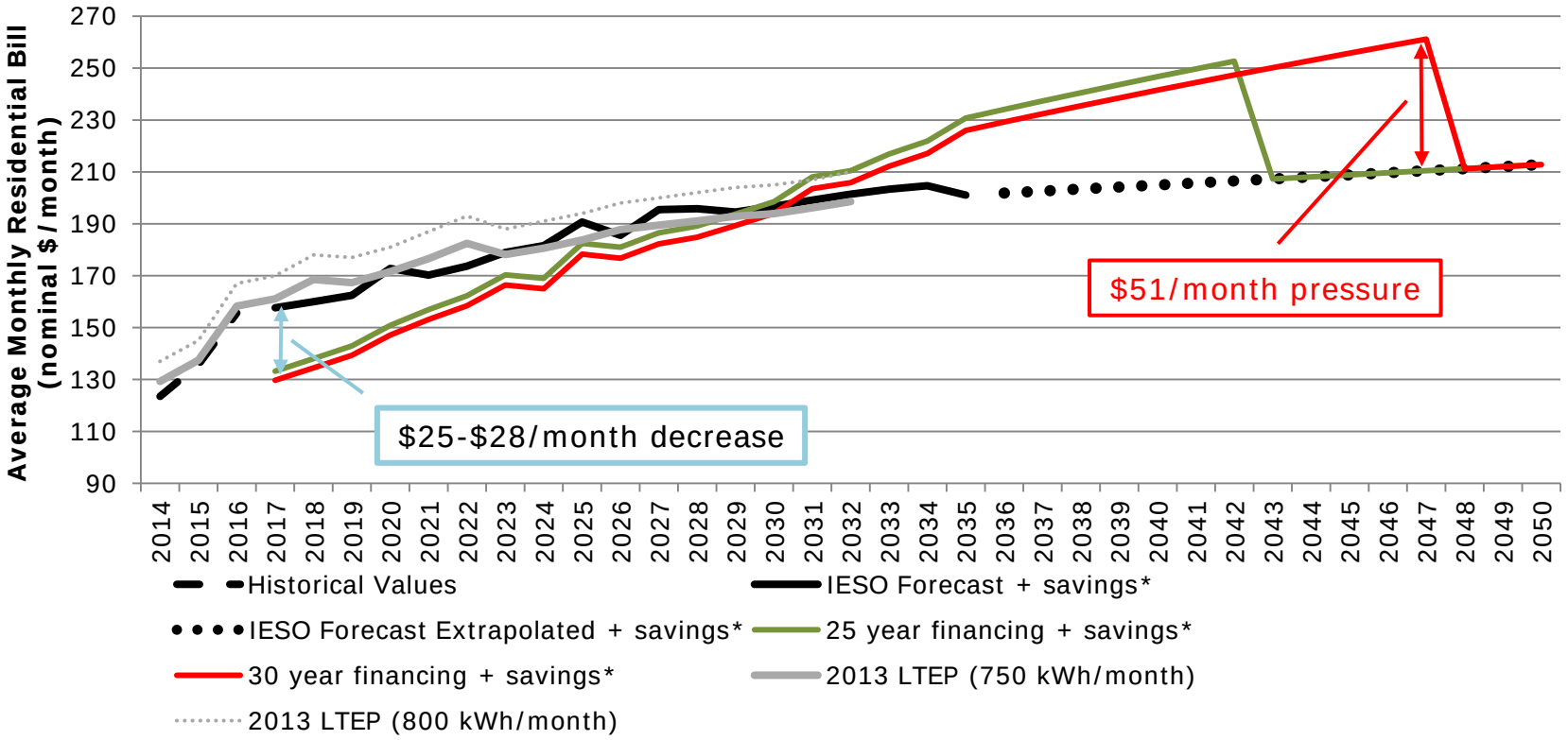
- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $2.5 billion and increases at 2% each year – up to a cap of no more than $2 billion more than the true cost of GA in any year – until the borrowed money is paid back in 2032.




- By **borrowing up to $9.3 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $14/month** at the cost of **increased future electricity bills over 10 years of up to $11/month** above the true cost of electricity production.

# High / GA Financing – Impact on Residential Electricity Bills

- In this option, the starting GA payment from all ratepayers in 2017 is lowered by $4.4 and $5 billion and increases at 2% each year until the borrowed money is paid back over a 25 and 30 year financing period respectively.

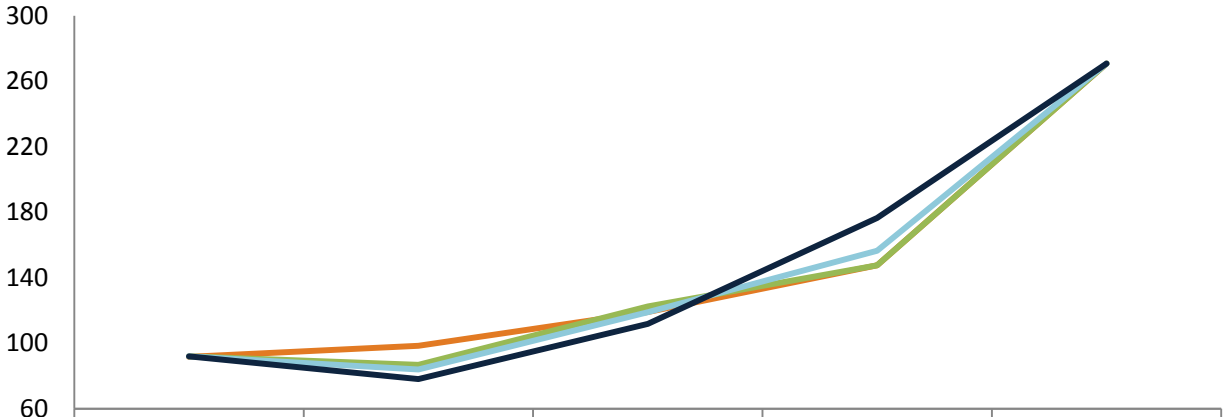



- By **borrowing up to $65 billion**, this scenario results in **a short-term residential electricity cost reduction of up to $25-$28/month** at the cost of **increased future electricity bills over 12-17 years of up to $46-$51/month** above the true cost of electricity production.

# GA Financing – Impact of the Level of Financing on Large Industrial Electricity Consumers

- Below graph illustrates the estimated impact of the level of GA financing for an average Class A electricity consumer over a 25 year amortization period.

**Estimated All-In Electricity Price**
*for Average Class A in $/MWh*



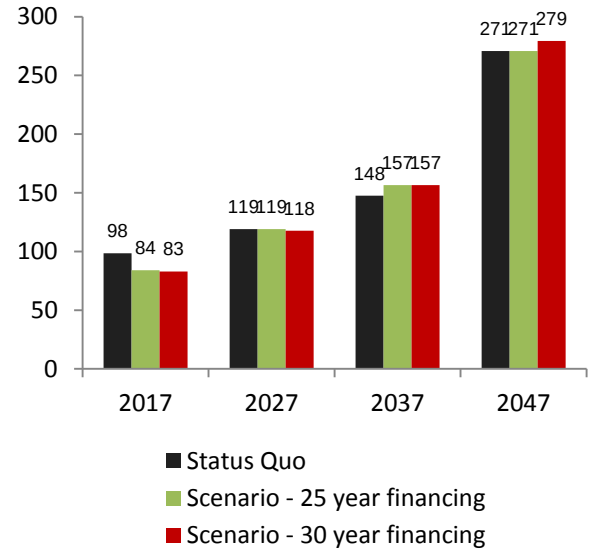

| | 2016 | 2017 | 2027 | 2037 | 2047 |
|---|---|---|---|---|---|
| Status Quo | 92 | 98 | 119 | 148 | 271 |
| Low Financing | - | 87 | 122 | 148 | 271 |
| Moderate Financing | | 84 | 119 | 157 | 271 |
| High Financing | | 78 | 112 | 177 | 271 |

**Note:** Assumes that demand by industrial sector continues at average 2011-2015 levels. Please see the Appendix or more information on the estimated impact on large industrial electricity consumers.

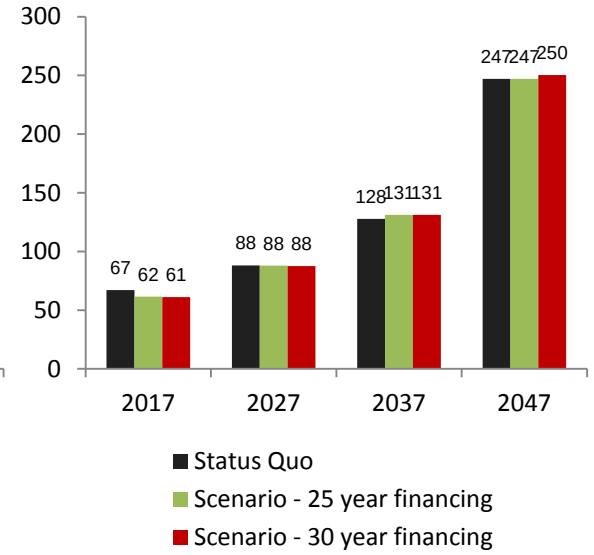
# GA Financing – Illustrative Impact for Large Industrial Electricity Consumers

- Below graphs illustrate the estimated impact under the moderate GA financing scenario for an average Class A electricity consumer, a consumer that pays low GA (i.e., pulp and paper) and high GA (i.e., refining and chemical manufacturing).

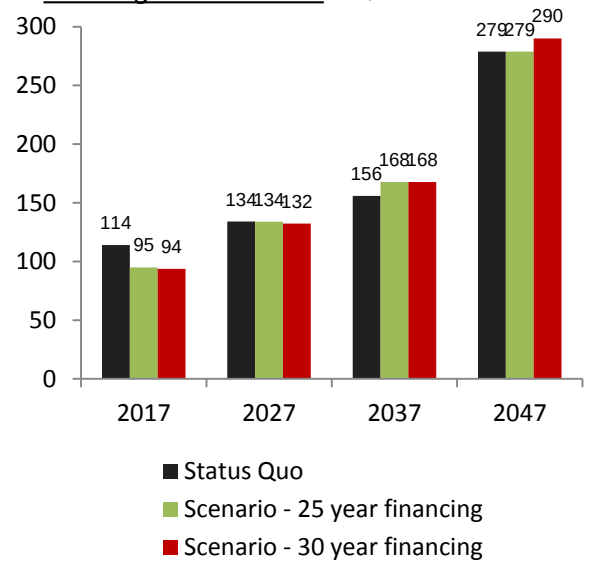
**Estimated All-In Electricity Price**
*for Average Class A in $/MWh*




**Estimated All-In Electricity Price**
*for Pulp & Paper in $/MWh*




**Estimated All-In Electricity Price**
*for Refining & Chemicals in $/MWh*




**Note:** Assumes that demand by industrial sector continues at average 2011-2015 levels.

# Other Options Considered – Typical Residential Electricity Consumer

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| b. Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |
| Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Options Considered – Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| b. Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |
| Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

**From:** John Kim
**To:** Ronald Kwan; Emily Kerr
**Cc:** Gavin He; Francisco Chinchon
**Subject:** RE: Decks
**Date:** Wednesday, January 25, 2017 8:07:02 AM

---

Hi Ron,

The main deck appears to have updated the earlier version with information shared in the distributed material from last Friday.

Some early comments:

Accountants will hammer out the use of trust to hold the GA or the new GA deferral account but currently the deck has the fiscal impact for the option as 'moderate' and the impacts TBC. It would be helpful to start putting numbers on the fiscal impact as the decision makers should be able to assess the downside risk related to the option. My understanding is that under both USGAAP and IFRS, the criteria of control is key in determining whether the entity is to be consolidated or not.

In the support deck on LDC and delivery line overview, it indicates that the program structure could be temporary until the start of 'revenue decoupling'. Given that the structure would still leave distribution cost variance cost across different LDCs, I don't believe the comment is valid.

John.

---

**From:** Ronald Kwan
**Sent:** Tuesday, January 24, 2017 10:36 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Subject:** FW: Decks

Hi,

See attached. Key comments are welcome.

Thanks,
Ron

---

**From:** Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
**Sent:** January-24-17 10:32 PM
**To:** Ghiassi, Ali (MOF) <Ali.Ghiassi@ontario.ca>; Elizabeth Mendes (MOF) <Elizabeth.Mendes@ontario.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>; Ronald Jaikaran (MOF) <Ronald.Jaikaran@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

**Cc:** David McLean (MOF) <David.McLean@ontario.ca>
**Subject:** FW: Decks

FYI all. Attached are the two Energy decks for FPC tomorrow. Note a second attachment which provides background and analysis on distribution costs and pressures.

---

**From:** Imbrogno, Serge (ENERGY)
**Sent:** Tuesday, January 24, 2017 10:15:17 PM (UTC-05:00) Eastern Time (US & Canada)
**To:** Orsini, Steve (CAB); Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
**Cc:** Bromm, William (CAB)
**Subject:** Decks

Hi,

Decks for tomorrow's meeting. My MO is still reviewing and they may have some edits.

Serge

**From:** Ronald Kwan
**To:** John Kim
**Cc:** Tomasz Bugajski; Shajee Kathirgamanathan
**Subject:** RE: Draft BN for Monday TB/MBC Meeting
**Date:** Sunday, September 11, 2016 3:22:47 AM

---

Hi John,

When did the request go to $300M for 16-17, $1.1B for 17-18, 18-19, and $1.2B for 19-20?

And there still does seem to be any more specification in the Minute on the RRRP adjustment mechanism.

Were either of those discussed at the prior briefings?

Ron

---

**From:** John Kim
**Sent:** September-10-16 6:52 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Fwd: Draft BN for Monday TB/MBC Meeting

FYI

Begin forwarded message:

> **From:** "Strang, James (TBS)" <James.Strang@ontario.ca>
> **To:** "Keley Katona (ENERGY)" <Keley.Katona@ontario.ca>
> **Cc:** "Felix Fung (MOF)" <Felix.Fung@ontario.ca>, "Madeleine Morgenstern (PPAGS)" <Madeleine.Morgenstern@ontario.ca>, "Sriram Subrahmanyan (MOF)" <Sriram.Subrahmanyan@ontario.ca>, "Ann Langleben (MOF)" <Ann.Langleben@ontario.ca>, "Patrick Laughton (MOF)" <Patrick.Laughton@ontario.ca>, "Nina Arbabzadeh (EDU)" <Nina.Arbabzadeh@ontario.ca>, "John Kim" <John.Kim@ofina.on.ca>, "Nick Smook (MOF)" <Nick.Smook@ontario.ca>, "Paul Kaufman (MOHLTC)" <Paul.Kaufman@ontario.ca>, "Len Hatzis (MGS)" <Len.Hatzis@ontario.ca>, "Shajee Kathirgamanathan" <Shajee.Kathirgamanathan@ofina.on.ca>, "Moore, Karen (CAB)" <Karen.Moore4@ontario.ca>, "Helen Graham (MOF)" <Helen.Graham@ontario.ca>, "Inglis, Liane (MOF)" <Liane.Inglis@ontario.ca>, "Jenarra DeSouza (MEDTE/MRI)" <Jenarra.DeSouza@ontario.ca>
> **Subject: Draft BN for Monday TB/MBC Meeting**
>
> Attached is the draft briefing note for TB/MBC on Monday. We followed the minute for OCEB then refined it for this item.

James

| | |
|---|---|
| **From:** | Strang, James (TBS) |
| **To:** | Keley Katona (ENERGY) |
| **Cc:** | Felix Fung (MOF); Madeleine Morgenstern (PPAGS); Sriram Subrahmanyan (MOF); Ann Langleben (MOF); Patrick Laughton (MOF); Nina Arbabzadeh (EDU); John Kim; Nick Smook (MOF); Paul Kaufman (MOHLTC); Len Hatzis (MGS); Shajee Kathirgamanathan; Moore, Karen (CAB); Helen Graham (MOF); Inglis, Liane (MOF); Jenarra DeSouza (MEDTE/MRI) |
| **Subject:** | RE: Draft BN for Monday TB/MBC Meeting |
| **Date:** | Sunday, September 11, 2016 2:24:44 PM |
| **Attachments:** | RAN Electricity Price Mitigation v12 2016 09 11.doc |

Attached is an updated draft briefing note for TB/MBC on Monday. Cap and trade minutes updated to reflect MOECC and CO input. The Financial Summary table future year numbers have moved back to the numbers used at Chair's briefing, in consultation with Energy (there's a minute explicitly saying Energy will through the upcoming PRRT process update the outyear numbers). The $300M for 2016-17 remains and aligns with the signed admin sheet for the TB/MBC item.

James

**TREASURY BOARD / MANAGEMENT BOARD OF CABINET**
**REQUEST ASSESSMENT NOTE**

| | | |
|---|---|---|
| **Ministry:** | Energy | |
| **Meeting Date:** | September 12, 2016 | |
| **Agenda Class:** | Major | |
| **Last reviewed by:** N/A | | **Tracking to:** Cabinet - September 12, 2016 |

| **SUBMISSION TITLE:** | Electricity Price Mitigation |
|---|---|

## I. DECISION BEFORE THE BOARD

The Ministry of Energy is requesting approval of a suite of initiatives providing relief to various electricity consumer classes.

## II. RECOMMENDATIONS:

| | |
|---|---|
| • Approve a suite of initiatives to provide relief to various electricity consumer classes (pending Cabinet policy approval):<br>– Providing an 8% rebate to Regulated Price Plan consumers;<br>– Expanding the Industrial Conservation Initiative;<br>– Updating the Rural or Remote Rate Protection program; and,<br>– Using $270M in cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade by providing a modest reduction in rates. Balance of proceeds intended for electricity relief through the Climate Change Action Plan ($60M), could provide some fiscal offsets.<br>• Approve $300M in Supplementary Estimates for electricity price mitigation.<br>• Direct the Ministry to report back to TB/MBC through the annual planning process with updated future year impacts, and obtain any required TB/MBC approvals to implement the initiatives.<br>• Recommend proceeding to Cabinet with the proposed legislation amendments to existing regulations to implement the initiatives. | *Board Judgment* |

## III. FINANCIAL SUMMARY

| **$ Millions** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|
| Initiative cost requested | 300.0 | 1006.0 | 1004.0 |
| Initiative cost recommended | 300.0 | 1006.0 | 1004.0 |
| Recommended program base | 300.0 | 1006.0 | 1004.0 |
| Offset Recommended – Applies if cap and trade proceeds diverted to in-plan initiatives | 0.0 | (60.0) | (60.0) |
| Total Fiscal Impact | 300.0 | 946.0 | 944.0 |

## IV. KEY COMMENTS AND CONSIDERATIONS

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online. Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period. Appendix C provides supporting background information.

As part of the 2016 Budget, the government committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the Budget commitment and additional price mitigation, while delivering on the Province's climate change objectives, the Ministry of Energy has developed price mitigation initiatives that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

The Ministry is proposing the following to mitigate electricity prices for consumers (Appendix D provides more information on each item below):

- Provide an 8% rebate on the pre-tax cost of electricity to consumers eligible for the Regulated Price Plan (i.e., residential, small business and farms), equivalent to the provincial portion of HST.
- Expand Industrial Conservation Initiative (ICI) eligibility by lowering the threshold to 1 MW, to provide support to Class B eligible electricity consumers (i.e., commercial, institutional and small industrial).
- Update the Rural or Remote Rate Protection (RRRP) program, to provide relief to rural customers.
- Use cap and trade proceeds to provide a modest rate reduction for commercial and industrial electricity consumers.

Public high-profile communications would coincide with introduction of legislation (September 2016). Currently, the 8% rebate would be available starting January 1, 2017, along with updating the RRRP. Expanding ICI won't be added to bills until 2018 due to the time required to implement the expansion and for billing changes. The impact of cap and trade would not be added to electricity bills until 2017.

The following tables provide an overview of the four initiatives, recipients, projected financial impact, grouping them based on whether taxpayers or ratepayers cover the costs:

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Taxpayers cover the costs (Potential to impact the Province's Fiscal Plan)** | | | |
| **1.** | 8% Rebate to Regulated Price Plan | Fiscal<br>About $1.0B | Residential, small business and small farms, and other small users |
| **2a.** | Use cap and trade proceeds to provide a modest reduction in rates for commercial and industrial electricity consumers. (Implementation details under development). | ($270M) in cap and trade proceeds to offset $270M in costs for reducing rates<br><br>No Fiscal Impact | The CCAP allocated up to $330M/year in cap and trade proceeds for electricity price mitigation.<br><br>See item 2b. regarding the residual amount of cap and trade proceeds ($330M - $270M = $60M) |
| **2b.** | While CCAP anticipated $330M/year was required to keep electricity affordable, the residential portion of this commitment is met by the 8% rebate. As such, some of the CCAP allocated proceeds can be redirected to other GHG reduction initiatives already in the fiscal plan. | Fiscal<br>($60M) | Provides fiscal plan flexibility of $60M/year if these proceeds are diverted to offset costs of other existing in-plan initiatives that reduce GHG emissions. |
| | **Total Fiscal Impact** | $946M | Matches Financial Summary on page 1 for 2017-18 |

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Ratepayers cover the costs (No impact to the Province's Fiscal Plan)** | | | |
| **3** | Expanding ICI eligibility to customers above 1MW in all sectors | Rate base<br>($47M/$82M)** | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors |
| **4.** | Updating Rural or Remote Rate Protection | Rate base<br>($110M) | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. |

** Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.

Due to the nature of the ICI Global Adjustment mechanism and cost recovery of RRRP, the rate base proposals (#3 and #4) above benefit the targeted recipients, but come at a cost to all other electricity ratepayers in Ontario.

The following table from the Ministry highlights the benefits by electricity consumer class.

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Benefit | | Class B (Commercial) Benefit | Class A (Industrial) Benefit | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br>(-8%) | -$45/ month<br>(-20%) | -$3/MWh<br>(-2%) | -$3/ MWh<br>(-3%) | Up to -$52/MWh<br>(-34%) |

**Notes:** * The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

See Appendix E for more illustrative bill impacts. See Appendix F for an electricity bill mock-up.

Fiscal Impact

The Ministry estimates proceeding with an 8% Regulated Price Plan (RPP) rebate without a cap would cost an estimated $1.1 billion per year. The Ministry's estimate of $300M needed for 2016-17 (to cover the first three months of 2017 when the 8% rebate applies) will be addressed through Supplementary Estimates. The Ministry will use the annual planning process to update future year impacts.

The Ministry also indicates the current proposal would use cap and trade proceeds to eliminate carbon price impacts/ grid emission reductions to ratepayers, as was established through the CCAP. This proposal does not require the full $330M/year notionally allocated through the CCAP, which could provide fiscal plan flexibility of about $60M per year to commit to other GHG reduction initiatives in the fiscal plan.

Cap and Trade Proceeds

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers (on average). While residential and other consumers would benefit from the 8% pre-tax rebate, this does not apply to non-Regulated Price Plan eligible consumers (larger industrial, commercial, and other consumers). As such, the Ministry is proposing to direct a portion of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to provide a modest rate reduction. This proposal fulfills the policy objective established in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to electricity ratepayers.

To be characterized as a regulatory charge under the cap and trade program, auction proceeds need to be spent on programs that are reasonably likely to reduce or support the reduction of greenhouse gases. The Ministry has indicated that their proposal would use proceeds to offset

the costs of committed investments that reduce greenhouse gases (e.g., non-emitting generation and conservation programs) and could incent fuel-switching away from fossil fuels.

Considerations – Implementation

At this point, the Ministry has presented a high level overview of major implementation pieces:

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010. If passed, the legislation would require a general regulation. Amendments would also be required to various regulations to expand ICI and RRRP.
- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. The Ministry indicates it will consult with LDCs (possibly through the Ontario Energy Board) to accurately assess these impacts once the program has been announced. In the past, LDCs have asked for at least six months' notice when implementing billing system changes. Timing concerns may be alleviated by allowing LDCs to provide retroactive payments rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- Detailed messaging on bills could be implemented. The rebate would not be directly linked to HST. With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.
- The Ministry will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

Legal Considerations

8% Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):

- Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):

- To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):

- Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on

both sides).

Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):

- To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

Other Considerations

- This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets for the 8% rebate.
- The 8% rebate would provide a typical residential consumer about an $11 per month benefit on average, exceeding the Budget 2016 $2 per month on average cap and trade commitment. The proposal to offer a modest rate reduction for industrial and commercial consumers also exceeds the Budget commitment to simply offset the impact of cap and trade on these consumers.
- Reduction in electricity prices that do not consider consumption amounts (e.g., without the cap in the previous OCEB program) does not promote electricity conservation and may be seen as unaligned with climate change objectives.
- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
  - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
  - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
  - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

| | | | |
|---|---|---|---|
| **Name of analyst:** | James Strang<br>With input from TPD and OFA | **Phone number:** | 416-327-2071 |
| **Date:** | September 9, 2016 | **Log number:** | |
| **Branch / Division:** | GGPR/ PEMD/ Treasury Board Secretariat<br>Tax Policy Division/ Ministry of Finance<br>Ontario Financing Authority/ Ministry of Finance | | |

## APPENDIX A: PROPOSED MINUTE

Approve electricity price mitigation for residential, commercial and industrial consumers.

In this regard:

i) Approve a suite of initiatives to provide relief to various electricity consumer classes:

   a) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor, starting January 1, 2017.

   b) Increase the total amount of rate protection available to R2 low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2003.

   c) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

   d) Expand eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

   e) Provide a modest rate reduction to commercial and industrial electricity consumers using cap and trade auction proceeds to offset the cost.

ii) Recommend to Cabinet the proposed Ontario Rebate for Electricity Consumers Act, 2016 and that the Ministry proceed to Legislation and Regulations Committee before the end of 2016 with supporting regulations under the proposed Ontario Rebate for Electricity Consumers Act, 2016.

iii) Approve the implementation details associated with the suite of initiatives:

   a) Approve:

      1. The creation of a new item entitled "Ontario Rebate for Electricity Consumers" in the Electricity Price Mitigation Program (Vote/Item 2905-3).

      2. The creation of a new Transfer Payment entitled "Ontario Rebate for Electricity Consumers" in Rebate for Electricity Consumers (Vote/Item 2905-3).

      3. An expenditure increase in the amount of $300,000,000 in 2016-17 in the Transfer Payment entitled "Rebate for Electricity Consumers[1]" in Rebate for Electricity Consumers (Vote/Item 2905-3). Direct the Ministry to return any under-spending to the Treasury Board Contingency Fund.

[1] Pending approval of the proposed Ontario Rebate for Electricity Consumers Act, 2016

b) Note:

1. Funding for 2016-17 will be implemented through Supplementary Estimates in the Fall of 2016.

2. Future year impacts of $1,006,000,000 in 2017-18 and $1,004,000,000 in 2018-19, and $1,004,000,000 in 2019-20 and ongoing.

c) Direct the Ministry to report back to Treasury Board/Management Board of Cabinet in the 2017-18 Program Review, Renewal, and Transformation process on updated future year impacts, and a potential offset strategy for resource requirements to support program implementation

iv) Note the reallocation of cap and trade auction proceeds from the up to $1,320,000,000 that was previously allocated through the Climate Change Action Plan for electricity price mitigation, as follows:

a) The Ministry of Energy to work with the Ministry of the Environment and Climate Change to invest an estimated amount of up to $1,080,000,000, from 2017-18 to 2020-21, of Cap and Trade auction proceeds for non- Regulated Price Plan electricity consumers over the first compliance period (2017-2020) through a volumetric rebate mechanism with a linkage to GHG emission reductions and the government's Climate Change Action Plan. Cap and trade auction proceeds would be used to promote fuel switching to make electricity more competitive with traditionally cheaper fossil fuels, supporting the Government's Climate Change Action Plan.

b) The remaining up to $240,000,000, from 2017-18 to 2020-21, which was previously allocated in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to ratepayers, to be used for other existing initiatives within the fiscal plan and the Climate Change Action Plan that reduce greenhouse gas emissions.

In this regard:

1) Note any redirection of proceeds previously allocated in the Climate Change Action Plan is subject to the evaluation of the Minister of the Environment and Climate Change.

2) Direct the Ministry of the Environment and Climate Change to work with Treasury Board Secretariat and Ministry of Finance to identify other existing initiatives within the fiscal plan that reduce greenhouse gas emissions that can be funded with the remaining up to $240,000,000, from 2017-18 to 2020-21, which was allocated in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to ratepayers.

v) To support implementation of electricity price mitigation, the Ministry is proceeding with the following amendments to existing regulations:

a) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the Electricity Act, 1998 to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and require electricity consumers and market participants between 1 MW and 5 MW to opt in.

b) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural or Remote Rate Protection Plan to R2 low density electricity customers and provide for a periodic adjustment mechanism.

vi) Direct the Ministry to work with the Premier's Office and Cabinet Office on the development and implementation of an integrated communications strategy.

# APPENDIX B: FINANCIAL TABLES

| FINANCIAL IMPACTS: CHANGES TO EXPENSE AND REVENUE | | | | | TABLE B1 |
|---|---|---|---|---|---|
| | | *Fiscal Plan Basis* | | | *Appropriations Basis* |
| **$ Millions** | | **2016-17** | **2017-18** | **2018-19** | **2016-17** |
| Initiative cost recommended | | 0.0000 | 0.0000 | 0.0000 | |
| *Expense changes:* | | | | | |
| Operating item (Supplementary Estimates inclusion for 2016-17 amount) | Oper | 300.0000 | 1006.0000 | 1004.0000 | 0.0000 |
| Operating Offset | Oper | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | | | | | |
| | | | | | |
| *Revenue changes:* | | | | | |
| Revenue Increase/ Offset - Applies if cap and trade proceeds diverted to in-plan initiatives | | 0.0000 | (60.0000) | (60.0000) | |
| Revenue decrease | | 0.0000 | 0.0000 | 0.0000 | |
| **Total Fiscal Impact (draw from c-funds)** | | **300.0000** | **946.0000** | **940.0000** | **0.0000** |

## APPENDIX C: ELECTRICITY SECTOR BACKGROUND

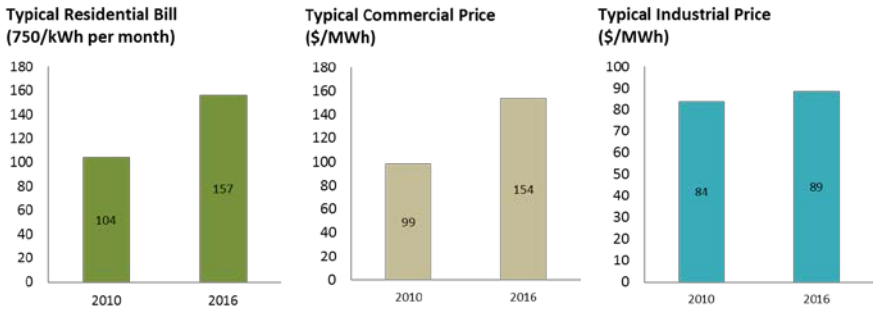
The Ministry has provided the following information to provide electricity sector context this item.

There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

*** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period.




**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

Existing Rate Mitigation efforts are on-going:

- Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs.
  - For example, Northern Ontario residential electricity consumers receive tax credits in recognition of higher electricity costs in the north and rural consumers receive a subsidy funded through the rate-base due to the higher cost of delivering power to rural areas.
  - As of 2016, the government removed the Debt Retirement Charge (DRC) from residential electricity bills. While this saves a typical residential electricity ratepayer about $60 per year, it is less than the benefit previously provided through the Ontario Clean Energy Benefit (OCEB).
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers.

- The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- Because electricity costs must be fully recovered from electricity consumers, rate mitigation funded through the rate-base often represents a shifting of costs from one consumer group to another (i.e., industrial to residential and commercial consumers).
  - Rate-based initiatives are generally associated with incenting changes in behaviour that provide electricity system benefits (i.e., shifting electricity consumption from on-peak to off-peak periods).

The table below shows the estimated cost shifts in the province's electricity system that result from three existing government programs (i.e., ICI, RRRP and OESP):

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

Since 2013, a number of actions have and are being taken to reduce overall electricity system costs. Despite these actions to reduce system costs, electricity rates continue to increase for consumers:

- Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
- Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
- Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
- Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
- Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.

## APPENDIX D: FURTHER INFORMATION SUPPORTING PROPOSED INITIATIVES

The following information has been provided by the Ministry.

**1. Provide an 8% rebate to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms), equivalent to the provincial portion of HST**

The Ministry is proposing to introduce legislation/regulation to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit. This would be equivalent to the provincial portion of the HST.

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).
- An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

| **Eligible for the 8% rebate** (< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate** (> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Farms eligible for Regulated Price Plan (Including Class B farms that opted out of the Regulated Price Plan)<br>• Small businesses<br>  – Coffee / snack retailer<br>  – Convenience store<br>  – Apparel store<br>  – Hair salon<br>  – Small insurance office | • Class A consumers<br>  – Manufacturer<br>  – Large grocery store<br>  – Mines<br>  – Auto assembly plants<br>• Class B consumers<br>  – Commercial offices (low rise)<br>  – Hotel<br>  – General warehousing |

**2. Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial)**

Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers). Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would (the benefit would be seen by consumers starting in 2018):

- Reduce electricity peak demand and electricity system costs by incenting more consumers to lower their electricity demand during peak periods;
- Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
- Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| Short-term | Up to 21% | 80 | 47 | Increase of $0.42/month |
| Long-term | Up to 34% | 165 | 82 | Increase of $0.74/month |

The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility. The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating. Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.

## 3. Update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers

The Ministry is proposing to provide an additional $110M in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

RRRP is a rate-based funded program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.

- Today, RRRP is a $175M program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
- The majority of the program funding ($127M) provided to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a rebate of $31.50. The proposed update to the program would increase the benefit to $60/month
- RRRP funding supporting R2 customers has been capped at the current level since 2003. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

An additional $110M in program funding would see an increased benefit of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.

- This would increase the R2 portion of the RRRP to $237 million with a monthly impact on an average residential consumer of ~$0.60.
- The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the benefit remains constant.

## 4. Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.

- To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).
- However, providing an 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other GHG reduction initiatives in the fiscal plan.

The rate reduction proposal would provide additional benefit to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $240M over the first four year compliance period).

# APPENDIX F: ILLUSTRATIVE BILL IMPACTS

The Ministry has provided the following illustrative bill impacts:

| | Current Bill ( before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $139 /month | N/A | 8% pre-tax rebate: - $11 | $128 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $229 /month | RRRP: –$32 | 8% pre-tax rebate + Updated RRRP: - $45 | $184 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $101 /month | OESP: -$38 | 8% pre-tax rebate: - $8 | $93 /month |
| Small Business (Toronto – 403,200 kWh/month) | $149 /MWh | N/A | 8% pre-tax rebate: - $12/MWh | $137 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $203 /MWh | N/A | 8% pre-tax rebate: - $16/MWh | $187 /MWh |

**Notes:**

***** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as $1,332 per year for a family.

** Income of less than $28,000, family of 4.

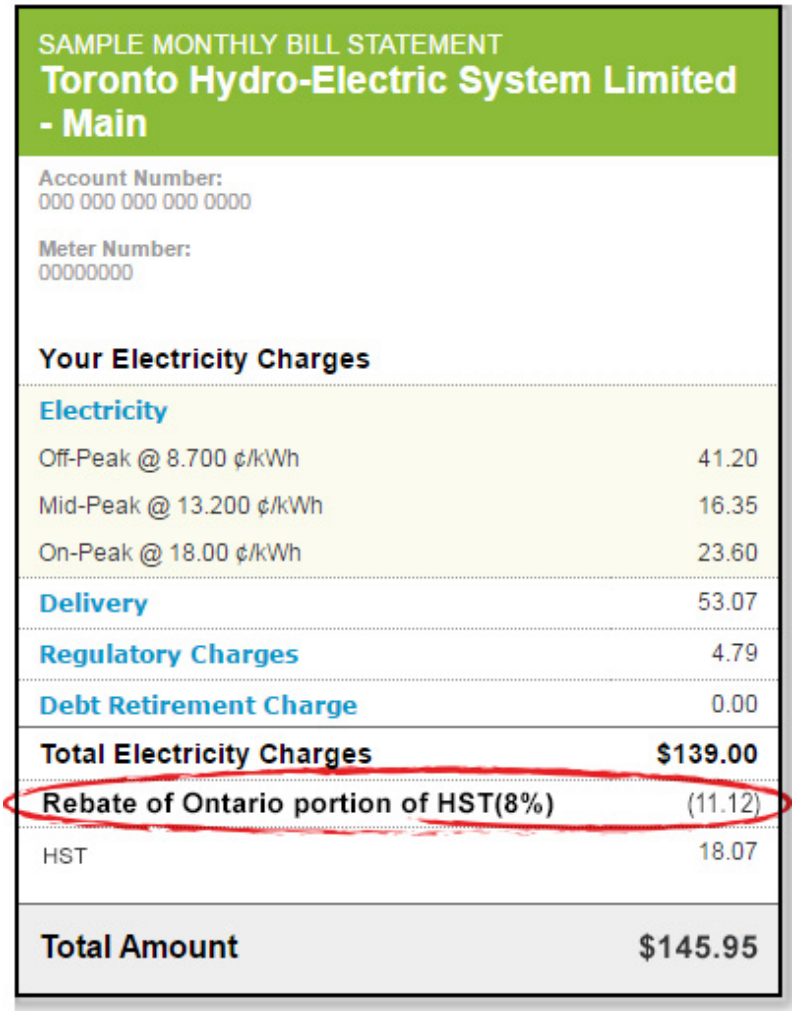
The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Totals may not add due to rounding.

| | Current Rate | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Rate |
|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | $105 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI + NIERP: -$69/MWh | Proceeds Recycling: -$2.60/MWh | $66 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling + ICI: Up to -$52/MWh | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $149 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $151 /MWh |

**Notes:**

The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

## APPENDIX E: ILLUSTRATIVE BILL MOCK-UP



SAMPLE MONTHLY BILL STATEMENT

**Toronto Hydro-Electric System Limited - Main**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| **Rebate of Ontario portion of HST(8%)** | (11.12) |
| HST | 18.07 |
| **Total Amount** | **$145.95** |

**Note:** Final bill presentment pending submission to LRC.

| | |
|---|---|
| **From:** | Strang, James (TBS) |
| **To:** | John Kim |
| **Subject:** | RE: ENERGY"s PRRT Submission |
| **Date:** | Monday, December 05, 2016 1:10:16 PM |

Energy has been moved to January.

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December 5, 2016 12:25 PM
**To:** Strang, James (TBS)
**Subject:** RE: ENERGY's PRRT Submission

Hi James,

In the email below, you indicated that you'd be briefing Karen last Friday.

Could you update me on where things are? Also, could you share the assessment note? We have some input to provide.

Thanks,

John.

**From:** Ronald Kwan
**Sent:** Tuesday, November 29, 2016 9:08 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: ENERGY's PRRT Submission

Hi,

See attached.

Thanks,
Ron

Begin forwarded message:

> **From:** "Strang, James (TBS)" <James.Strang@ontario.ca>
> **To:** "Ronald Kwan" <Ronald.Kwan@ofina.on.ca>
> **Subject: ENERGY's PRRT Submission**
>
> Good Morning Ron,
>
> Attached is Energy's PRRT Submission. It includes elements related to H1, Electricity Rate Mitigation, and Cap & Trade (GGRA). Not sure who

gets what over at the OFA, so I've just sent the zip file to you.

I'll share a draft of PRRT assessment note later today.  We're scheduled to brief Karen this Friday.

James

---

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

**From:** Ronald Kwan
**To:** John Kim; Emily Kerr
**Cc:** Gavin He
**Subject:** RE: ENERGY"s PRRT Submission
**Date:** Monday, December 05, 2016 12:19:58 PM

---

Hi,

Please reach out to him.

He had mentioned sharing a draft PRRT assessment note last week. I don't recall seeing that. Did it come over?

Thanks,
Ron

---

**From:** John Kim
**Sent:** December-05-16 12:18
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: ENERGY's PRRT Submission

Hi Ron,

We have not heard anything from James but at branch meeting this morning staff did a summary deck to go over the key items as a group.

I can reach out to him to see what has happened.

Is there a product you have in mind?

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** Monday, December 05, 2016 12:04 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: ENERGY's PRRT Submission

Hi,

Any status updates on this?

Thanks,

Ron

---

**From:** Ronald Kwan
**Sent:** November-29-16 09:08
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: ENERGY's PRRT Submission

Hi,

See attached.

Thanks,
Ron

Begin forwarded message:

> **From:** "Strang, James (TBS)" <James.Strang@ontario.ca>
> **To:** "Ronald Kwan" <Ronald.Kwan@ofina.on.ca>
> **Subject: ENERGY's PRRT Submission**
>
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>
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>
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>
> James

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | John Kim; Emily Kerr |
| **Cc:** | Gavin He |
| **Subject:** | RE: ENERGY"s PRRT Submission |
| **Date:** | Monday, December 05, 2016 12:04:28 PM |

Hi,

Any status updates on this?

Thanks,
Ron

**From:** Ronald Kwan
**Sent:** November-29-16 09:08
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: ENERGY's PRRT Submission

Hi,

See attached.

Thanks,
Ron

Begin forwarded message:

> **From:** "Strang, James (TBS)" <James.Strang@ontario.ca>
> **To:** "Ronald Kwan" <Ronald.Kwan@ofina.on.ca>
> **Subject: ENERGY's PRRT Submission**
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>
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>
> James

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | John Kim |
| **Subject:** | RE: ENERGY"s PRRT Submission |
| **Date:** | Monday, December 05, 2016 1:13:22 PM |

Thanks John.

Ron

---

**From:** John Kim
**Sent:** December-05-16 13:11
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: ENERGY's PRRT Submission

Hi Ron,

James indicated that Energy has been moved to January now.

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** Monday, December 05, 2016 12:20 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: ENERGY's PRRT Submission

Hi,

Please reach out to him.

He had mentioned sharing a draft PRRT assessment note last week. I don't recall seeing that. Did it come over?

Thanks,
Ron

---

**From:** John Kim
**Sent:** December-05-16 12:18
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: ENERGY's PRRT Submission

Hi Ron,

We have not heard anything from James but at branch meeting this morning staff did a summary deck to go over the key items as a group.

I can reach out to him to see what has happened.

Is there a product you have in mind?

Thanks,

John.

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**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: ENERGY's PRRT Submission

Hi,

Any status updates on this?

Thanks,
Ron

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**From:** Ronald Kwan
**Sent:** November-29-16 09:08
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: ENERGY's PRRT Submission

Hi,

See attached.

Thanks,
Ron

Begin forwarded message:

> **From:** "Strang, James (TBS)" <James.Strang@ontario.ca>
> **To:** "Ronald Kwan" <Ronald.Kwan@ofina.on.ca>
> **Subject: ENERGY's PRRT Submission**

Good Morning Ron,

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I'll share a draft of PRRT assessment note later today. We're scheduled to brief Karen this Friday.

James

| | |
|---|---|
| **From:** | Morgenstern, Madeleine (TBS) |
| **To:** | Felix Fung (MOF); John Kim |
| **Cc:** | Shajee Kathirgamanathan |
| **Subject:** | RE: Electricity Item - Cabinet/TB on Monday at 9 am |
| **Date:** | Monday, September 12, 2016 8:10:13 AM |
| **Attachments:** | RAN Electricity Price Mitigation v13 2016 09 12 CLEAN.doc |

Hi John,

Here is the latest version.

Thanks,
Madeleine

---

**From:** Fung, Felix (TBS)
**Sent:** September-12-16 8:01 AM
**To:** Kim, John (OFA)
**Cc:** Morgenstern, Madeleine (TBS); Kathirgamanathan,Shajee (OFA)
**Subject:** RE: Electricity Item - Cabinet/TB on Monday at 9 am

Thanks John!

We're going to send you the final version of the note very shortly (just got the ok from our DMO).

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** September-12-16 7:59 AM
**To:** Fung, Felix (TBS)
**Cc:** Morgenstern, Madeleine (TBS); Kathirgamanathan,Shajee (OFA)
**Subject:** RE: Electricity Item - Cabinet/TB on Monday at 9 am

Hi Felix,

I understand Ron is planning to attend so we are not planning to be there.

Hope all goes well!

Thanks,

John.

---

**From:** Fung, Felix (TBS) [mailto:Felix.Fung@ontario.ca]
**Sent:** Friday, September 09, 2016 5:25 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Jenarra DeSouza (MEDTE/MRI) <Jenarra.DeSouza@ontario.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Inglis, Liane (MOF) <Liane.Inglis@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
**Cc:** Madeleine Morgenstern (PPAGS) <Madeleine.Morgenstern@ontario.ca>; James Strang (MOF) <James.Strang@ontario.ca>

**Subject:** Electricity Item - Cabinet/TB on Monday at 9 am

Hi everyone,

This is to let everyone know that Energy's Electricity item will be going to TB/MBC on Monday morning at 9 am. The meeting will be at the Council Chambers, Room 275, in the Legislature.

Due to the room size, not everyone may be able to go inside the room - but we are happy to have folks outside in the anteroom should questions come up.

If you plan to attend, please arrive by 8:45 am.

We will be sharing the next version of the assessment note and TB minute later today / this evening.

Thanks,
Felix

---

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

**TREASURY BOARD / MANAGEMENT BOARD OF CABINET**
**REQUEST ASSESSMENT NOTE**

| | |
|---|---|
| **Ministry:** | Energy |
| **Meeting Date:** | September 12, 2016 |
| **Agenda Class:** | Major |
| **Last reviewed by:** N/A | **Tracking to:** Cabinet - September 12, 2016 |

| **SUBMISSION TITLE:** | Electricity Price Mitigation |
|---|---|

## I. DECISION BEFORE THE BOARD

The Ministry of Energy is requesting approval of a suite of initiatives providing relief to various electricity consumer classes.

## II. RECOMMENDATIONS:

| | |
|---|---|
| • Approve a suite of initiatives to provide relief to various electricity consumer classes (pending Cabinet policy approval):<br>– Providing an 8% rebate to Regulated Price Plan eligible consumers;<br>– Expanding the Industrial Conservation Initiative;<br>– Updating the Rural or Remote Rate Protection program; and,<br>– Using $270M in cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade by providing a modest reduction in rates. Balance of proceeds intended for electricity relief through the Climate Change Action Plan ($60M), could provide some fiscal offsets.<br>• Approve $300M in 2016-17 in Supplementary Estimates for electricity price mitigation.<br>• Direct the Ministry to report back to TB/MBC through the annual planning process with updated future year impacts, and obtain any required TB/MBC approvals to implement the initiatives.<br>• Recommend proceeding to Cabinet with the proposed legislation and amendments to existing regulations to implement the initiatives. | *Board Judgment* |

## III. FINANCIAL SUMMARY

| **$ Millions** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|
| Initiative cost requested | 300.0 | 1006.0 | 1004.0 |
| Initiative cost recommended | 300.0 | 1006.0 | 1004.0 |
| Recommended program base | 300.0 | 1006.0 | 1004.0 |
| Offset Recommended – Applies if cap and trade proceeds diverted to in-plan initiatives | 0.0 | (60.0) | (60.0) |
| Total Fiscal Impact | 300.0 | 946.0 | 944.0 |

## IV. KEY COMMENTS AND CONSIDERATIONS

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online. Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period. Appendix C provides supporting background information.

As part of the 2016 Budget, the government committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the Budget commitment and additional price mitigation, while delivering on the Province's climate change objectives, the Ministry of Energy has developed price mitigation initiatives that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

The Ministry is proposing the following to mitigate electricity prices for consumers (Appendix D provides more information on each item below):

- Provide an 8% rebate on the pre-tax cost of electricity to consumers eligible for the Regulated Price Plan (i.e., residential, small business and farms), equivalent to the provincial portion of HST.
- Expand Industrial Conservation Initiative (ICI) eligibility by lowering the threshold to 1 MW, to provide support to additional commercial, institutional and small industrial consumers.
- Update the Rural or Remote Rate Protection (RRRP) program, to provide relief to rural customers.
- Use cap and trade proceeds to provide a modest rate reduction for commercial and industrial electricity consumers.

Public high-profile communications would coincide with introduction of legislation (September 2016). Currently, the 8% rebate would be available starting January 1, 2017, along with updating the RRRP. Expanding ICI won't be added to bills until 2018 due to the time required to implement the expansion and for billing changes. The impact of cap and trade would not be added to electricity bills until 2017.

The following tables provide an overview of the four initiatives, recipients, projected financial impact, grouping them based on whether taxpayers or ratepayers cover the costs:

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Taxpayers cover the costs (Potential to impact the Province's Fiscal Plan)** | | | |
| **1.** | 8% Rebate to Regulated Price Plan | Fiscal<br>About $1.0B | Residential, small business and farms, and other small users |
| **2a.** | Use cap and trade proceeds to provide a modest reduction in rates for commercial and industrial electricity consumers. (Implementation details under development). | ($270M) in cap and trade proceeds to offset $270M in costs for reducing rates<br><br>No Fiscal Impact | The CCAP allocated up to $330M/year in cap and trade proceeds for electricity price mitigation.<br><br>See item 2b. regarding the residual amount of cap and trade proceeds ($330M - $270M = $60M) |
| **2b.** | While CCAP anticipated $330M/year was required to keep electricity affordable, the residential portion of this commitment is met by the 8% rebate. As such, some of the CCAP allocated proceeds can be redirected to other GHG reduction initiatives already in the fiscal plan. | Fiscal<br>($60M) | Provides fiscal plan flexibility of $60M/year if these proceeds are diverted to offset costs of other existing in-plan initiatives that reduce GHG emissions. |
| | **Total Fiscal Impact** | $946M | Matches Financial Summary on page 1 for 2017-18 |

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **Ratepayers cover the costs (No impact to the Province's Fiscal Plan)** | | | |
| **3** | Expanding ICI eligibility to customers above 1MW in all sectors | Rate base<br>($47M/$82M)** | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors |
| **4.** | Updating Rural or Remote Rate Protection | Rate base<br>($110M) | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. |

** Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.

Due to the nature of the ICI Global Adjustment mechanism and cost recovery of RRRP, the rate base proposals (#3 and #4) above benefit the targeted recipients, but come at a cost to all other electricity ratepayers in Ontario.

The following table from the Ministry highlights the benefits by electricity consumer class.

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Benefit | | Class B (Commercial) Benefit | Class A (Industrial) Benefit | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan eligible consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion annually | $0.27 billion annually<br>(Reduction of $0.06 billion annually or $0.24 billion total from the CCAP commitment) | -$11/ month<br>(-8%) | -$45/ month<br>(-20%) | -$3/MWh<br>(-2%) | -$3/ MWh<br>(-3%) | Up to -$52/MWh<br>(-34%) |

**Notes:** * The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

See Appendix E for more illustrative bill impacts. See Appendix F for an electricity bill mock-up.

Fiscal Impact

The Ministry estimates proceeding with an 8% Regulated Price Plan (RPP) rebate without a cap would cost an estimated $1.0 billion per year. The Ministry's estimate of $300M needed for 2016-17 (to cover the first three months of 2017 when the 8% rebate applies) will be addressed through Supplementary Estimates. The Ministry will use the annual planning process to update future year impacts.

The Ministry also indicates the current proposal would use cap and trade proceeds to eliminate carbon price impacts/ grid emission reductions to ratepayers, as was established through the CCAP. This proposal does not require the full $330M/year notionally allocated through the CCAP, which could provide fiscal plan flexibility of about $60M per year to commit to other GHG reduction initiatives in the fiscal plan.

Cap and Trade Proceeds

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers (on average). While residential and other consumers would benefit from the 8% pre-tax rebate, this does not apply to non-Regulated Price Plan eligible consumers (larger industrial, commercial, and other consumers). As such, the Ministry is proposing to direct a portion of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to provide a modest rate reduction. This proposal fulfills the policy objective established in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to electricity ratepayers.

To be characterized as a regulatory charge under the cap and trade program, auction proceeds need to be spent on programs that are reasonably likely to reduce or support the reduction of greenhouse gases. The Ministry has indicated that their proposal would use proceeds to offset the costs of committed investments that reduce greenhouse gases (e.g., non-emitting generation and conservation programs) and incent fuel-switching away from fossil fuels.

Considerations – Implementation

At this point, the Ministry has presented a high level overview of major implementation pieces:

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010. If passed, the legislation would require a general regulation. Amendments would also be required to various regulations to expand ICI and RRRP.
- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. The Ministry indicates it will consult with LDCs (possibly through the Ontario Energy Board) to accurately assess these impacts once the program has been announced. In the past, LDCs have asked for at least six months' notice when implementing billing system changes. Timing concerns may be alleviated by allowing LDCs to provide retroactive payments rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- Detailed messaging on bills could be implemented. The rebate would not be directly linked to HST. With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.
- The Ministry will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

Legal Considerations

8% Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):

- Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):

- To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural or remote customers):

- Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):

- To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

Other Considerations

- This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets for the 8% rebate.
- The 8% rebate would provide a typical residential consumer about an $11 per month benefit on average, exceeding the Budget 2016 $2 per month on average cap and trade commitment. The proposal to offer a modest rate reduction for industrial and commercial consumers also exceeds the Budget commitment to simply offset the impact of cap and trade on these consumers.
- Reductions in electricity prices that do not consider consumption amounts (e.g., without the cap in the previous OCEB program) do not promote electricity conservation and may be seen as unaligned with climate change objectives.
- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
  - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
  - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
  - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

| | | | |
|---|---|---|---|
| **Name of analyst:** | James Strang<br>With input from TPD and OFA | **Phone number:** | 416-327-2071 |
| **Date:** | September 12, 2016 | **Log number:** | |
| **Branch / Division:** | GGPR/ PEMD/ Treasury Board Secretariat<br>Tax Policy Division/ Ministry of Finance<br>Ontario Financing Authority/ Ministry of Finance | | |

## APPENDIX A: PROPOSED MINUTE

Approve electricity price mitigation for residential, commercial and industrial consumers.

In this regard:

i) Approve a suite of initiatives to provide relief to various electricity consumer classes:

   a) Provide a rebate of 8% on the pre-tax cost of electricity for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP); and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor, starting January 1, 2017.

   b) Increase the total amount of rate protection available to R2 low density electricity consumers under the Rural or Remote Rate Protection Program (RRRP) by increasing the subsidy by $110 million from its current level of $127 million which has been capped since 2003.

   c) Implement a mechanism to periodically adjust the total annual amount of rate protection available to R2 low density electricity consumers under the RRRP, effective on or after January 1, 2018.

   d) Expand eligibility for participation in the Industrial Conservation Initiative (ICI) to smaller industrial, institutional and commercial customers by lowering the eligibility threshold to 1 MW and removing restrictions on eligible sectors.

   e) Provide a modest rate reduction to commercial and industrial electricity consumers using cap and trade auction proceeds to offset the cost.

ii) Recommend to Cabinet the proposed Ontario Rebate for Electricity Consumers Act, 2016 and that the Ministry proceed to Legislation and Regulations Committee before the end of 2016 with supporting regulations under the proposed Ontario Rebate for Electricity Consumers Act, 2016.

iii) Approve the implementation details associated with the suite of initiatives:

   a) Approve:

      1. The creation of a new item entitled "Ontario Rebate for Electricity Consumers" in the Electricity Price Mitigation Program (Vote/Item 2905-3).

      2. The creation of a new Transfer Payment entitled "Ontario Rebate for Electricity Consumers" in Rebate for Electricity Consumers (Vote/Item 2905-3).

      3. An expenditure increase in the amount of $300,000,000 in 2016-17 in the Transfer Payment entitled "Rebate for Electricity Consumers[1]" in Rebate for Electricity Consumers (Vote/Item 2905-3). Direct the Ministry to return any under-spending to the Treasury Board Contingency Fund.

[1] Pending approval of the proposed Ontario Rebate for Electricity Consumers Act, 2016

b) Note:

1. Funding for 2016-17 will be implemented through Supplementary Estimates in the Fall of 2016.

2. Future year impacts of $1,006,000,000 in 2017-18 and $1,004,000,000 in 2018-19, and $1,004,000,000 in 2019-20 and ongoing.

c) Direct the Ministry to report back to Treasury Board/Management Board of Cabinet in the 2017-18 Program Review, Renewal, and Transformation process on updated future year impacts, and a potential offset strategy for resource requirements to support program implementation

iv) Further to the Cabinet Minute of May 11, 2016 and the Treasury Board Minute of May 19, 2016, note the reallocation of cap and trade auction proceeds from the up to $1,320,000,000 that was previously allocated through the Climate Change Action Plan for electricity price mitigation, as follows:

a) The Ministry of Energy to work with the Ministry of the Environment and Climate Change, Treasury Board Secretariat, Ministry of Finance, Cabinet Office and Office of the Premier, to allocate up to $1,080,000,000, from 2017-18 to 2020-21, of Cap and Trade auction proceeds to address rate-impacts on non-Regulated Price Plan electricity consumers (e.g., industrial, commercial and institutional) related to cap and trade and the expansion of other rate-based programs, subject to the evaluation by the Minister of the Environment and Climate Change.

In this regard:

1) Direct the Ministry of Energy to work with the Ministry of the Environment and Climate Change and report back to Cabinet by the end of 2016 with options on the appropriate mechanism.

b) The remaining up to $240,000,000, from 2017-18 to 2020-21, which was previously allocated in the Climate Change Action Plan to eliminate carbon price impacts/ grid emission reductions to ratepayers, to be used for other existing initiatives within the fiscal plan and the Climate Change Action Plan that reduce greenhouse gas emissions, subject to the evaluation by the Minister of the Environment and Climate Change.

In this regard:

1) Direct the Ministry of the Environment and Climate Change to work with Treasury Board Secretariat and Ministry of Finance to identify other existing initiatives within the fiscal plan and the Climate Change Action Plan that reduce greenhouse gas emissions that can be funded with the remaining up to $240,000,000, from 2017-18 to 2020-21.

v) To support implementation of electricity price mitigation, the Ministry is proceeding with the following amendments to existing regulations:

a) Amendments to Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) made under the Electricity Act, 1998 to lower the Industrial Conservation Initiative (ICI) threshold to 1 megawatt and allow electricity consumers and market participants between 1 MW and 5 MW to opt in.

b) Amendments to Ontario Regulation 442/01 (Rural or Remote Electricity Rate Protection) made under the Ontario Energy Board Act, 1998, to increase support through the Rural or Remote Rate Protection Plan to R2 low density electricity customers and provide for a periodic adjustment mechanism.

vi) Direct the Ministry to work with Office of the Premier and Cabinet Office on the development and implementation of an integrated communications strategy.

# APPENDIX B: FINANCIAL TABLES

| FINANCIAL IMPACTS: CHANGES TO EXPENSE AND REVENUE | | | | | TABLE B1 |
|---|---|---|---|---|---|
| | | *Fiscal Plan Basis* | | | *Appropriations Basis* |
| **$ Millions** | | **2016-17** | **2017-18** | **2018-19** | **2016-17** |
| Initiative cost recommended | | 0.0000 | 0.0000 | 0.0000 | |
| *Expense changes:* | | | | | |
| Operating item (Supplementary Estimates inclusion for 2016-17 amount) | Oper | 300.0000 | 1006.0000 | 1004.0000 | 0.0000 |
| Operating Offset | Oper | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | | | | | |
| | | | | | |
| *Revenue changes:* | | | | | |
| Revenue Increase/ Offset - Applies if cap and trade proceeds diverted to in-plan initiatives | | 0.0000 | (60.0000) | (60.0000) | |
| Revenue decrease | | 0.0000 | 0.0000 | 0.0000 | |
| **Total Fiscal Impact (draw from c-funds)** | | **300.0000** | **946.0000** | **940.0000** | **0.0000** |

# APPENDIX C: ELECTRICITY SECTOR BACKGROUND

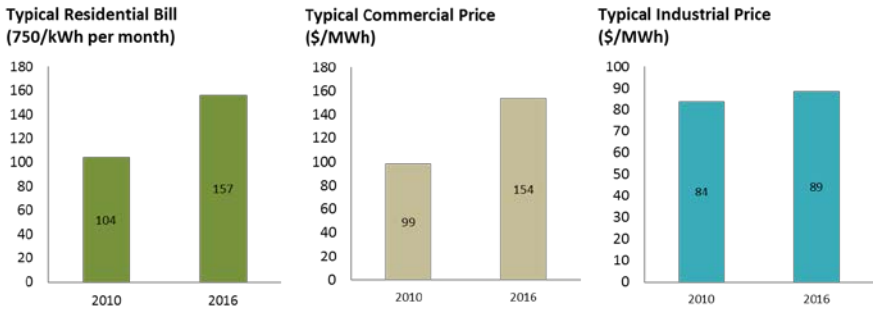
The Ministry has provided the following information to provide electricity sector context this item.

There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

*** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period.




**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

Existing Rate Mitigation efforts are on-going:

- Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs.
  - For example, Northern Ontario residential electricity consumers receive tax credits in recognition of higher electricity costs in the north and rural consumers receive a subsidy funded through the rate-base due to the higher cost of delivering power to rural areas.
  - As of 2016, the government removed the Debt Retirement Charge (DRC) from residential electricity bills. While this saves a typical residential electricity ratepayer about $60 per year, it is less than the benefit previously provided through the Ontario Clean Energy Benefit (OCEB).
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers.

- The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- The Rural or Remote Rate Protection (RRRP) program is provided to rural or remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- Because electricity costs must be fully recovered from electricity consumers, rate mitigation funded through the rate-base often represents a shifting of costs from one consumer group to another (i.e., industrial to residential and commercial consumers).
  - Rate-based initiatives are generally associated with incenting changes in behaviour that provide electricity system benefits (i.e., shifting electricity consumption from on-peak to off-peak periods).

The table below shows the estimated cost shifts in the province's electricity system that result from three existing government programs (i.e., ICI, RRRP and OESP):

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

Since 2013, a number of actions have and are being taken to reduce overall electricity system costs. Despite these actions to reduce system costs, electricity rates continue to increase for consumers:

- Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
- Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
- Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
- Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
- Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.

## APPENDIX D: FURTHER INFORMATION SUPPORTING PROPOSED INITIATIVES

The following information has been provided by the Ministry.

**1. Provide an 8% rebate to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms), equivalent to the provincial portion of HST**

The Ministry is proposing to introduce legislation/regulation to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit. This would be equivalent to the provincial portion of the HST.

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).
- An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

| **Eligible for the 8% rebate** (< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate** (> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Farms eligible for Regulated Price Plan (Including Class B farms that opted out of the Regulated Price Plan)<br>• Small businesses<br>– Coffee / snack retailer<br>– Convenience store<br>– Apparel store<br>– Hair salon<br>– Small insurance office | • Class A consumers<br>– Manufacturer<br>– Large grocery store<br>– Mines<br>– Auto assembly plants<br>• Class B consumers<br>– Commercial offices (low rise)<br>– Hotel<br>– General warehousing |

**2. Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial)**

Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers). Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would (the benefit would be seen by consumers starting in 2018):

- Reduce electricity peak demand and electricity system costs by incenting more consumers to lower their electricity demand during peak periods;
- Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
- Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

| | Benefit to New ICI Participants | System Benefit | Financial Impact | Residential Bill Impact |
|---|---|---|---|---|
| | Bill Savings | Peak Demand Reduction (MW) | GA shifted to Class B ($M) | |
| Short-term | Up to 21% | 80 | 47 | Increase of $0.42/month |
| Long-term | Up to 34% | 165 | 82 | Increase of $0.74/month |

The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility. The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating. Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.

## 3. Update the Rural or Remote Rate Protection (RRRP) program, to provide relief to rural customers

The Ministry is proposing to provide an additional $110M in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

RRRP is a rate-based funded program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.

- Today, RRRP is a $175M program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
- The majority of the program funding ($127M) provided to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a rebate of $31.50. The proposed update to the program would increase the benefit to $60/month
- RRRP funding supporting R2 customers has been capped at the current level since 2003. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

An additional $110M in program funding would see an increased benefit of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.

- This would increase the R2 portion of the RRRP to $237 million with a monthly impact on an average residential consumer of ~$0.60.
- The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the benefit remains constant.

## 4. Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.

- To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).
- However, providing an 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other GHG reduction initiatives in the fiscal plan.

The rate reduction proposal would provide additional benefit to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $240M over the first four year compliance period).

# APPENDIX E: ILLUSTRATIVE BILL IMPACTS

The Ministry has provided the following illustrative bill impacts:

| | Current Bill ( before tax) | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Bill (before tax) |
|---|---|---|---|---|
| Average Residential (Toronto – 750 kWh/month) | $139 /month | N/A | 8% pre-tax rebate: - $11 | $128 /month |
| Rural Residential (Hydro One R2 – 1000 kWh/month) | $229 /month | RRRP: –$32 | 8% pre-tax rebate + Updated RRRP: - $45 | $184 /month |
| Low-income Residential ** (Toronto – 750 kWh/month) | $101 /month | OESP: -$38 | 8% pre-tax rebate: - $8 | $93 /month |
| Small Business (Toronto – 403,200 kWh/month) | $149 /MWh | N/A | 8% pre-tax rebate: - $12/MWh | $137 /MWh |
| Small Farm (Hydro One R1 – 4,000 kWh/month) | $203 /MWh | N/A | 8% pre-tax rebate: - $16/MWh | $187 /MWh |

**Notes:**

***** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as $1,332 per year for a family.

** Income of less than $28,000, family of 4.

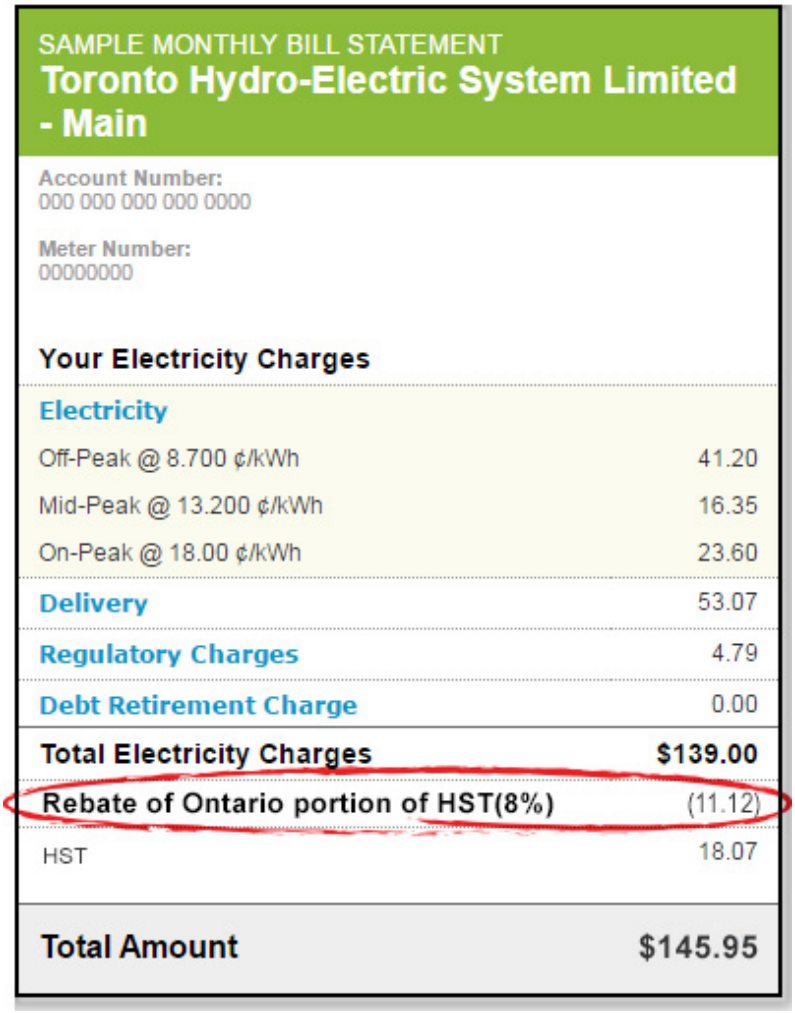
The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Totals may not add due to rounding.

| | Current Rate | Current Rate mitigation initiatives* | New Rate Mitigation initiatives | New Rate |
|---|---|---|---|---|
| Large Institutional (Toronto – distribution-connected, 10 MW) | $108 /MWh | ICI: -$49/MWh | Proceeds Recycling: -$2.60/MWh (2017-2020 average) | $105 /MWh |
| Large Industrial (Timmins – transmission-connected, 10 MW) | $69 /MWh | ICI + NIERP: -$69/MWh | Proceeds Recycling: -$2.60/MWh | $66 /MWh |
| Small Industrial – opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling + ICI: Up to -$52/MWh | $100 /MWh |
| Large Commercial – does not opt-in to ICI (Toronto – 2 MW) | $152 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $149 /MWh |
| Small Institutional (Toronto – 500 kw) | $154 /MWh | N/A | Proceeds Recycling: -$2.60/MWh | $151 /MWh |

**Notes:**

The above benefits do not include the cost of ICI expansion and the RRRP update (total impact of $1.74/MWh). Proceeds recycling is net of the cost of carbon and represents an estimated average of the proceeds required over the first compliance period (2017-2020).

## APPENDIX F: ILLUSTRATIVE BILL MOCK-UP



SAMPLE MONTHLY BILL STATEMENT

**Toronto Hydro-Electric System Limited - Main**

Account Number:
000 000 000 000 0000

Meter Number:
00000000

**Your Electricity Charges**

| | |
|---|---|
| **Electricity** | |
| Off-Peak @ 8.700 ¢/kWh | 41.20 |
| Mid-Peak @ 13.200 ¢/kWh | 16.35 |
| On-Peak @ 18.00 ¢/kWh | 23.60 |
| **Delivery** | 53.07 |
| **Regulatory Charges** | 4.79 |
| **Debt Retirement Charge** | 0.00 |
| **Total Electricity Charges** | **$139.00** |
| **Rebate of Ontario portion of HST(8%)** | (11.12) |
| HST | 18.07 |
| **Total Amount** | **$145.95** |

**Note:** Final bill presentment pending submission to LRC.

## APPENDIX G: BACKGROUND CONTEXT

**Budget commitment** (*2016 Ontario Budget - Chapter I: Building Prosperity and Creating Jobs*)**:**

The government will also take steps to ensure that the net impact of cap and trade would not result in an overall increase in electricity costs for commercial and industrial consumers, and that there would be a modest benefit of up to $2 per month, on average, to residential consumers.

**CCAP public document** (under *Action Area – Buildings and Homes: Reduce emissions from fossil-fuel use in buildings*)**:**

Keep Electricity Rates Affordable: Use cap and trade proceeds to offset the cost of greenhouse gas pollution reduction initiatives that are currently funded by residential and industrial consumers through their bills.

**CCAP policy minute** (May 11, 2016)**:**

ENERGY develop additional options to addressing rate-impacts on electricity consumers and work with MOECC, the Premier's Office and Cabinet Office regarding the selected option for inclusion in the action plan

**CCAP TB/MBC minute** (May 19, 2016)**:**

i) Approve-in-principle the following estimated ranges to guide potential investment of cap and trade proceeds over four years, from 2017-18 to 2020-21, should proceeds be available:

| **CCAP Action** | **Initiative** | **Potential Funding range from proceeds over 4-year period** | **Estimated GHG reduction in 2020 associated with potential funding** |
|---|---|---|---|
| Moving toward a lower-carbon energy supply with adequate capacity and affordable low-carbon electricity. | Eliminate Carbon Price Impacts / Grid Emission Reductions to Ratepayers | · Range - $1,000,000,000 to $1,320,000,000 | 3,000,000 Tonnes (Energy Planning) |

**From:** John Kim
**To:** Nadine Petsche (MOF)
**Subject:** RE: Electricity Price Mitigation teleconference MOE OFA IESO OPCD.docx
**Date:** Monday, January 23, 2017 8:31:58 AM

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Hi Nadine,

If we could keep the discussion now to the generality, it'd be best. I can try to provide comments to the attached for maybe end of day.

Thanks,

John.

---

**From:** Petsche, Nadine (TBS) [mailto:Nadine.Petsche@ontario.ca]
**Sent:** Monday, January 23, 2017 8:21 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Electricity Price Mitigation teleconference MOE OFA IESO OPCD.docx
**Importance:** High

Hi John,
In advance of our meeting, just sharing a draft summary I prepared based on what I heard on the call. There are likely many errors as I joined the call late. Can you perhaps suggest edits based on your understanding (in track changes mode).
Thanks. N

| | |
|---|---|
| **From:** | Morgenstern, Madeleine (TBS) |
| **To:** | Sriram Subrahmanyan (MOF); John Kim; Shajee Kathirgamanathan |
| **Cc:** | Felix Fung (MOF); James Strang (MOF); Tim Schuurman (MOF); Jenarra DeSouza (MEDTE/MRI); Ann Langleben (MOF); Ronald Kwan |
| **Subject:** | RE: Electricity item |
| **Date:** | Tuesday, September 06, 2016 5:43:43 PM |
| **Attachments:** | RAN Electricity Price Mitigation v6 2016 09 06.doc |

Hi,

Attached is the latest version of the note, which will be updated based on our conversation with our Minister this afternoon.

And yes – it looks like ENE is proposing to use $270M annually in proceeds for commercial and industrial consumers, and has suggested the remaining $60M annually (from what was proposed through CCAP) could provide some flexibility in the fiscal plan.

We currently have two briefings on this scheduled for tomorrow – the Cabinet pre-brief with Karen Hughes/our MO and the Chair's briefing for Sept. 13 TB/MBC. Stay tuned as to whether this item will stay on the agenda for those briefings given the evolving status.

Thanks,
Madeleine

---

**From:** Subrahmanyan, Sriram (MOF)
**Sent:** September-06-16 2:56 PM
**To:** Morgenstern, Madeleine (TBS); Kim, John (OFA); Kathirgamanathan,Shajee (OFA)
**Cc:** Fung, Felix (TBS); Strang, James (TBS); Schuurman, Tim (MOF); DeSouza, Jenarra (MOF); Langleben, Ann (MOF); Kwan, Ronald (OFA)
**Subject:** Re: Electricity item

Thanks for passing on. Can you forward your note when it's done? We're briefing our Minister tomorrow. It looks like they're using 270m of the cap and trade proceeds, unless I'm misreading it.

Sent from my BlackBerry 10 smartphone on the Rogers network.

---

**From:** Morgenstern, Madeleine (TBS)
**Sent:** Tuesday, September 6, 2016 11:50 AM
**To:** Subrahmanyan, Sriram (MOF); Kim, John (OFA); Kathirgamanathan,Shajee (OFA)
**Cc:** Fung, Felix (TBS); Strang, James (TBS)
**Subject:** Electricity item

Hi everyone,

Just received a draft Cab Sub from ENE, which they expect will change again based on comments from their MO. We are reviewing this now as we understand our MO may be interested in a briefing. We will forward invites and any additional materials as we receive. Password is the external Budget password.

Thanks,
Madeleine

**ADD ON**

# TREASURY BOARD / MANAGEMENT BOARD OF CABINET REQUEST ASSESSMENT NOTE

| | |
|---|---|
| **Ministry:** | Energy |
| **Meeting Date:** | September 13, 2016 |
| **Agenda Class:** | Major |
| **Last reviewed by:** N/A | **Tracking to:** Cabinet - September 14, 2016 |

| **SUBMISSION TITLE:** | Electricity Price Mitigation |
|---|---|

**NO MATERIALS RECEIVED –BASED ON DRAFT POLICY SUBMISSION**

## I. DECISION BEFORE THE BOARD

The Ministry of Energy is requesting approval of a suite of initiatives providing relief to various electricity consumer classes.

## II. RECOMMENDATIONS:

| | |
|---|---|
| • Approve a suite of initiatives to provide relief to various electricity consumer classes (pending Cabinet policy approval):<br>– Providing a pre-tax 8% rebate to Regulated Price Plan consumers;<br>– Expanding the Industrial Conservation Initiative;<br>– Updating the Rural and Remote Rate Protection program; and,<br>– Using cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade (A 1% reduction in rates). Balance of proceeds intended for electricity relief through the Climate Change Action Plan could provide some fiscal offsets.<br>• Approve in principle an expenditure increase estimated at $261M in 2016-17 for the Electricity Price Mitigation, offset from the Treasury Board Contingency Fund. [estimate subject to refinement from the Ministry]<br>• Direct the Ministry to report back to TB/MBC with implementation details, including confirmation of financial implications, and required TB/MBC approvals to implement.<br>• Recommend to Cabinet that the Ministry proceed to Cabinet with the proposed legislation (TBD). | *Board Judgment* |

## III. FINANCIAL SUMMARY

| **$ Millions** | **2016-17** | **2017-18** | **2018-19** |
|---|---|---|---|
| Initiative cost requested | 261.0 | 1006.0 | 1004.0 |
| Initiative cost recommended | 261.0 | 1006.0 | 1004.0 |
| Recommended program base | 261.0 | 1006.0 | 1004.0 |
| Offset Recommended | 0.0 | 60.0 (TBD) | 60.0 (TBD) |
| Total Fiscal Impact | 261.0 | 946.0 | 944.0 |

## IV. KEY COMMENTS AND CONSIDERATIONS

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online. Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period. Appendix C provides supporting background information.

As part of the 2016 Budget, the government committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers. This included a commitment to provide a modest benefit of up to $2 per month, on average, to residential consumers. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable for residential and industrial consumers.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the CCAP commitment and additional price mitigation, the Ministry of Energy has developed price mitigation options that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

The Ministry is proposing the following to mitigate electricity prices for consumers (Appendix D provides more information on each item below):

- Provide an 8% rebate on the pre-tax cost of electricity to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms), equivalent to the provincial portion of HST
- Expand Industrial Conservation Initiative (ICI) eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial)
- Update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers
- Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest (1%) reduction in rates

Public high-profile communications would coincide with introduction of legislation (September 2016). Currently, the 8% rebate would be available starting January 1, 2017 (it could be prescribed earlier), along with updating the RRRP. Expanding ICI won't be added to bills until 2018 due to the time required to implement the expansion and for billing changes. Recycling

cap and trade proceeds would commence in 2017.

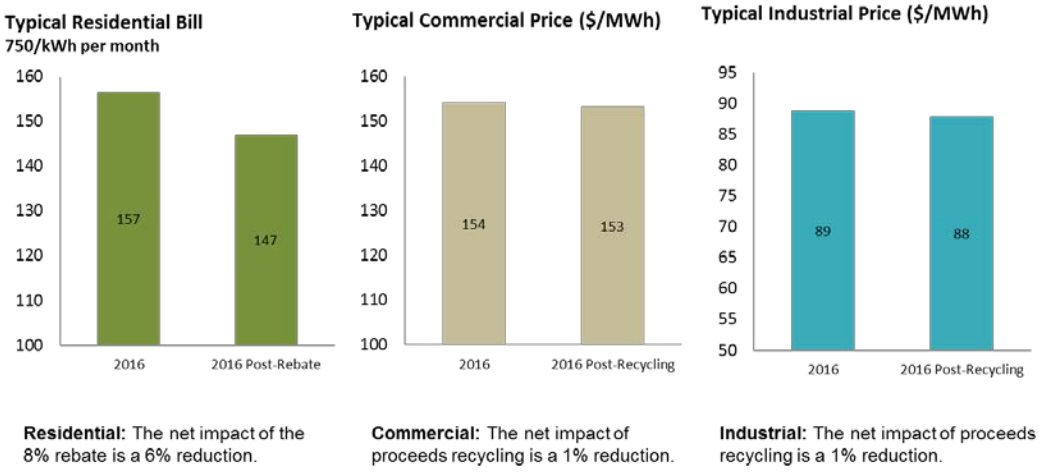
The following table provides an overview of the four initiatives, recipients, projected financial impact, and whether taxpayers or ratepayers cover the costs:

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **1.** | 8% Rebate to Regulated Price Plan | Fiscal ($1B)* | Residential, small business and small farms, and other small users |
| **2.** | Expanding ICI eligibility to customers above 1MW in all sectors | Rate base ($47M/$82M)** | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors |
| **3.** | Updating Rural and Remote Rate Protection | Rate base ($110M) | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. |
| **4.** | Use cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates. | $270M | The projected $330M in cap and trade proceeds/year were estimated to go to different electricity consumer classes:<br>- $120M residential consumers<br>- $170M commercial consumers<br>- $40M for industrial consumers<br><br>The 8% rebate above allows for cap and trade previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan, requiring about $60M less in proceeds |

* Annual numbers from ENERGY.

** Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.

The following graphic from the Ministry highlights the bill impacts by electricity consumer class.




**Residential:** The net impact of the 8% rebate is a 6% reduction.

**Commercial:** The net impact of proceeds recycling is a 1% reduction.

**Industrial:** The net impact of proceeds recycling is a 1% reduction.

Due to the nature of the ICI Global Adjustment mechanism and cost recovery of RRRP, the rate base proposals (#2 and #3) benefit the targeted recipients, but come at a cost to all other electricity rate payers in Ontario.

Fiscal Impact

The most recent Electricity Price Mitigation Options deck notes that "proceeding with an 8% Regulated Price Plan (RPP) rebate without a cap would cost an estimated $1 billion per year".

The $1 billion figure is a 2017 to 2020 calendar year average of cost estimates developed by Ministry of Energy staff, as follows:

| *$ millions* | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|
| | 1,003 | 1,014 | 975 | 1,049 |
| Avg. 2017-20 | 1,010 | | | |

- On a fiscal year basis, the above estimates become:

| *$ millions* | **2016-17** | **2017-18** | **2018-19** | **2019-20** |
|---|---|---|---|---|
| | 261 | 1,006 | 1,004 | 994 |
| 3-Year Avg. | 1,001 | | | |

The Ministry also indicates the current proposal would provide recycling of cap and trade proceeds to commercial and industrial consumers on a volumetric basis. This would require an estimated $60 million less per year in proceeds than previously estimated (i.e., providing fiscal plan flexibility of about $60M per year to commit to other GHG reduction initiatives in the fiscal plan).

There are no details as this point if the $261M in 2016-17 would be offset from the Treasury Board Contingency Fund or provided through supplementary estimates.

Cap and Trade Proceeds

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers (on average). While residential and other consumers would benefit from the 8% pre-tax rebate, this does not apply to non-Regulated Price Plan consumers (larger industrial, commercial, and other consumers). As such, the Ministry is proposing to direct a portion of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to go beyond mitigating cap and trade impacts and provide a 1% bill impact (shown in the graphic at the bottom of page 3).

To be characterized as a regulatory charge under the cap and trade program, auction proceeds need to be spent on programs that are reasonably likely to reduce or support the reduction of greenhouse gases. It is unclear from current materials whether this proposal meets this requirement.

Considerations – Implementation

At this point, the Ministry has presented a high level overview of major implementation pieces:

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010. If passed, the legislation would require a general regulation. Amendments would also be required to various regulations to expand ICI and RRRP.
- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. The Ministry indicates will consult with LDCs (possibly

through Ontario Energy Board) to accurately assess these impacts once the program has been announced. In the past, LDCs have asked for at least six months' notice when implementing billing system changes. Timing concerns may be alleviated by allowing LDCs to provide retroactive payments rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.

- Detailed messaging on bills could be implemented (A bill mock-up is pending from the Ministry). The rebate would not be directly linked to HST. With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.
- The Ministry will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

Legal Considerations

8% Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):

- Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.

ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):

- To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):

- Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).

Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):

- To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

Other Considerations

- This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets.
- The 8% rebate would provide a typical residential consumer about an $11 per month

benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average cap and trade commitment. Also, the budget committed to offsetting the impact of cap an trade on industrial and commercial consumers, a 1% reduction is being proposed using cap and trade proceeds, which could be recycled elsewhere on GHG reduction initiatives.

- Reduction in electricity prices that does not consider consumption amounts (e.g., without the cap in the previous OCEB program) does not promote electricity conservation and may be seen as unaligned with climate change objectives.
- There is potentially a need for supplementary estimates as the existing vote (2905) Electricity Price Mitigation does not include a separate item for the 8% rebate (2905 was used for the Ontario Clean Energy Benefit and currently includes the Northern Ontario Energy Credit).
- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
  - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
  - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
  - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

| | | | |
|---|---|---|---|
| **Name of analyst:** | James Strang<br>With input from TPD and OFA | **Phone number:** | 416-327-2071 |
| **Date:** | September 6, 2016 | **Log number:** | |
| **Branch / Division:** | GGPR/ PEMD/ Treasury Board Secretariat<br>Tax Policy Division/ Ministry of Finance<br>Ontario Financing Authority/ Ministry of Finance | | |

## APPENDIX A: PROPOSED MINUTE
## UNDER DEVELOPMENT

# APPENDIX B: FINANCIAL TABLES

| FINANCIAL IMPACTS: CHANGES TO EXPENSE AND REVENUE | | | | | TABLE B1 |
|---|---|---|---|---|---|
| | | *Fiscal Plan Basis* | | | *Appropriations Basis* |
| **$ Millions** | | **2016-17** | **2017-18** | **2018-19** | **2016-17** |
| Initiative cost recommended | | 0.0000 | 0.0000 | 0.0000 | |
| *Expense changes:* | | | | | |
| Operating item | Oper | 261.0000 | 1006.0000 | 1004.0000 | 261.0 |
| Operating Offset | Oper | 0.0000 | 0.0000 | 0.0000 | 00000 |
| | | | | | |
| | | | | | |
| *Revenue changes:* | | | | | |
| Revenue Increase/ Offset | | 0.0000 | 60.0000 | 60.0000 | |
| Revenue decrease | | 0.0000 | 0.0000 | 0.0000 | |
| **Total Fiscal Impact (draw from c-funds)** | | **261.0000** | **946.0000** | **944.0000** | **261.0000** |

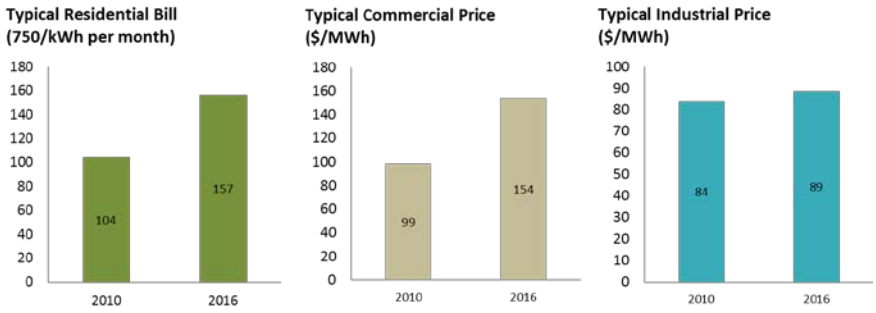
## APPENDIX C: ELECTRICITY SECTOR BACKGROUND

The Ministry has provided the following information to provide electricity sector context this item.

There are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 3 MW | Above 3 MW* |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period.




**Note:** 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

Existing Rate Mitigation efforts are on-going:

- Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs.
  - For example, Northern Ontario residential electricity consumers receive tax credits in recognition of higher electricity costs in the north and rural consumers receive a subsidy funded through the rate-base due to the higher cost of delivering power to rural areas.
  - As of 2016, the government removed the Debt Retirement Charge (DRC) from residential electricity bills. While this saves a typical residential electricity ratepayer about $60 per year, it is less than the benefit previously provided through the Ontario Clean Energy Benefit (OCEB).
  - OCEB provided a tax-base rebate of 10% rebate on the total cost of electricity charges related to electricity consumption on eligible bills between 2011 and 2015.
- Because electricity costs must be fully recovered from electricity consumers, rate mitigation funded through the rate-base often represents a shifting of costs from one consumer group to another (i.e., industrial to residential and commercial consumers).

- Rate-based initiatives are generally associated with incenting changes in behaviour that provide electricity system benefits (i.e., shifting electricity consumption from on-peak to off-peak periods).

- The following slides provide an overview of the programs currently available to different electricity consumer classes along with the cost shift associated with several of the programs:

| Program | Consumer Type | Rate/Tax-based | Description |
|---|---|---|---|
| Northern Ontario Energy Credit | **Residential** | Tax | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year. |
| Ontario Energy and Property Tax Credit | | Tax | Also delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families. |
| Ontario Electricity Support Program | | Rate | Provides ongoing assistance directly on the bills of eligible low-income electricity consumers. |
| Rural or Remote Rate Protection | | Rate | Provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas. |
| saveONenergy Conservation Programs (including Home Assistance Program for low income customers) | | Rate | Delivered by LDCs which provide financial incentives for electricity-saving measures like LEDs, ENERGYSTAR certified ceiling fans, baseboard programmable thermostats, clotheslines, and advanced powerbars. |
| saveONenergy Conservation Programs (including Retrofit Program for Buildings and other programs) | **Commercial** | Rate | saveONenergy suite of electricity conservation programs for commercial customers offered by local distribution companies (LDCs) help businesses save energy to better manage their electricity consumption and reduce their annual electricity costs. See Appendix for more information. |
| Industrial Conservation Initiative | **Industrial** | Rate | Encourages Ontario's largest consumers to reduce consumption during peak periods to save on average 25% on their electricity bills. |
| Industrial Accelerator Program | | Rate | Provides financial incentives of up to $10 million to transmission-connected electricity consumers, to invest in energy-efficiency or self-generation which would reduce the amount of electricity withdrawn from the provincial grid. |
| Industrial Electricity Incentive | | Rate | Provides reduced electricity rates for companies starting or expanding operations in Ontario. |
| Northern Industrial Electricity Rate Program | | Tax | Provides $20 megawatt per hour (MWh) rebate for qualifying large northern industrial consumers. |
| Demand Response | | Rate | Provides payments to businesses and industry to shift consumption at times when the electricity system is stressed. DR currently provides ~500 MW of capacity to the system. |

Ontario has implemented several programs that have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial). The table below shows the estimated cost shifts in the province's electricity system that result from three existing government programs (i.e., ICI, RRRP and OESP):

| Cost Shift Impact | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Residential Bill ($/month for 750 kWh) | 3.55 | 4.07 | 3.85 | 4.46 | 5.68 | 6.55 |
| Commercial – Class B ($/MWh) | 4.74 | 5.43 | 5.14 | 5.94 | 7.57 | 8.73 |
| Industrial – Class A ($/MWh) | -20.97 | -25.26 | -22.38 | -24.68 | -32.56 | -31.55 |

**Note:** Negative values indicate a benefit; positive values denote an incremental charge.

A number of actions have and are being taken to reduce overall electricity system costs. Despite these actions to reduce system costs, electricity rates continue to increase for consumers:

- Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
- Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
- Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.

- Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
- Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

## APPENDIX D: FURTHER INFORMATION SUPPORTING PROPOSED INITIATIVES

he following information has been provided by the Ministry.

**1. Provide an 8% rebate to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms), equivalent to the provincial portion of HST**

The Ministry is proposing to introduce legislation/regulation to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit. This would be equivalent to the provincial portion of the HST.

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).
- An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

| **Eligible for the 8% rebate** (< 50 kW or < 250,000 kWh/year) | **Not eligible for the 8% rebate** (> 50 kW or > 250,000 kWh/year) |
|---|---|
| • Residential Regulated Price Plan consumers<br>• Residential retail consumers<br>• Multi-unit residential buildings and other facilities used as residential rental units<br>• Long-term care homes and school residences<br>• Regulated Price Plan eligible farms<br>• Small businesses<br>– Coffee / snack retailer<br>– Convenience store<br>– Apparel store<br>– Hair salon<br>– Small insurance office | • Class A consumers<br>– Manufacturer<br>– Large grocery store<br>– Mines<br>– Auto assembly plants<br>• Class B consumers (except farms that have opted out of the Regulated Price Plan)<br>– Commercial offices (low rise)<br>– Hotel<br>– General warehousing |

**2. Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial)**

Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers). Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.

ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:

- Reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods;
- Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
- Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

| | **Benefit to New ICI Participants** | **System Benefit** | **Financial Impact** | **Residential Bill Impact** |
|---|---|---|---|---|
| | **Bill Savings** | **Peak Demand Reduction (MW)** | **GA shifted to Class B ($M)** | |
| **Short-term** | Up to 21% | 80 | 47 | Increase of $0.42/month |
| **Long-term** | Up to 34% | 165 | 82 | Increase of $0.74/month |

The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility. The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating. Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.

## 3. Update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers

The Ministry is proposing to provide an additional $110M in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.

RRRP is a rate-based funded subsidy program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.

- Today, RRRP is a $175M program. For an average residential customer, the cost of supporting RRRP is roughly $1 per month. For other customers, the cost can range from $65 for a greenhouse to $8,000 for a medium industrial.
- The majority of the program funding ($125.5M) provides a subsidy to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a monthly subsidy for R2 customers of $31.50.
- RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.

An additional $110Mn in program funding would see an increased subsidy of ~$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.

- This would increase the R2 portion of the RRRP to $235 million with a monthly impact on an average residential consumer of ~$0.60.
- The RRRP could be indexed at inflation or "trued up" on a regular basis to ensure the subsidy remains constant.

## 4. Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates

The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to $2 per month for residential consumers.

- To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed $1.3 billion from the GGRA over the first compliance period (2017-2020).
- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.

The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated $60 million less per year (i.e., a reduction of $240M over the first four year compliance period).

The following table identifies the illustrative impacts.

| | Average Annual Fiscal Impact | Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact | Regulated Price Plan (Residential) Impact | | Class B (Commercial) Impact | Class A (Industrial) Impact | |
|---|---|---|---|---|---|---|---|
| | | | *Average (750 kWh/ month)* | *Rural** (1000 kWh/ month)* | | *Existing* | *New* |
| • 8% rebate to Regulated Price Plan consumers<br>• ICI Expansion<br>• RRRP Update<br>• Proceeds Recycling | $1.0 billion | $270 million annually | -$10/ month<br><br>(-6%) | -$45/ month<br><br>(-20%) | -$1/MWh<br><br>(-1%) | -$1/ MWh<br><br>(-1%) | Up to -$52/MWh<br><br>(-34%) |

***Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

****Note**: Rural customers refers to customers of Hydro One eligible to receive RRRP (R2 rate class customers)

## APPENDIX E: PROPOSED POLICY MINUTE

CABINET AGREED THAT:

1. THE MINISTRY OF ENERGY (ENERGY), WITH SUPPORT FROM THE MINISTRY OF FINANCE (MOF), SHALL PREPARE LEGISLATION THAT WOULD PROVIDE AN EIGHT PERCENT (8%) REBATE ON THE PRE-TAX COST OF ELECTRICITY FOR THE FOLLOWING CLASSES OF CONSUMERS:
   A. ALL CONSUMERS ELIGIBLE TO BE BILLED UNDER THE ONTARIO ENERGY BOARD'S REGULATED PRICE PLAN; AND
   B. ANY OTHER CONSUMERS WHO WERE ELIGIBLE FOR FINANCIAL ASSISTANCE UNDER THE *ONTARIO CLEAN ENERGY BENEFIT ACT, 2010* (OCEBA) DURING THE PERIOD THAT PROGRAM WAS IN PLACE.

2. THE LEGISLATION SHALL BE GENERALLY MODELLED UPON THE OCEBA, AND WOULD INCLUDE THE FOLLOWING ELEMENTS:
   A. THE REBATE WOULD BE AVAILABLE STARTING JANUARY 1, 2017 AND BEFORE SUCH DATE AS MAY BE PRESCRIBED;
   B. THE REBATE WOULD NOT BE SUBJECT TO A CAP UNLESS A CAP IS PRESCRIBED;
   C. THE LEGISLATION WOULD SPECIFY THE TYPES OF COSTS TO WHICH THE REBATE WOULD OR WOULD NOT BE APPLIED, WITH AUTHORITY TO MAKE CHANGES BY REGULATION;
   D. THE LEGISLATION WOULD ADDRESS INVOICING REQUIREMENTS, INCLUDING AUTHORITY TO PRESCRIBE HOW THE REBATE IS TO APPEAR ON CONSUMER ELECTRICITY BILLS;
   E. THE LEGISLATION WOULD INCLUDE AUTHORITY TO PRESCRIBE THE WAY IN WHICH THE REBATE IS TO BE FLOWED THROUGH TO CONSUMERS, AND THE WAY IN WHICH ELECTRICITY VENDORS PROVIDING THE REBATE ARE TO BE REIMBURSED;
   F. THE LEGISLATION WOULD INCLUDE RECORD-KEEPING REQUIREMENTS FOR ELECTRICITY VENDORS AND ANY OTHER PRESCRIBED PERSONS; AND
   G. THE LEGISLATION WOULD INCLUDE INSPECTION POWERS FOR INSPECTORS APPOINTED BY THE MINISTER OF FINANCE, INCLUDING POWERS RELATED TO RECOVERY OF OVERPAYMENTS.
3. ENERGY AMEND O. REG. 429/04 (ADJUSTMENTS UNDER SECTION 25.33 OF THE ACT) MADE UNDER THE ELECTRICITY ACT, 1998 TO EXPAND ELIGIBILITY FOR CLASS A CONSUMERS AND CLASS A MARKET PARTICIPANTS UNDER THE INDUSTRIAL CONSERVATION INITIATIVE (ICI) TO ALL ELECTRICITY CONSUMERS AND MARKET PARTICIPANTS WITH A PEAK DEMAND ABOVE AN AVERAGE OF ONE MEGAWATT (1MW) WITH NO SECTORAL RESTRICTIONS ON PARTICIPATION.
4. ENERGY AMEND O. REG 442/01 (RURAL OR REMOTE ELECTRICITY RATE PROTECTION) MADE UNDER THE ONTARIO ENERGY BOARD ACT, 1998 TO INCREASE THE TOTAL AMOUNT OF RATE PROTECTION AVAILABLE TO LOW DENSITY HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE RATE PROTECTION PROGRAM BY $110 MILLION, EFFECTIVE JANUARY 1, 2017.
5. ENERGY CONSIDER AND, IF APPROPRIATE, UTILIZE A MECHANISM TO PERIODICALLY ADJUST THE TOTAL ANNUAL AMOUNT OF RATE PROTECTION AVAILABLE TO HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE ELECTRICITY RATE PROTECTION REGULATION / PROGRAM, EFFECTIVE JANUARY 1, 2018.
6. ENERGY TO RECYCLE UP TO AN AVERAGE OF $270 MILLION OF CAP AND TRADE AUCTION PROCEEDS FROM THE GREENHOUSE GAS REDUCTION ACCOUNT PER YEAR OVER THE FIRST COMPLIANCE PERIOD (2017-2020) TO COMMERCIAL AND INDUSTRIAL ELECTRICITY CONSUMERS.
7. ENERGY AND MOF TO WORK WITH CABINET OFFICE (CO) AND PREMIER'S OFFICE (PO) ON COMMUNICATIONS PLAN.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Ronald Kwan |
| **Cc:** | Francisco Chinchon; Emily Kerr; Darren Scanlan; Shajee Kathirgamanathan; Gavin He |
| **Subject:** | RE: Energy and Price Mitigation |
| **Date:** | Monday, December 12, 2016 5:12:44 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v4Clean (SIFB SPFB EFB).doc |

Pls. use this version.

Thanks,

John.

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**From:** John Kim
**Sent:** Monday, December 12, 2016 5:05 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Energy and Price Mitigation

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Pls. see attached with input from all three branches.

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**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Subject:** Energy and Price Mitigation

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Please review and do a markup. A short note with staff comments would be helpful too.

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# Comments on Proposed Initiatives to Transform Ontario's Electricity Sector

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on the potential initiatives, as outlined in its deck.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e. meeting goals towards decarbonize) and modernize the electricity infrastructure (i.e. more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

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- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

Energy's proposals generally involve shifting costs from the rate base to the tax base. While these proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), the proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those prestend in an earlier deck ($1.3 billion to $1.9 billion).

Over the past five years, the fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
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| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

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OREC – Ontario Rebate for Electricity Consumers
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OEPTC – Ontario Energy and Property Tax Credit

**Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

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This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy noted in previous drafts of its price mitigation deck that
  - OESP credits could be increased to address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time the costs would transition to the new "green bank entity".

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects. Incremental investments would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.) May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
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Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy is proposed using some or all of this departure tax for price mitigation.

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Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

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- Removing additional DRC revenue from the OEFC would call into question the proposed end date of the DRC.

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| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
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**Electricity Finance Branch, Corporate and Electricity Finance Division**
**Ontario Financing Authority**
**December 12, 2016**

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| **Subject:** | RE: Energy and Price Mitigation |
| **Date:** | Monday, December 12, 2016 5:05:16 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v4Clean (SIFB SPFB EFB).doc<br>Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy_SIFBEFBmarkup.pptx |

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**Electricity Finance Branch, Corporate and Electricity Finance Division**
**Ontario Financing Authority**
**December 12, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8%  per cent rebate ($11/month savings), updating RRRP ($45/month savings, combined with the 8% rebate), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured,  the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP),  which provides an opportunity to consider a range of policy changes to  how the Ontario energy sector operates.

# Broad Policy Themes / Rationale

- No longer use rate-base to pay for social programs [despite the system benefit rationale] by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.
- Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.
- Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" beyond the Moving Ontario Forward initiative to make certain investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties ~~and expansion of natural gas to rural areas~~, etc. (note that expanding access to natural gas is already included under Moving Ontario Forward.)
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" a single rate plan as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time.
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.16 | 2.31 | 2.41 | 2.49 | 2.54 | 2.58 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.13 | 0.13 | 0.14 | 0.14 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.88 | 3.08 | 3.21 | 3.33 | 3.39 | 3.44 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 2.82 | 3.05 | 2.47 | 2.56 | 2.13 | 2.14 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.10 | 0.10 | 0.11 | 0.11 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Taxpayer Funded Electricity Price Mitigation

| *($M)* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | | 398 | 419 | 433 | 447 |
| 2. Expand the OESP (i.e., 50% increase) | TBD | TBD | TBD | TBD | TBD |
| 3. Fund Conservation Programs Through The Tax-Base | 110 | 450 | 450 | 450 | 450 |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC efficiencies | - | - | - | - | - |
| c. OPG – Borrowing | - | - | - | - | - |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | 110 | 450 | - | - | - |
| 8. Cancel / Adjust FIT | - | - | - | - | - |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| 2. Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy

# Considerations / Outcomes

- The proposed initiatives provide the following opportunities to:
  - Lower the cost of electricity for all consumers;
  - Re-set how electricity programs and energy infrastructure is funded (i.e., shifting costs to the tax-base from rate-base);
  - Provide electricity consumers with greater choices (i.e., signal rate plan);
  - Provide system benefits (e.g., market renewal); and
  - Increase cost effectiveness and improve efficiency.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | John Kim |
| **Cc:** | Francisco Chinchon; Emily Kerr; Darren Scanlan; Shajee Kathirgamanathan; Gavin He |
| **Subject:** | RE: Energy and Price Mitigation |
| **Date:** | Tuesday, December 13, 2016 7:02:51 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v4Clean (CEFD)_Markup.doc |

Hi John, et al,

Thanks.

I added a summary table upfront and some other suggested edits. Please review.

Ron

---

**From:** John Kim
**Sent:** December-12-16 5:13 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Energy and Price Mitigation

Pls. use this version.

Thanks,

John.

---

**From:** John Kim
**Sent:** Monday, December 12, 2016 5:05 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Energy and Price Mitigation

Hi Ron,

Pls. see attached with input from all three branches.

Thanks,

John.

---

**From:** Ronald Kwan

**Sent:** Monday, December 12, 2016 1:26 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Subject:** Energy and Price Mitigation

Hi,

Apparently a draft "bootleg" copy.

Please review and do a markup. A short note with staff comments would be helpful too.

Is a draft for EOD doable?

The "Trillium Trust" would notionally be either all incremental electricity projects vs Moving Ontario Forward, and hitting the bottom line once in-service and amortised. Or crowds out Moving Ontario Forward projects. However, could hurt the fiscal bottom line if it is perceived as detracting from Hydro One potential rate base growth, hurting market value upfront, and net income (and corporate taxes) over time. Does that make sense?

And little or no near-term rate impact, as new projects would affect the rate base years out, unless the Trillium Trust is used for existing Tx projects already about to come on line.

I might want to argue that if they do the DRC one, it is in effect giving up a chunk of the Departure Tax benefit to OEFC. And on the departure tax, aside from all the regulatory principles arguments, I might think about saying that the elimination of the deferred tax liability portion was just truing up the PILs amounts owing.

Thanks,
Ron

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on ~~the~~ potential price mitigation initiatives, as outlined in its deck.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to~~wards~~ decarbonize) and modernize the electricity infrastructure (~~i.~~e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

Energy's proposals generally involve shifting costs from the rate base to the tax base. While the~~se~~ subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), th~~e~~ose proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those pres~~t~~ented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit NIERP – Northern ~~Ontario~~Industrial Electricity Rate program DRC – Debt etirement Charge

OREC – Ontario Rebate for Electricity Consumers NOEC – Northern Ontario Energy Credit OEPTC – Ont. Energy & Property Tax Credit
~~DRC – Debt etirement Charge~~ ~~OEPTC – Ontario Energy and Property Tax Credit~~

## Energy's Broad Policy Themes / Rationales

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| Provide greater support for lower income Ontarians by enhancing the **OESP or expanding eligibility** | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the ne**w "green bank entity" over time** | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| Expand the scope of the "Trillium Trust" to make investments in energy infr**astructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value, including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return on |
| **E**nd the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |

## Detail on Proposals

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy noted ~~in previous drafts of its price mitigation deck~~ that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - ~~OESP credits could be increased to address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits).~~
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, ~~.~~ ~~I~~incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.~~.~~
  - ~~o~~
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).

  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy ~~is proposed~~lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related ~~to the~~ deferred tax benefit, as well ~~and~~ as the s.50.3 benefit under the *Electricity Act, 1998*.]
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported~~proposed end date of the DRC~~.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission
3. Total would be significantly larger with the TBDs crystalized.

**~~Electricity Finance Branch,~~ Corporate and Electricity Finance Division**
**/ Ontario Financing Authority**
**December 12, 2016**

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | Francisco Chinchon; John Kim |
| **Cc:** | Darren Scanlan |
| **Subject:** | RE: Energy"s Deck with CEFD additions |
| **Date:** | Tuesday, December 06, 2016 4:08:25 PM |
| **Attachments:** | Price-Mitigation - CEFD Slides-Dec6-2016_v4.pptx |

Hi Francisco,

Also please find attached the revised and separate CEFD deck.

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Francisco Chinchon
**Sent:** Tuesday, December 06, 2016 3:37 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** RE: Energy's Deck with CEFD additions

Also, the programs are not used/received by everyone (at least as I understand) so I'm not sure you can say that is the typical impact on a bill.

---

**From:** Francisco Chinchon
**Sent:** Tuesday, December 06, 2016 3:33 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** RE: Energy's Deck with CEFD additions

Hi,

Why the change in slide 12? Is up to EFB, but I preferred the previous table as is easy to read and solely focused on the fiscal hit.

Francisco

---

**From:** John Kim
**Sent:** Tuesday, December 06, 2016 3:31 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** RE: Energy's Deck with CEFD additions

We don't have two products, yet.

---

**From:** Francisco Chinchon
**Sent:** Tuesday, December 06, 2016 3:31 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** RE: Energy's Deck with CEFD additions

Thanks, is this the markup for Energy or the annotated version? or we don't have two products yet?

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, December 06, 2016 3:29 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Energy's Deck with CEFD additions

Hi Francisco,

We used a different chart format to represent the information in Slide 12. Please see files attache.d

Thanks,
Shajee

**Shajee Kathirgamanathan**
Senior Advisor
Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

DRAFT

# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

DRAFT

# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost [about $1.5 billion per year in new fiscal costs].
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 billion in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time), with the total tax-based costs rising to about $3.5 billion in 2017-18.
  - These existing mitigation costs are not presented in Energy's deck.
  - Also not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

DRAFT

# Context: Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

# Energy's Proposals

Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded. They could be upwards of $2 bn/year, (plus the departure tax), which is not included in the fiscal plan, which would challenge the path to balance.

- OESP & RRRP (Total of about $0.4 Bn/yr): This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI -- About $900+ M/yr): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes that about 30% price increase (from $85/MWh to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
  - As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $100 million).

- Departure Tax: As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.
  - This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
  - Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

- Other fiscal cost risks (Total of about $0.8+ Bn):
  - Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
  - Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
  - Lowering of the debt interest paid by OPG (about $30 – 70 million/yr between 2017 and 2021),

DRAFT

# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
  - These targeted, low-income measures were introduced after the HST was introduced.
  - The OESP provides a larger, targeted and on-bill relief to qualifying consumers.

- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
  - As with the prior OCEB cap, provides a rough incentive for conservation and correlation to larger homes. A higher cap in winter may help with space-heating issue.
  - May be challenging to implement.

- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

# Appendix

DRAFT

# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | The government removed the DRC from residential electricity users' bills as of January 1, 2016. This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

DRAFT

# Timeline: Taxpayer-funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

DRAFT

# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

DRAFT

# Proposed Taxpayer Funded Electricity Price Mitigation
(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | | | | |
| 7. DRC Ended for Class B | | | | | |
| 8. Other | | | | | |
| **TOTAL** | **1195** | **3,421** | **3,152** | **3,177** | **3,191** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.2 billion, or more, by 2020-21. That is about a 60% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

**From:** John Kim
**To:** Ronald Kwan
**Subject:** RE: Fiscal prep
**Date:** Tuesday, November 01, 2016 10:46:28 AM

---

Hi Ron,

I have some comments but will talk to you first, offline. It has to do with how much we want to get explicit on what the MOU covers.

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** Tuesday, November 01, 2016 10:42 AM
**To:** Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** Re: Fiscal prep

Thanks Emily.

Ron

On Nov 1, 2016, at 9:51 AM, Emily Kerr <Emily.Kerr@ofina.on.ca> wrote:

> Hi Ron,
> We didn't have any comments on the slide deck. We did want to note that the increased RRRP payments will be a reduction to the distribution line item on Hydro One R2 consumer's bills.
> Emily
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Monday, October 31, 2016 2:42 PM
> **To:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
> **Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> **Subject:** Re: Fiscal prep
>
> Hi,
>
> An updated deck attached.

Any comments?

Ron

---

**From:** Ronald Kwan
**Sent:** October 28, 2016 7:16 PM
**To:** Sandy Roberts; John Kim; Emily Kerr; Shajee Kathirgamanathan
**Subject:** FW: Fiscal prep

Hi,

FYI and any comments?

Ron

---

**From:** Nguyen, Marianne (MOF) [mailto:Marianne.Nguyen@ontario.ca]
**Sent:** October-28-16 19:11
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>
**Subject:** FW: Fiscal prep

An updated version will come on Monday.

**From:** John Kim
**To:** Ronald Kwan
**Subject:** RE: Fiscal prep
**Date:** Tuesday, November 01, 2016 11:46:19 AM

---

For the deck….not sure if we'd want to put words in there saying we would be doing fiscal impact forecasting, etc.

---

**From:** Ronald Kwan
**Sent:** Tuesday, November 01, 2016 11:45 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: Fiscal prep

Hi,

For the deck, or in general?

Ron

On Nov 1, 2016, at 10:46 AM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Ron,
>
> I have some comments but will talk to you first, offline. It has to do with how much we want to get explicit on what the MOU covers.
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**Subject:** FW: Fiscal prep

An updated version will come on Monday.

**From:** Ronald Kwan
**To:** Salman Qadir; John Kim
**Cc:** Gavin He
**Subject:** RE: GA scenario
**Date:** Thursday, January 26, 2017 5:17:06 PM

Thanks, I see that now in his email. We should make an adjustment, and/or get his adjusted numbers.

Ron

---

**From:** Salman Qadir
**Sent:** January-26-17 17:15
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: GA scenario

Hi Ron,

You're absolutely correct. This is confirmed in the original email response below from Tim Christie as well.

I've changed the language to Fiscal Exposure and added a Notes box with that note.

Saved it here:
Z:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA

Salman

---

**From:** Ronald Kwan
**Sent:** Thursday, January 26, 2017 5:04 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: GA scenario

Hi,

So assumption is borrowing is all end of year, not 1/12 per month, or even assumed mid-year on average? Not realistic, if so.

And can we label it fiscal exposure, and footnote it as accounting treatment is TBD?

Thanks,
Ron

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**From:** John Kim
**Sent:** January-26-17 16:59
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: GA scenario

Hi Ron,

Pls. see attached spreadsheet from Salman which ties in with the scenarios provided.

Thanks,

John.

---

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**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: GA scenario

Apologies, there was a referencing error in the charting. Updated is attached.

Salman

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**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: GA scenario

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Attached is a few charts for the fiscal impact for each scenario. Note that the assumption is that the debt is drawn down at the end of the year and interest on that drawdown incurs the following year.

Salman

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**Subject:** FW: GA scenario

Hi Salman,

Would you mind doing a fiscal impact chart for each scenarios? Essentially, the bump up in the debt would potentially be fiscal impact on the downside.

Thanks,

John.

---

**From:** Malecki, Justin (ENERGY) [mailto:Justin.Malecki@ontario.ca]
**Sent:** Thursday, January 26, 2017 9:34 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Tim Christie (ENERGY) <Tim.Christie@ontario.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: GA scenario

Hello John,

Yes, the table Tim sent you yesterday is the 30-year financing version of scenario 1a. Below is the same table but for the 30-year financing version of scenario 1b. Don't hesitate to let us know if there is anything else you need.

Cheers,

Justin Malecki, PhD
Senior Advisor, Energy System Planning
Ontario Ministry of Energy
416-325-9372

| ***Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments ($ million)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 10,679 | 9,912 | 9,200 | 8,540 | 8,798 | 9,063 | 9,337 | 9,619 | 9,910 | 10,209 | 10,517 | 10,835 | 11,162 | 11,499 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 1,416 | 3,410 | 5,932 | 9,857 | 12,396 | 14,586 | 16,190 | 18,462 | 19,964 | 20,774 | 22,271 | 23,313 | 23,236 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-26-17 8:17 AM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA); Malecki, Justin (ENERGY)
**Subject:** RE: GA scenario

Thanks Tim.

Am I right in thinking this is the latest 1A? Could we also get the 1B?

John.

**From:** Christie, Tim (ENERGY) [mailto:Tim.Christie@ontario.ca]
**Sent:** Wednesday, January 25, 2017 3:59 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Justin Malecki (ENERGY) <Justin.Malecki@ontario.ca>
**Subject:** RE: GA scenario

John, here's the data you requested. Note that we have not included in-year interest costs (so any deferral doesn't start accumulating interest until the next year). We have since done it using a monthly schedule, but this is the version that was used in the deck. Let me know if you have any questions.

| **Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing** ***($ millions)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 8,769 | 8,944 | 9,123 | 9,306 | 9,492 | 9,682 | 9,875 | 10,073 | 10,274 | 10,480 | 10,689 | 10,903 | 11,121 | 11,344 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 | 12,451 | 14,425 | 16,098 | 17,240 | 19,111 | 20,281 | 20,836 | 22,164 | 23,133 | 23,087 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-23-17 4:50 PM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA)
**Subject:** GA scenario

Hi Tim,

Hope all's well.

I left you a voicemail and wanted to clarify what I'm looking for. Would you have the accumulated debt figure, by year, for the 23bn scenario?

Thanks,

John.

Y. John Kim
Director, Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

**From:** Salman Qadir
**To:** Ronald Kwan; John Kim
**Cc:** Gavin He
**Subject:** RE: GA scenario
**Date:** Thursday, January 26, 2017 5:15:17 PM
**Attachments:** GA Financing - Scenario 1a 1b v2.xlsx

Hi Ron,

You're absolutely correct. This is confirmed in the original email response below from Tim Christie as well.

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Saved it here:
Z:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA

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Ontario Ministry of Energy
416-325-9372

| ***Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments ($ million)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 10,679 | 9,912 | 9,200 | 8,540 | 8,798 | 9,063 | 9,337 | 9,619 | 9,910 | 10,209 | 10,517 | 10,835 | 11,162 | 11,499 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 1,416 | 3,410 | 5,932 | 9,857 | 12,396 | 14,586 | 16,190 | 18,462 | 19,964 | 20,774 | 22,271 | 23,313 | 23,236 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

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**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-26-17 8:17 AM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA); Malecki, Justin (ENERGY)
**Subject:** RE: GA scenario

Thanks Tim.

Am I right in thinking this is the latest 1A? Could we also get the 1B?

John.

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**From:** Christie, Tim (ENERGY) [mailto:Tim.Christie@ontario.ca]
**Sent:** Wednesday, January 25, 2017 3:59 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Justin Malecki (ENERGY) <Justin.Malecki@ontario.ca>
**Subject:** RE: GA scenario

John, here's the data you requested. Note that we have not included in-year interest costs (so any deferral doesn't start accumulating interest until the next year). We have since done it using a monthly schedule, but this is the version that was used in the deck. Let me know if you have any questions.

| **Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing *($ millions)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 8,769 | 8,944 | 9,123 | 9,306 | 9,492 | 9,682 | 9,875 | 10,073 | 10,274 | 10,480 | 10,689 | 10,903 | 11,121 | 11,344 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 | 12,451 | 14,425 | 16,098 | 17,240 | 19,111 | 20,281 | 20,836 | 22,164 | 23,133 | 23,087 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

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**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-23-17 4:50 PM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA)
**Subject:** GA scenario

Hi Tim,

Hope all's well.

I left you a voicemail and wanted to clarify what I'm looking for. Would you have the accumulated debt figure, by year, for the 23bn scenario?

Thanks,

John.

Y. John Kim
Director, Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

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**Annual Interest Rate = 5%**

## Scenario 1a

**Debt Borrowing/Payment Sched**
***($ millions)***

a
c = a*5%
b
d = a+b+c

**Fiscal Exposure, Scenario 1a**

Provided by Energy

## Scenario 1b

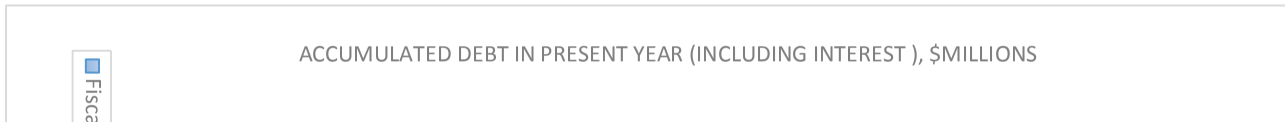
**Debt Borrowing Payment Sched**
***($ million)***

a
c = a*5%
b
d = a+b+c

**Fiscal Exposure, Scenario 1b**

Provided by Energy

**Notes:**

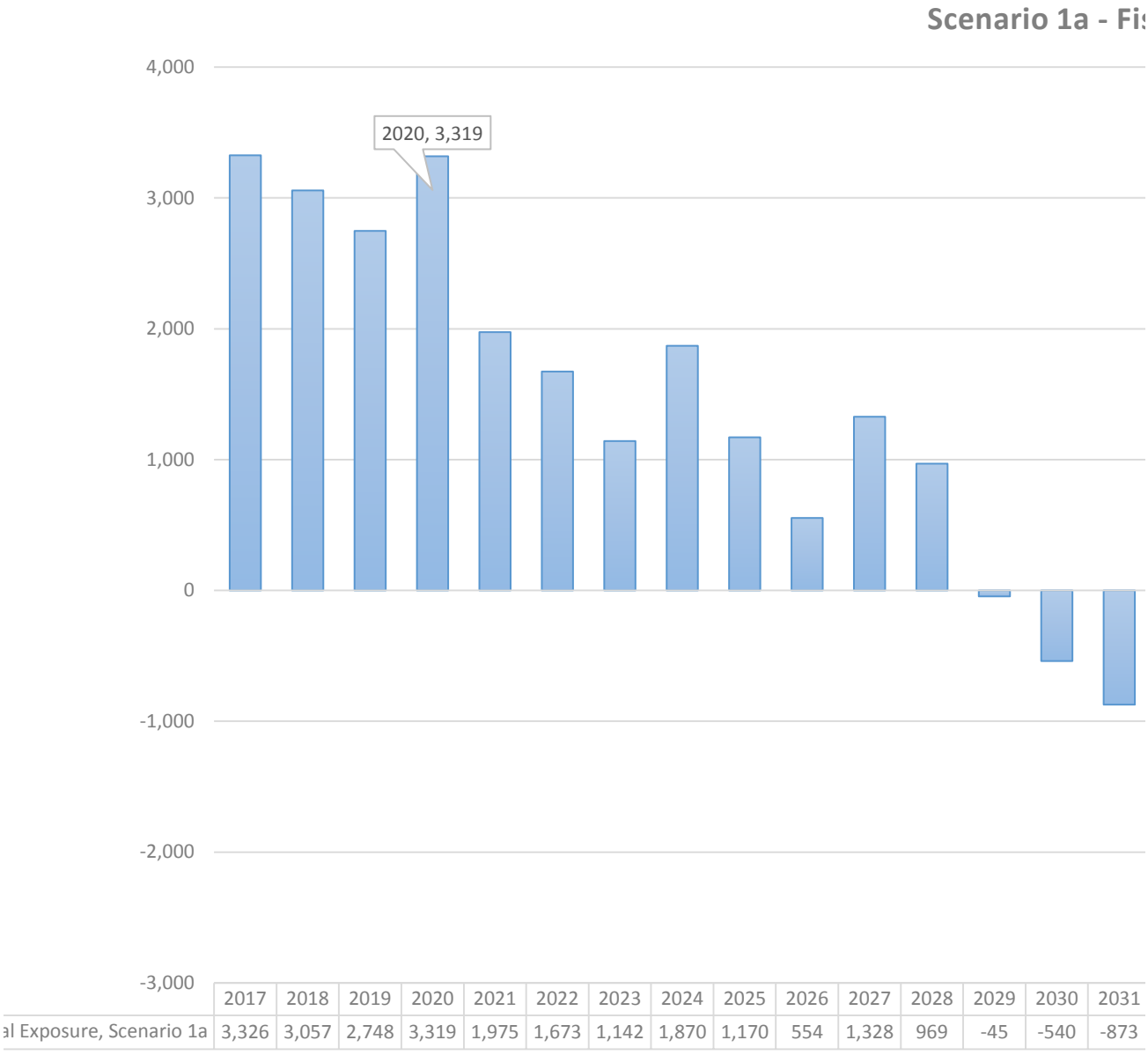

ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST ), $MILLIONS
Fisca

**Debt is drawn-down at end of Year**

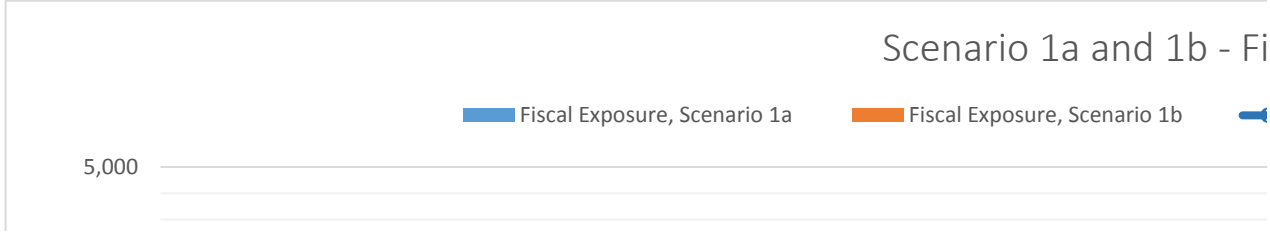
| | 2017 | 2018 | 2019 |
|---|---|---|---|
| **dule for Scenario 1a. Moderate / GA Financing 30-year financing** | | | |
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 |
| Ratepayer GA Payment | 8,769 | 8,944 | 9,123 |
| GA Debt Requirement | 3,326 | 2,891 | 2,429 |
| Debt, Beginning of Year | 0 | 3,326 | 6,383 |
| *Interest Cost - Scenario 1a* | *0* | *166* | *319* |
| Additional GA Debt Drawdown, End of Year | 3,326 | 2,891 | 2,429 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 |
| | 3,326 | 3,057 | 2,748 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 |
| Errors | 0 | 0 | 0 |

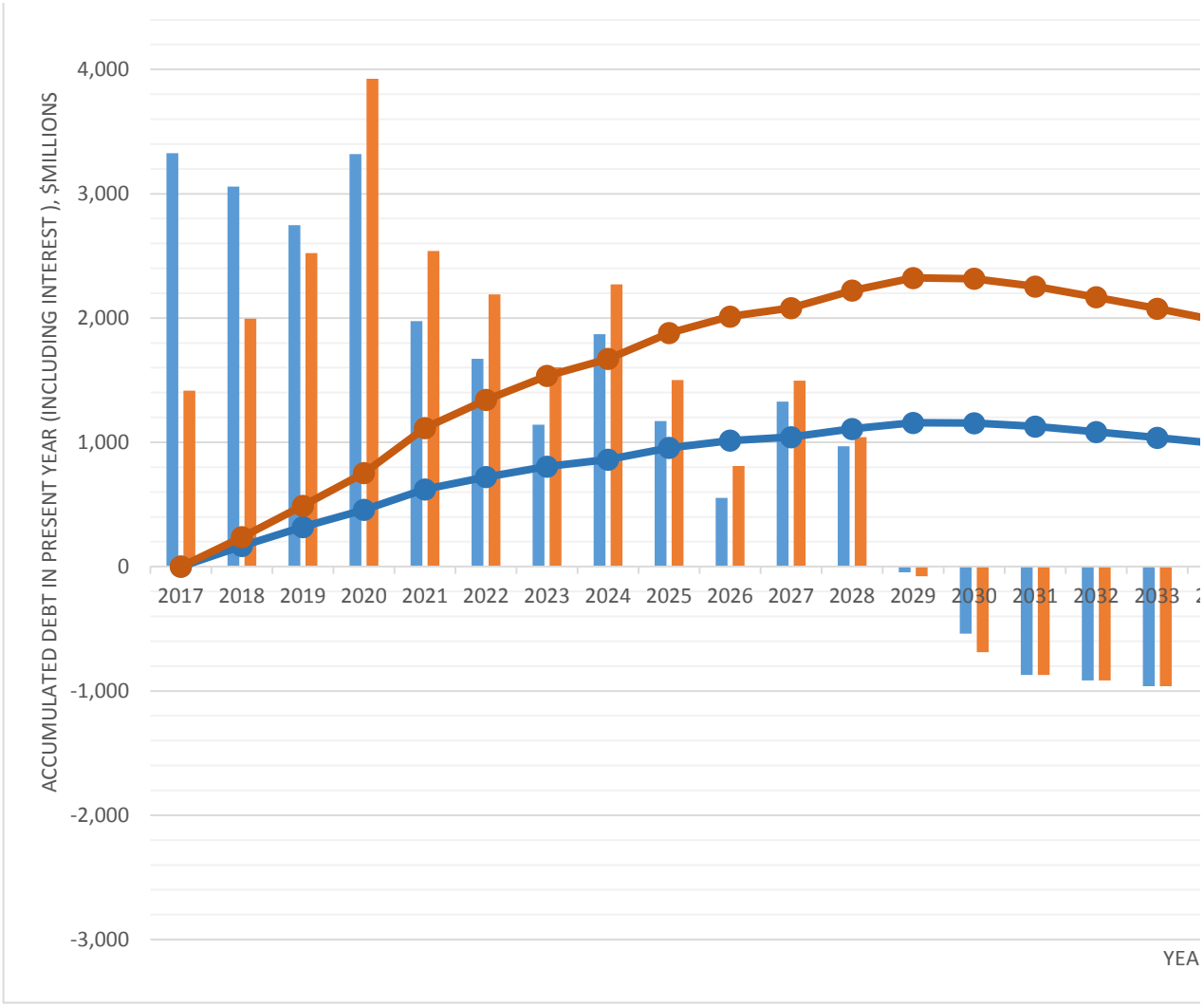
| | 2017 | 2018 | 2019 |
|---|---|---|---|
| **lule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments** | | | |
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 |
| Ratepayer GA Payment | 10,679 | 9,912 | 9,200 |
| GA Debt Requirement | 1,416 | 1,923 | 2,352 |
| Debt, Beginning of Year | 0 | 1,416 | 3,410 |
| *Interest Cost - Scenario 1b* | *0* | *71* | *170* |
| Additional GA Debt Drawdown, End of Year | 1,416 | 1,923 | 2,352 |
| Accumulated debt in present year (including 5% annual interest) | 1,416 | 3,410 | 5,932 |
| | 1,416 | 1,994 | 2,522 |
| Accumulated debt in present year (including 5% annual interest) | 1,416 | 3,410 | 5,932 |
| Errors | 0 | 0 | 0 |

Accounting treatment is to be determined.




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| al Exposure, Scenario 1a | 3,326 | 3,057 | 2,748 | 3,319 | 1,975 | 1,673 | 1,142 | 1,870 | 1,170 | 554 | 1,328 | 969 | -45 | -540 | -873 |

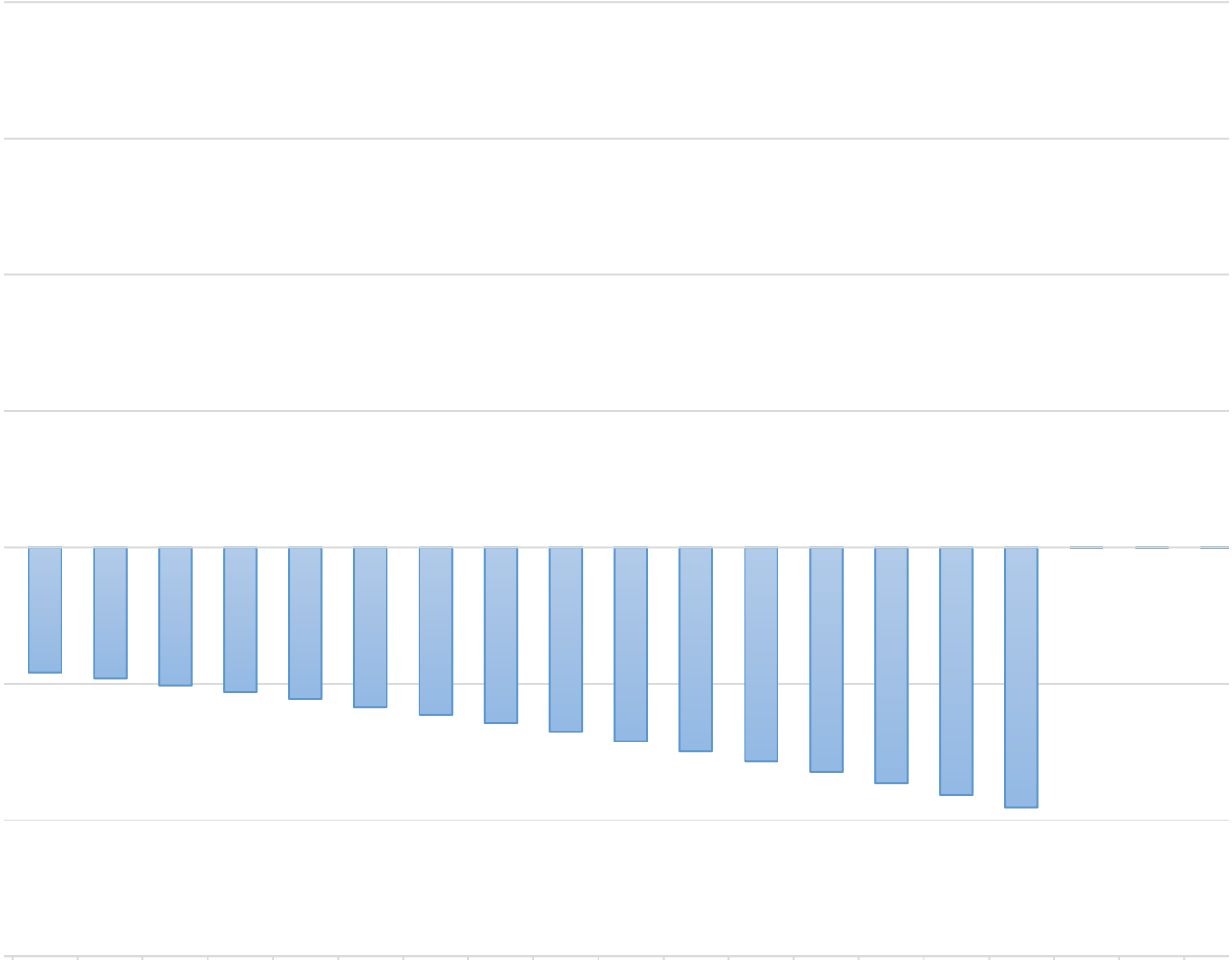



ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST ), $MILLIONS
4,000
3,000
2,000
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
YEA

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|---|---|---|---|---|---|---|---|---|---|
| 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 |
| 9,306 | 9,492 | 9,682 | 9,875 | 10,073 | 10,274 | 10,480 | 10,689 | 10,903 | 11,121 |
| 2,862 | 1,352 | 952 | 337 | 1,008 | 215 | -460 | 286 | -139 | -1,202 |
| 9,131 | 12,450 | 14,425 | 16,098 | 17,240 | 19,110 | 20,280 | 20,834 | 22,162 | 23,131 |
| *457* | *623* | *721* | *805* | *862* | *955* | *1,014* | *1,042* | *1,108* | *1,157* |
| 2,862 | 1,352 | 952 | 337 | 1,008 | 215 | -460 | 286 | -139 | -1,202 |
| 12,450 | 14,425 | 16,098 | 17,240 | 19,110 | 20,280 | 20,834 | 22,162 | 23,131 | 23,085 |
| 3,319 | 1,975 | 1,673 | 1,142 | 1,870 | 1,170 | 554 | 1,328 | 969 | -45 |
| 12,451 | 14,425 | 16,098 | 17,240 | 19,111 | 20,281 | 20,836 | 22,164 | 23,133 | 23,087 |
| 1 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 2 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|---|---|---|---|---|---|---|---|---|---|
| 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 |
| 8,540 | 8,798 | 9,063 | 9,337 | 9,619 | 9,910 | 10,209 | 10,517 | 10,835 | 11,162 |
| 3,628 | 2,046 | 1,571 | 875 | 1,462 | 579 | -189 | 458 | -71 | -1,243 |
| 5,932 | 9,857 | 12,396 | 14,587 | 16,191 | 18,462 | 19,965 | 20,774 | 22,270 | 23,313 |
| *297* | *493* | *620* | *729* | *810* | *923* | *998* | *1,039* | *1,114* | *1,166* |
| 3,628 | 2,046 | 1,571 | 875 | 1,462 | 579 | -189 | 458 | -71 | -1,243 |
| 9,857 | 12,396 | 14,587 | 16,191 | 18,462 | 19,965 | 20,774 | 22,270 | 23,313 | 23,236 |
| 3,925 | 2,539 | 2,191 | 1,604 | 2,272 | 1,502 | 809 | 1,497 | 1,043 | -77 |
| 9,857 | 12,396 | 14,586 | 16,190 | 18,462 | 19,964 | 20,774 | 22,271 | 23,313 | 23,236 |
| 0 | 0 | -1 | -1 | 0 | -1 | 0 | 1 | 0 | 0 |

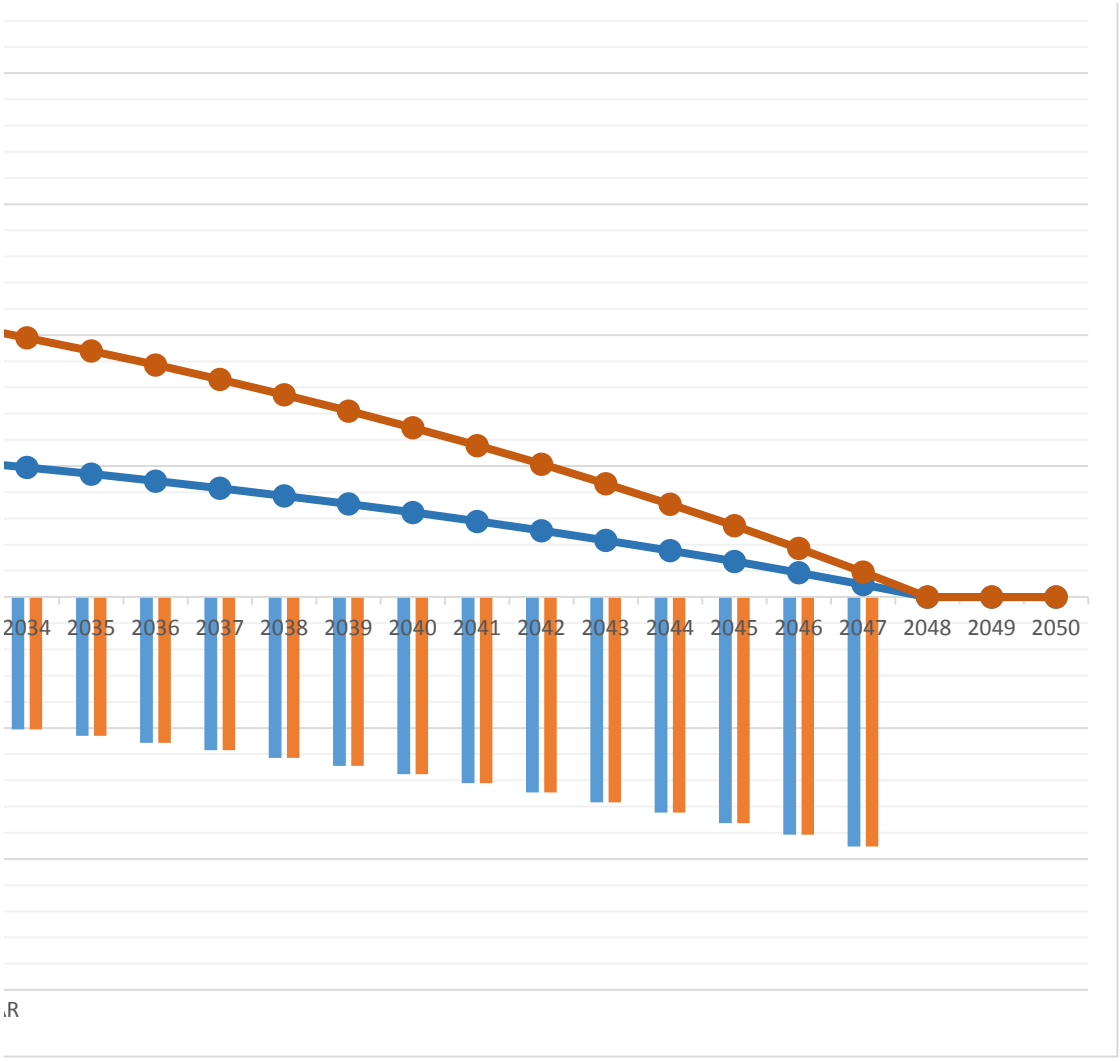
## scal Exposure



| | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 205 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 | -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | 0 | 0 | 0 |

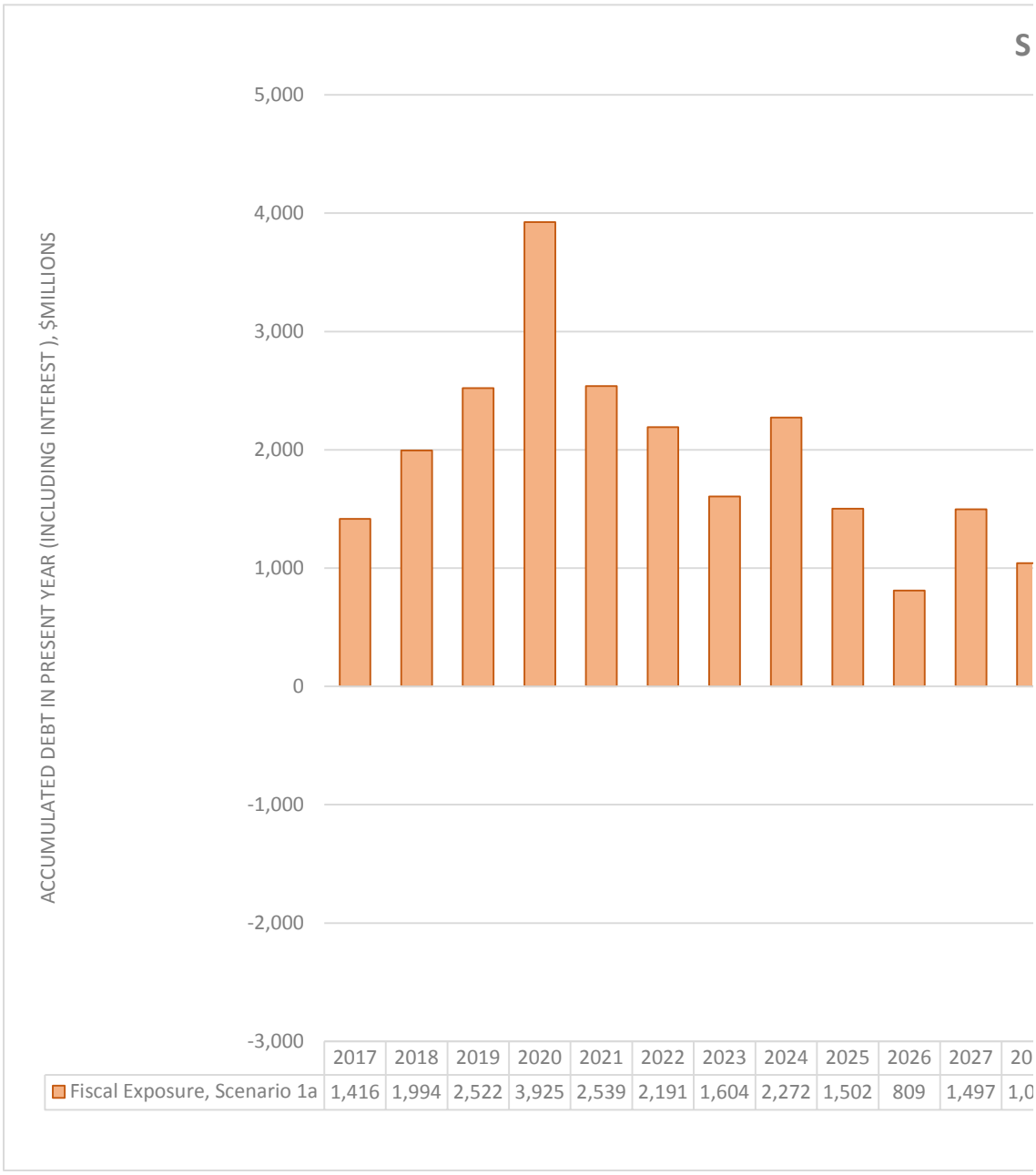
YEAR

## iscal Exposure


2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
AR

| 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
|---|---|---|---|---|---|---|---|---|---|
| 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 |
| 11,344 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 |
| -1,694 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 |
| 23,085 | 22,546 | 21,673 | 20,757 | 19,795 | 18,784 | 17,723 | 16,610 | 15,440 | 14,212 |
| *1,154* | *1,127* | *1,084* | *1,038* | *990* | *939* | *886* | *830* | *772* | *711* |
| -1,694 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 |
| 22,546 | 21,673 | 20,757 | 19,795 | 18,784 | 17,723 | 16,610 | 15,440 | 14,212 | 12,923 |
| -540 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 |
| 22,548 2 | 21,676 3 | 20,759 2 | 19,797 2 | 18,787 3 | 17,727 4 | 16,613 3 | 15,443 3 | 14,216 4 | 12,926 3 |

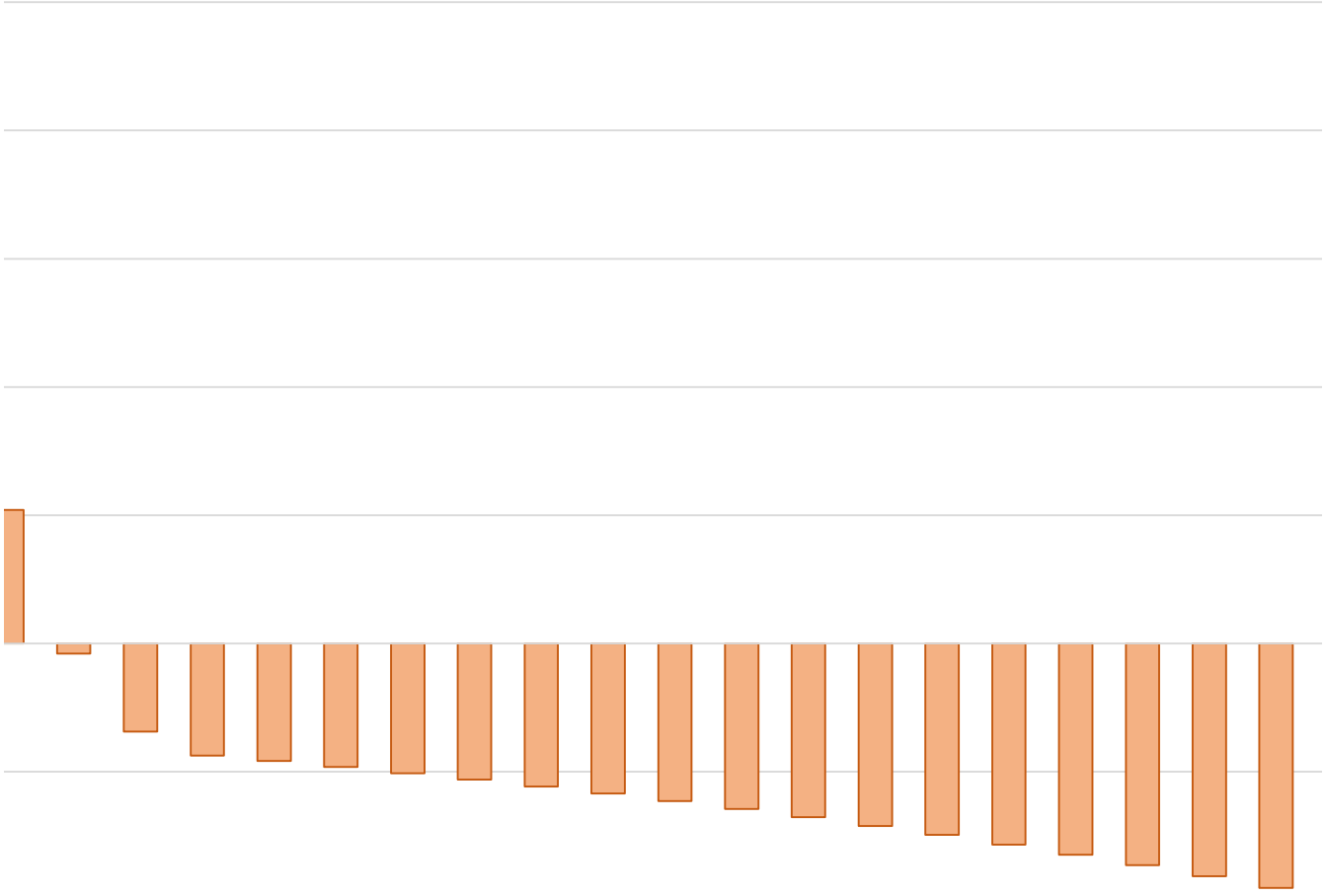
| 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
|---|---|---|---|---|---|---|---|---|---|
| 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 |
| 11,499 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 |
| -1,849 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 |
| 23,236 | 22,548 | 21,676 | 20,760 | 19,798 | 18,787 | 17,727 | 16,613 | 15,444 | 14,216 |
| *1,162* | *1,127* | *1,084* | *1,038* | *990* | *939* | *886* | *831* | *772* | *711* |
| -1,849 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 |
| 22,548 | 21,676 | 20,760 | 19,798 | 18,787 | 17,727 | 16,613 | 15,444 | 14,216 | 12,927 |
| -687 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,169 | -1,228 | -1,289 |
| 22,548 0 | 21,676 0 | 20,759 -1 | 19,797 -1 | 18,787 0 | 17,727 0 | 16,613 0 | 15,443 -1 | 14,216 0 | 12,926 -1 |


S
5,000
4,000
3,000
2,000
1,000
0
-1,000
-2,000
-3,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST ), $MILLIONS
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 20
Fiscal Exposure, Scenario 1a 1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,272 1,502 809 1,497 1,0

| 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 |
|---|---|---|---|---|---|---|---|---|---|
| 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 |
| 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 |
| -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | 0 | 0 |
| 12,923 | 11,569 | 10,147 | 8,655 | 7,087 | 5,442 | 3,714 | 1,900 | -5 | -6 |
| *646* | *578* | *507* | *433* | *354* | *272* | *186* | *95* | *0* | *0* |
| -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | 0 | 0 |
| 11,569 | 10,147 | 8,655 | 7,087 | 5,442 | 3,714 | 1,900 | -5 | -6 | -6 |
| -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | 0 | 0 |
| 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 |
| 4 | 4 | 4 | 5 | 4 | 5 | 5 | 5 | 6 | 6 |

| 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 |
|---|---|---|---|---|---|---|---|---|---|
| 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 |
| 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 |
| -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | 0 | 0 |
| 12,927 | 11,573 | 10,152 | 8,659 | 7,092 | 5,447 | 3,719 | 1,905 | 1 | 1 |
| *646* | *579* | *508* | *433* | *355* | *272* | *186* | *95* | *0* | *0* |
| -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | 0 | 0 |
| 11,573 | 10,152 | 8,659 | 7,092 | 5,447 | 3,719 | 1,905 | 1 | 1 | 1 |
| -1,354 | -1,421 | -1,492 | -1,567 | -1,645 | -1,728 | -1,814 | -1,905 | 0 | 0 |
| 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 |
| 0 | -1 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | -1 |

## cenario 1b - Fiscal Exposure



| 028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 043 | -77 | -687 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,169 | -1,228 | -1,289 | -1,354 | -1,421 | -1,492 | -1,567 | -1,645 | -1,728 | -1,814 | -1,905 | |

YEAR

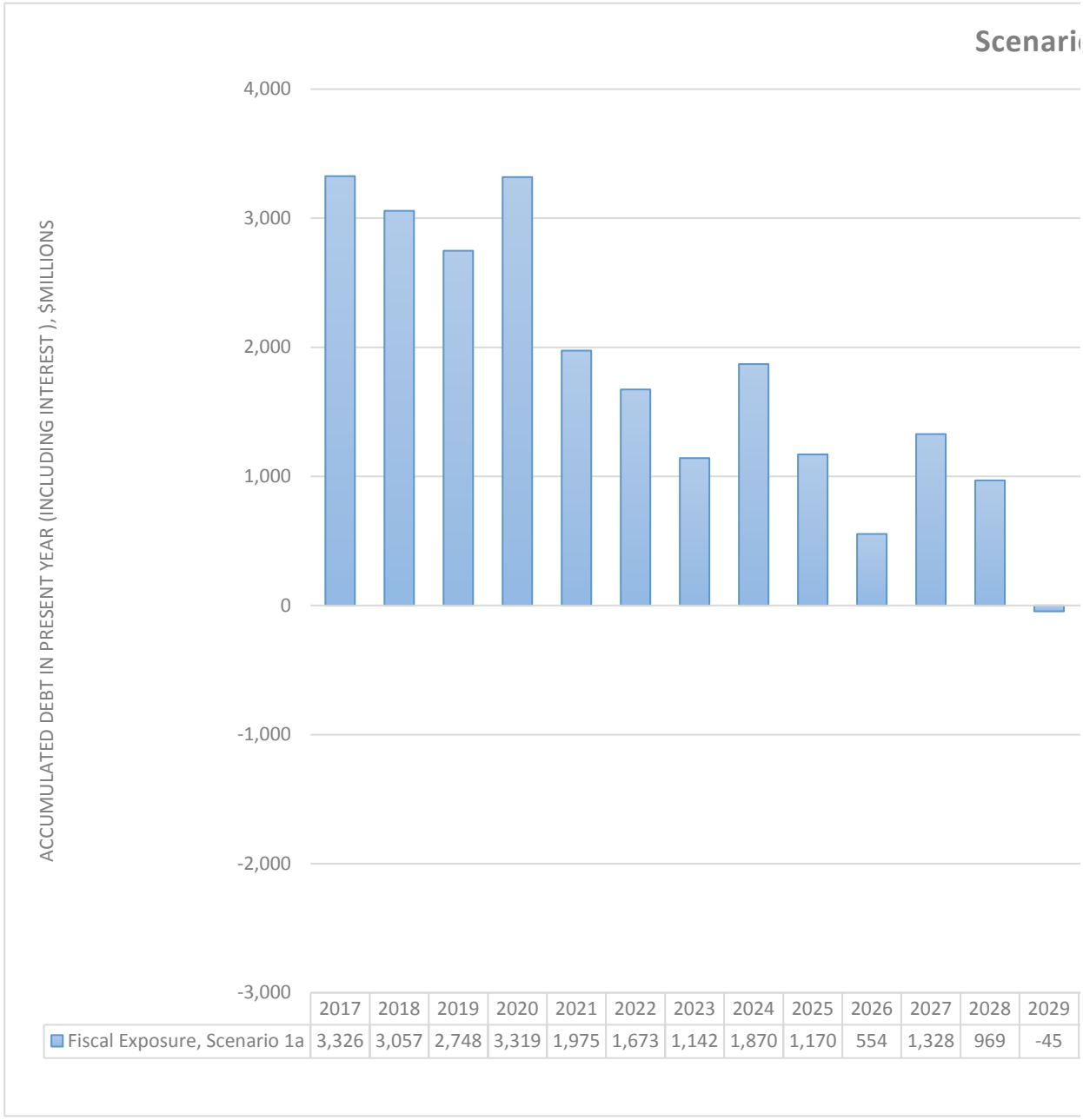
| 2050 |
|---|
| |
| 2,616 |
| 2,616 |
| 0 |
| |
| -6 |
| *0* |
| 0 |
| -6 |
| |
| 0 |
| |
| 0 |
| 6 |

| 2050 |
|---|
| |
| 2,616 |
| 2,616 |
| 0 |
| |
| 1 |
| *0* |
| 0 |
| 1 |
| |
| 0 |
| |
| 0 |
| -1 |

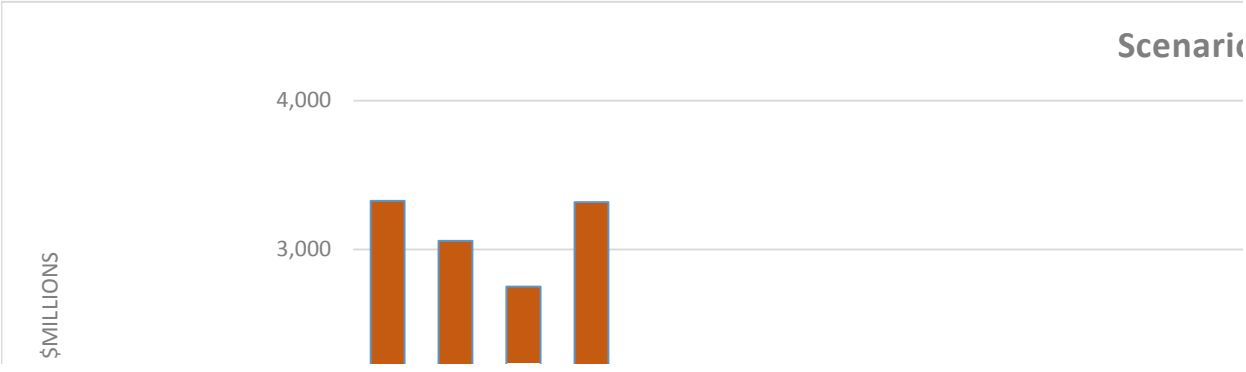
96

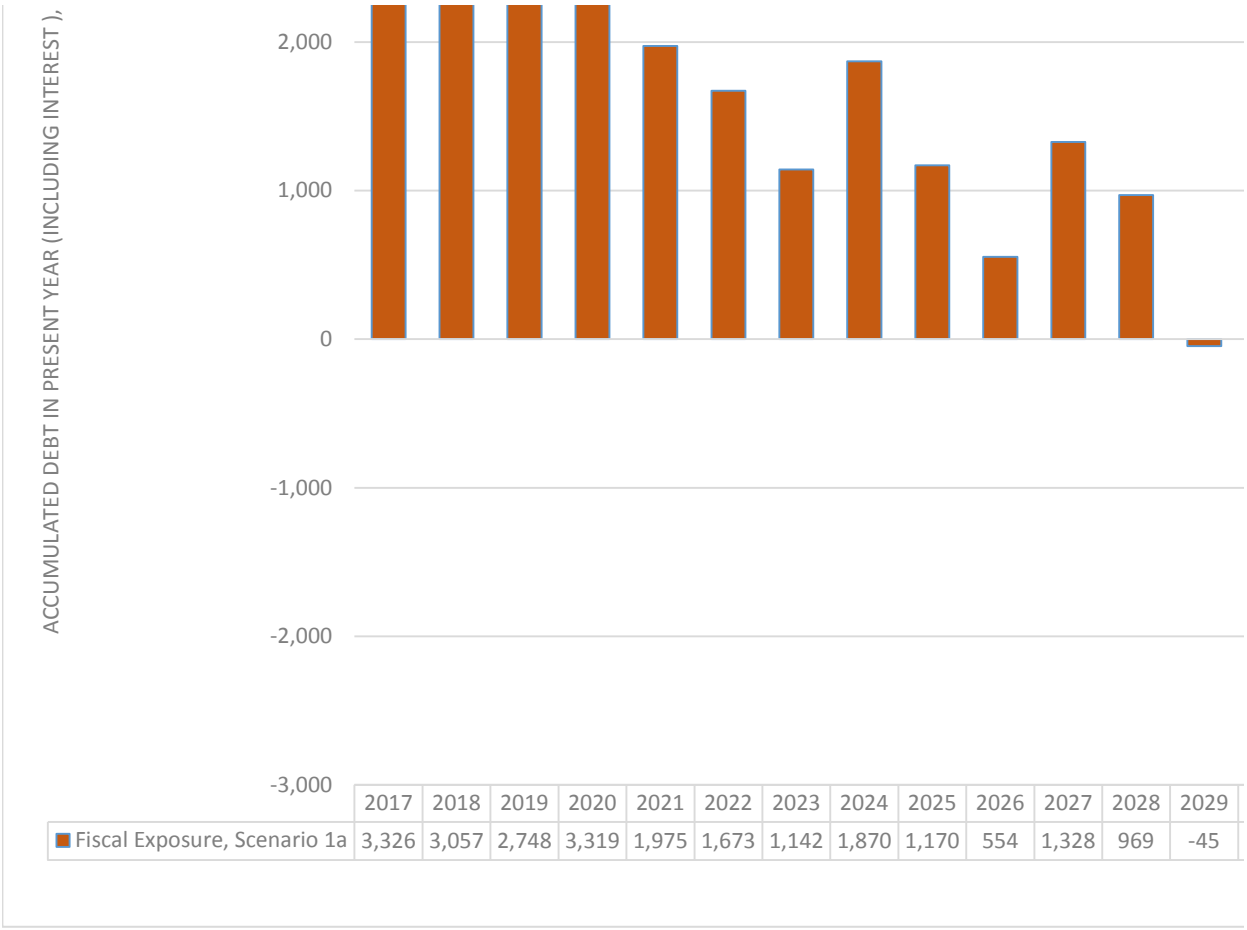
-10

| 2048 | 2049 | 2050 |
|---|---|---|
| 0 | 0 | 0 |



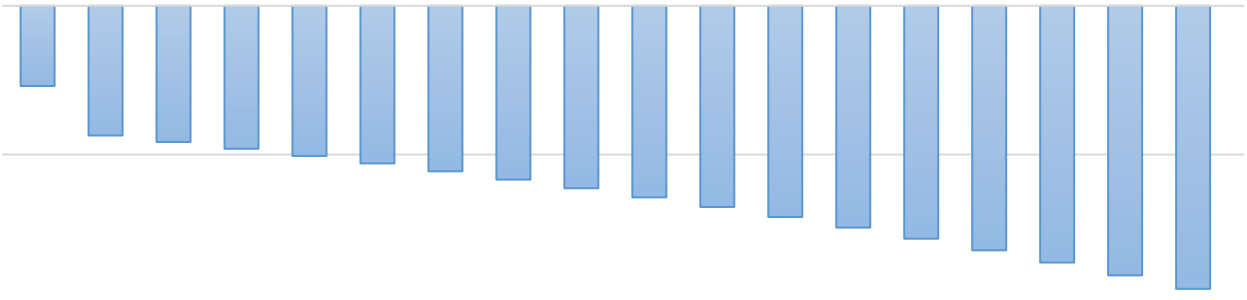

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fiscal Exposure, Scenario 1a | 3,326 | 3,057 | 2,748 | 3,319 | 1,975 | 1,673 | 1,142 | 1,870 | 1,170 | 554 | 1,328 | 969 | -45 |






| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fiscal Exposure, Scenario 1a | 3,326 | 3,057 | 2,748 | 3,319 | 1,975 | 1,673 | 1,142 | 1,870 | 1,170 | 554 | 1,328 | 969 | -45 |

## o 1a - Fiscal Exposure



| 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -540 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 | -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | |

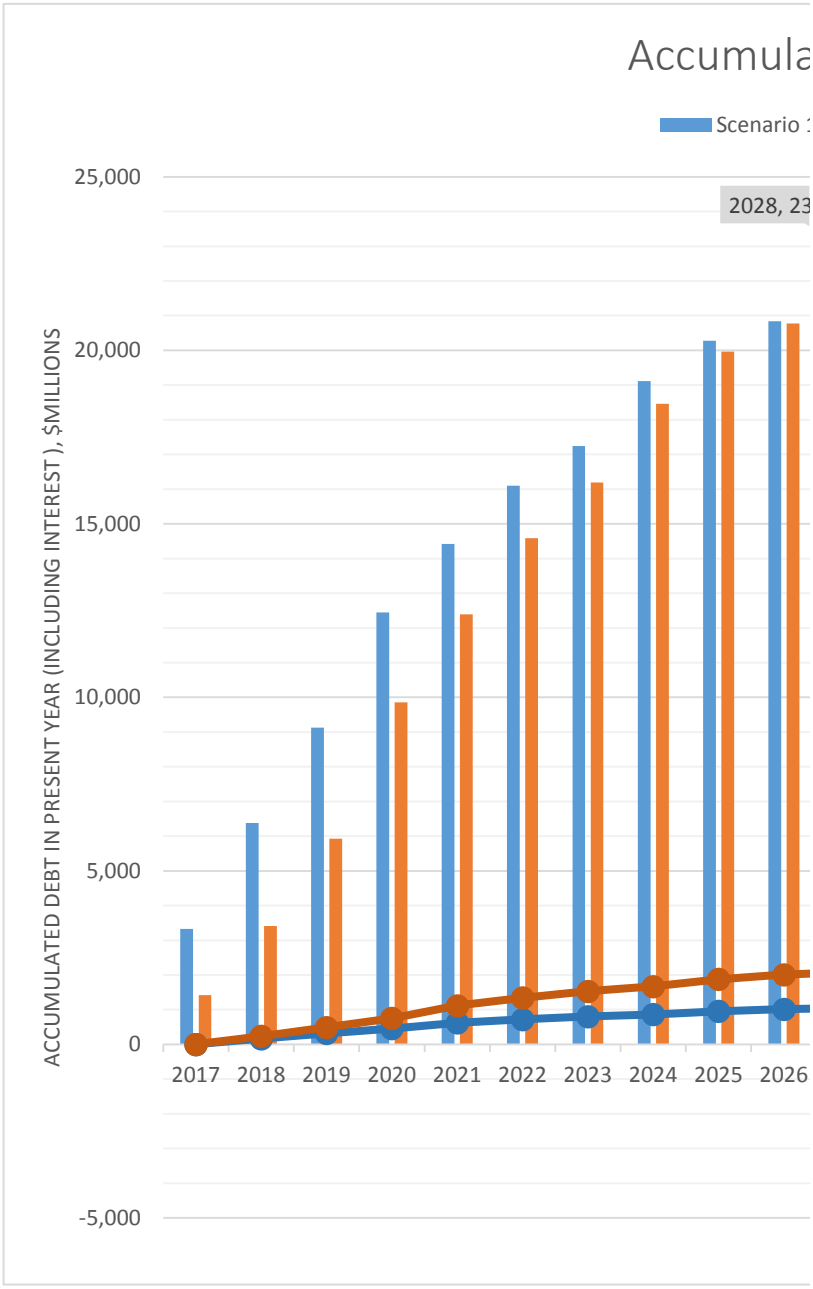
YEAR

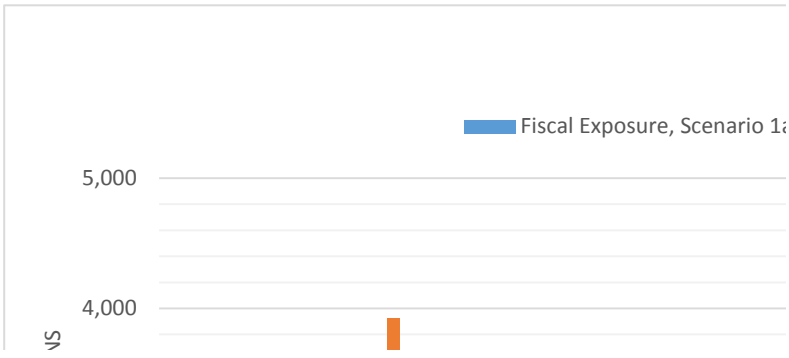
## o 1b - Fiscal Exposure

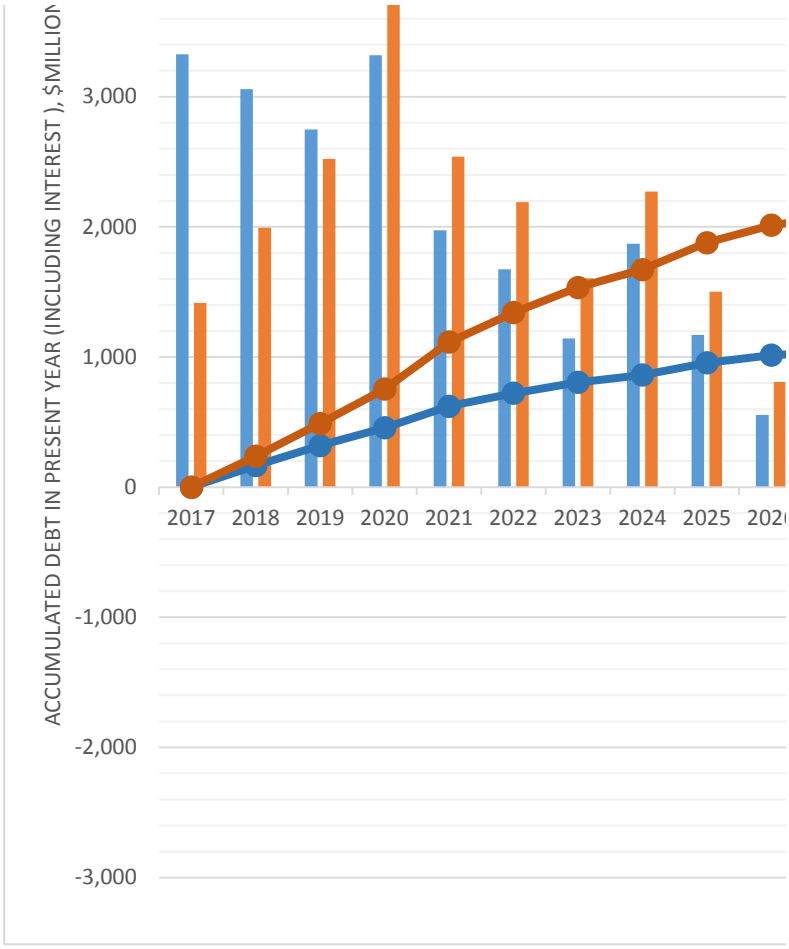
| 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -540 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 | -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | |

YEAR

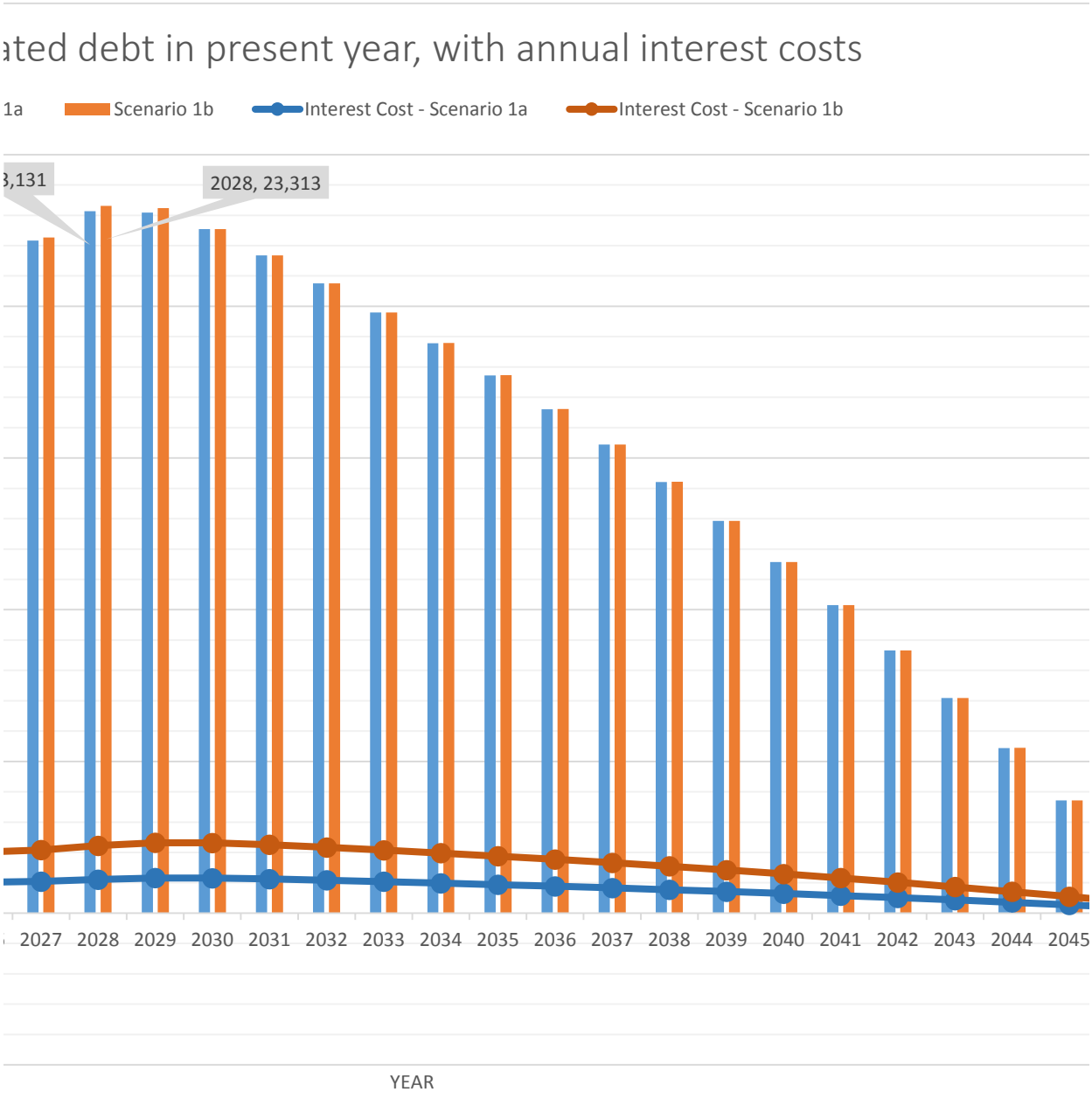
| 2048 | 2049 | 2050 |
|---|---|---|
| 0 | 0 | 0 |

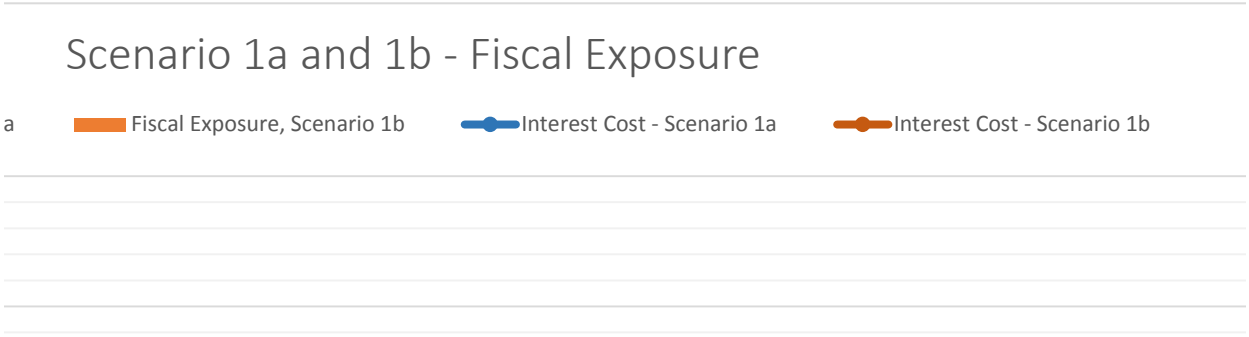


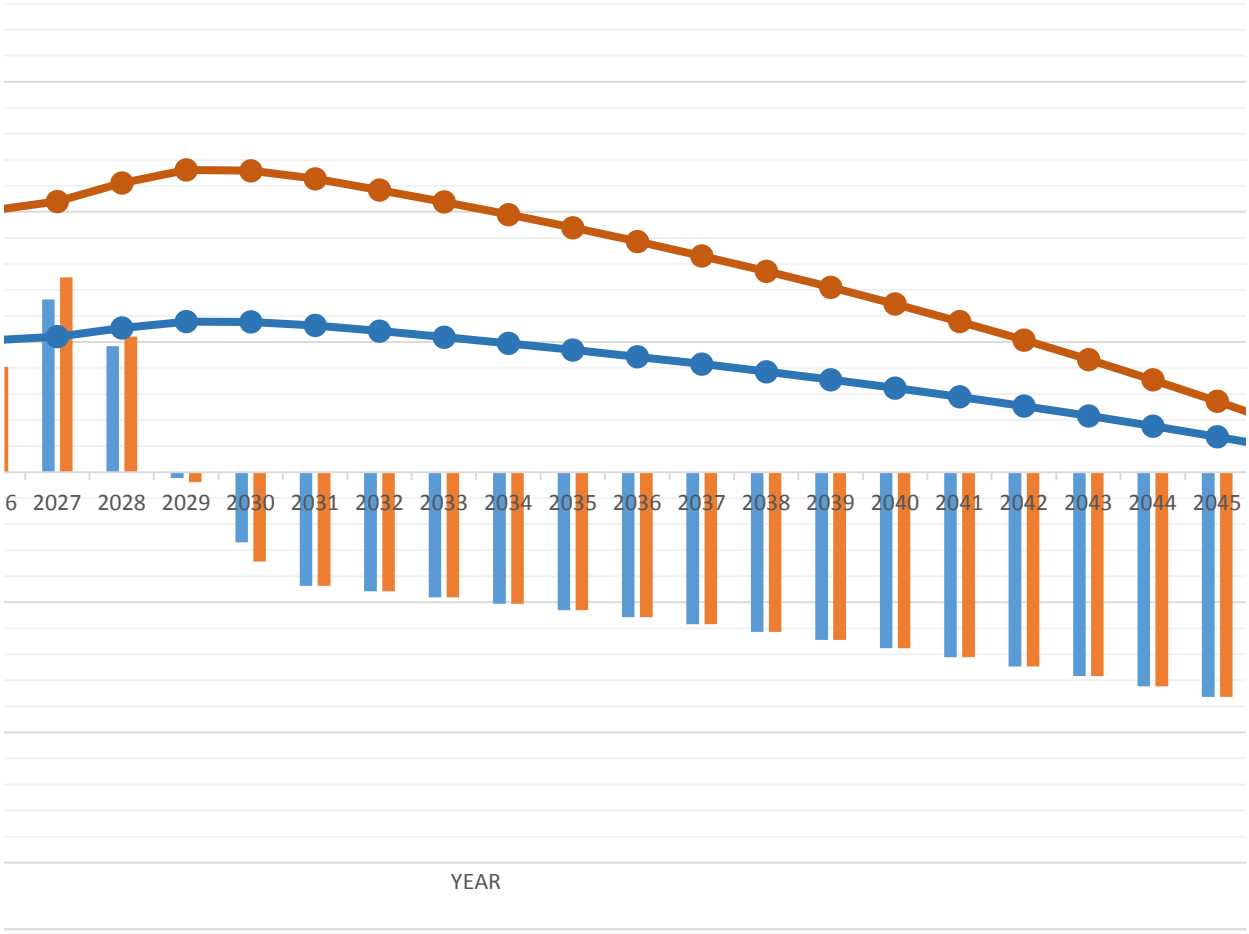






| 2048 | 2049 | 2050 |
|---|---|---|
| 0 | 0 | 0 |


ated debt in present year, with annual interest costs
1a
Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b
,131
2028, 23,313
2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045
YEAR


Scenario 1a and 1b - Fiscal Exposure
a
Fiscal Exposure, Scenario 1b
Interest Cost - Scenario 1a
Interest Cost - Scenario 1b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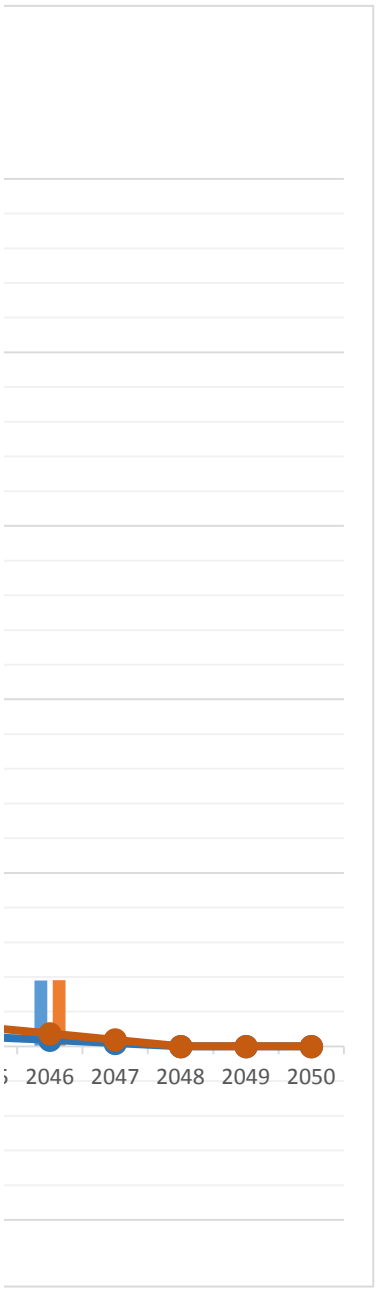
YEAR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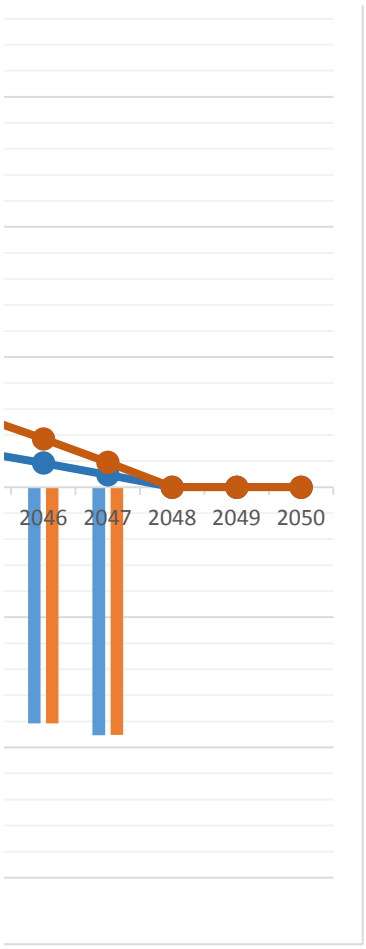
2046
2047
2048
2049
2050

**From:** Ronald Kwan
**To:** John Kim
**Cc:** Salman Qadir; Gavin He
**Subject:** RE: GA scenario
**Date:** Thursday, January 26, 2017 5:04:30 PM

Hi,

So assumption is borrowing is all end of year, not 1/12 per month, or even assumed mid-year on average? Not realistic, if so.

And can we label it fiscal exposure, and footnote it as accounting treatment is TBD?

Thanks,
Ron

---

**From:** John Kim
**Sent:** January-26-17 16:59
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: GA scenario

Hi Ron,

Pls. see attached spreadsheet from Salman which ties in with the scenarios provided.

Thanks,

John.

---

**From:** Salman Qadir
**Sent:** Thursday, January 26, 2017 1:33 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: GA scenario

Apologies, there was a referencing error in the charting. Updated is attached.

Salman

---

**From:** Salman Qadir
**Sent:** Thursday, January 26, 2017 12:07 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: GA scenario

Hi John,

Attached is a few charts for the fiscal impact for each scenario. Note that the assumption is that the debt is drawn down at the end of the year and interest on that drawdown incurs the following year.

Salman

---

**From:** John Kim
**Sent:** Thursday, January 26, 2017 10:53 AM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: GA scenario

Hi Salman,

Would you mind doing a fiscal impact chart for each scenarios? Essentially, the bump up in the debt would potentially be fiscal impact on the downside.

Thanks,

John.

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**From:** Malecki, Justin (ENERGY) [mailto:Justin.Malecki@ontario.ca]
**Sent:** Thursday, January 26, 2017 9:34 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Tim Christie (ENERGY) <Tim.Christie@ontario.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: GA scenario

Hello John,

Yes, the table Tim sent you yesterday is the 30-year financing version of scenario 1a. Below is the same table but for the 30-year financing version of scenario 1b. Don't hesitate to let us know if there is anything else you need.

Cheers,

Justin Malecki, PhD
Senior Advisor, Energy System Planning
Ontario Ministry of Energy
416-325-9372

| ***Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments ($ million)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 10,679 | 9,912 | 9,200 | 8,540 | 8,798 | 9,063 | 9,337 | 9,619 | 9,910 | 10,209 | 10,517 | 10,835 | 11,162 | 11,499 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 1,416 | 3,410 | 5,932 | 9,857 | 12,396 | 14,586 | 16,190 | 18,462 | 19,964 | 20,774 | 22,271 | 23,313 | 23,236 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-26-17 8:17 AM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA); Malecki, Justin (ENERGY)
**Subject:** RE: GA scenario

Thanks Tim.

Am I right in thinking this is the latest 1A? Could we also get the 1B?

John.

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**From:** Christie, Tim (ENERGY) [mailto:Tim.Christie@ontario.ca]
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**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Justin Malecki (ENERGY) <Justin.Malecki@ontario.ca>
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| **Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing *($ millions)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| Ratepayer GA Payment | 8,769 | 8,944 | 9,123 | 9,306 | 9,492 | 9,682 | 9,875 | 10,073 | 10,274 | 10,480 | 10,689 | 10,903 | 11,121 | 11,344 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
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**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-23-17 4:50 PM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA)
**Subject:** GA scenario

Hi Tim,

Hope all's well.

I left you a voicemail and wanted to clarify what I'm looking for. Would you have the accumulated debt figure, by year, for the 23bn scenario?

Thanks,

John.

Y. John Kim
Director, Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

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**From:** Salman Qadir
**To:** John Kim
**Cc:** Shajee Kathirgamanathan; Adam Prokop; Gavin He
**Subject:** RE: GA scenario
**Date:** Thursday, January 26, 2017 1:32:54 PM
**Attachments:** GA Financing - Scenario 1a 1b v1.xlsx

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Salman

---

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**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
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**Sent:** Thursday, January 26, 2017 9:34 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Tim Christie (ENERGY) <Tim.Christie@ontario.ca>
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Ph: 416-212-6996
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**Annual Interest Rate = 5%**

## Scenario 1a

**Debt Borrowing/Payment Sched**
***($ millions)***

a
c = a*5%
b
d = a+b+c

## Fiscal Impact, Scenario 1a

Provided by Energy

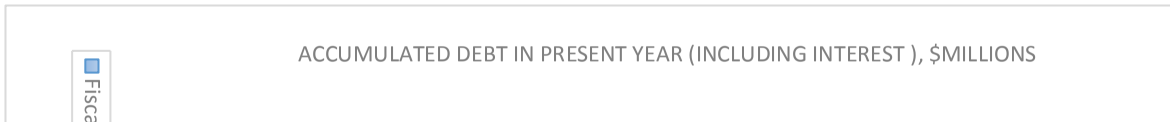
## Scenario 1b

**Debt Borrowing Payment Sched**
***($ million)***

a
c = a*5%
b
d = a+b+c

## Fiscal Impact, Scenario 1b

Provided by Energy


Fisca
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST ), $MILLIONS

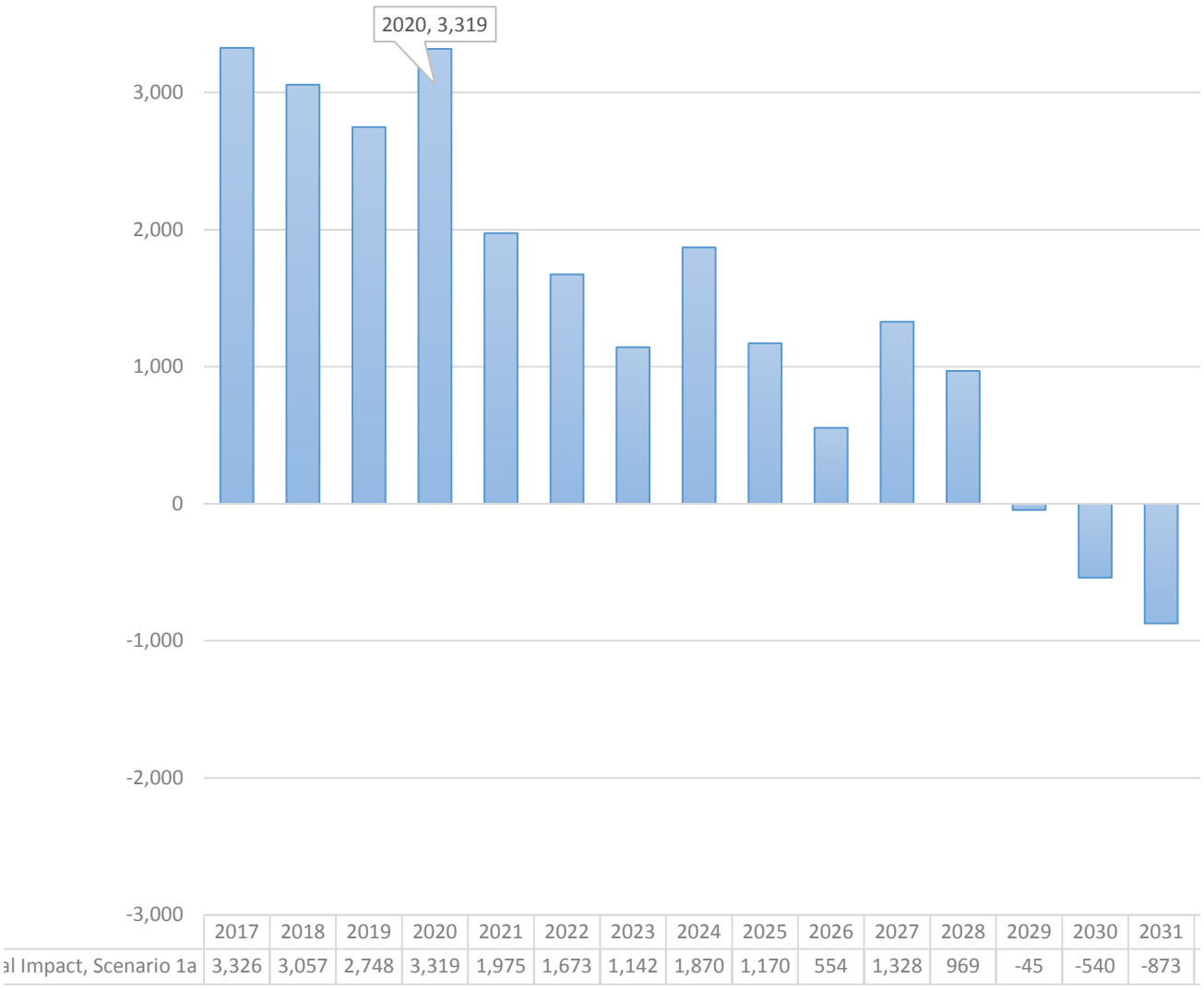
**Debt is drawn-down at end of Year**

| | 2017 | 2018 | 2019 |
|---|---|---|---|
| **dule for Scenario 1a. Moderate / GA Financing 30-year financing** | | | |
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 |
| Ratepayer GA Payment | 8,769 | 8,944 | 9,123 |
| GA Debt Requirement | 3,326 | 2,891 | 2,429 |
| Debt, Beginning of Year | 0 | 3,326 | 6,383 |
| *Interest Cost - Scenario 1a* | *0* | *166* | *319* |
| Additional GA Debt Drawdown, End of Year | 3,326 | 2,891 | 2,429 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 |
| | 3,326 | 3,057 | 2,748 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 |
| Errors | 0 | 0 | 0 |

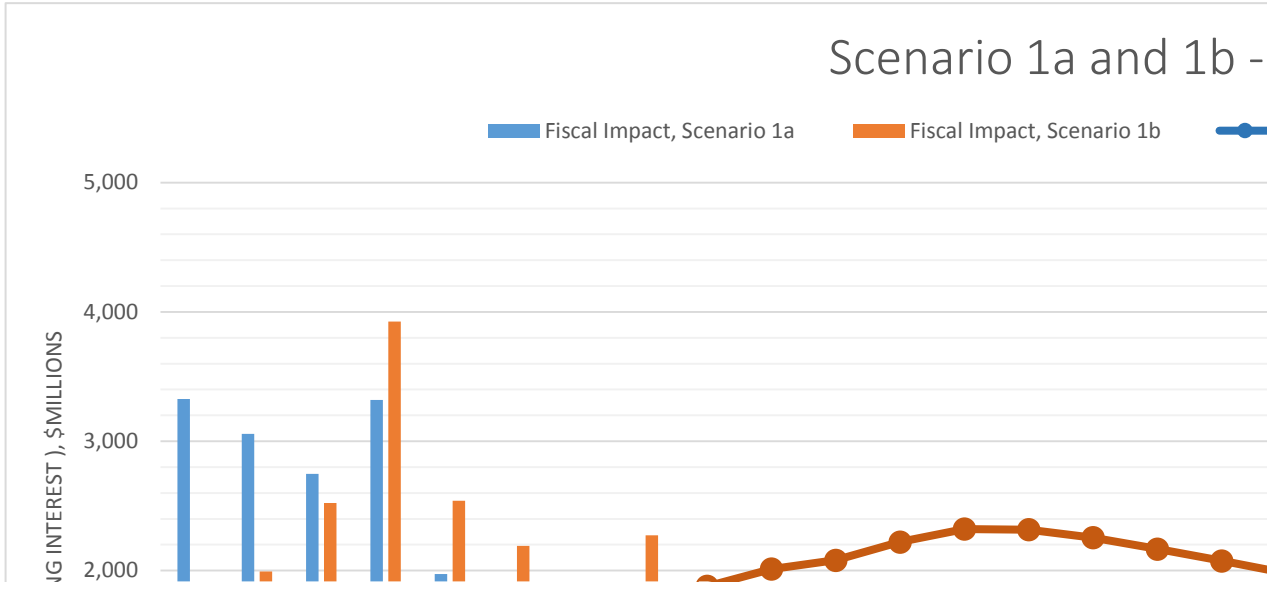
| | 2017 | 2018 | 2019 |
|---|---|---|---|
| **lule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments** | | | |
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 |
| Ratepayer GA Payment | 10,679 | 9,912 | 9,200 |
| GA Debt Requirement | 1,416 | 1,923 | 2,352 |
| Debt, Beginning of Year | 0 | 1,416 | 3,410 |
| *Interest Cost - Scenario 1b* | *0* | *71* | *170* |
| Additional GA Debt Drawdown, End of Year | 1,416 | 1,923 | 2,352 |
| Accumulated debt in present year (including 5% annual interest) | 1,416 | 3,410 | 5,932 |
| | 1,416 | 1,994 | 2,522 |
| Accumulated debt in present year (including 5% annual interest) | 1,416 | 3,410 | 5,932 |
| Errors | 0 | 0 | 0 |

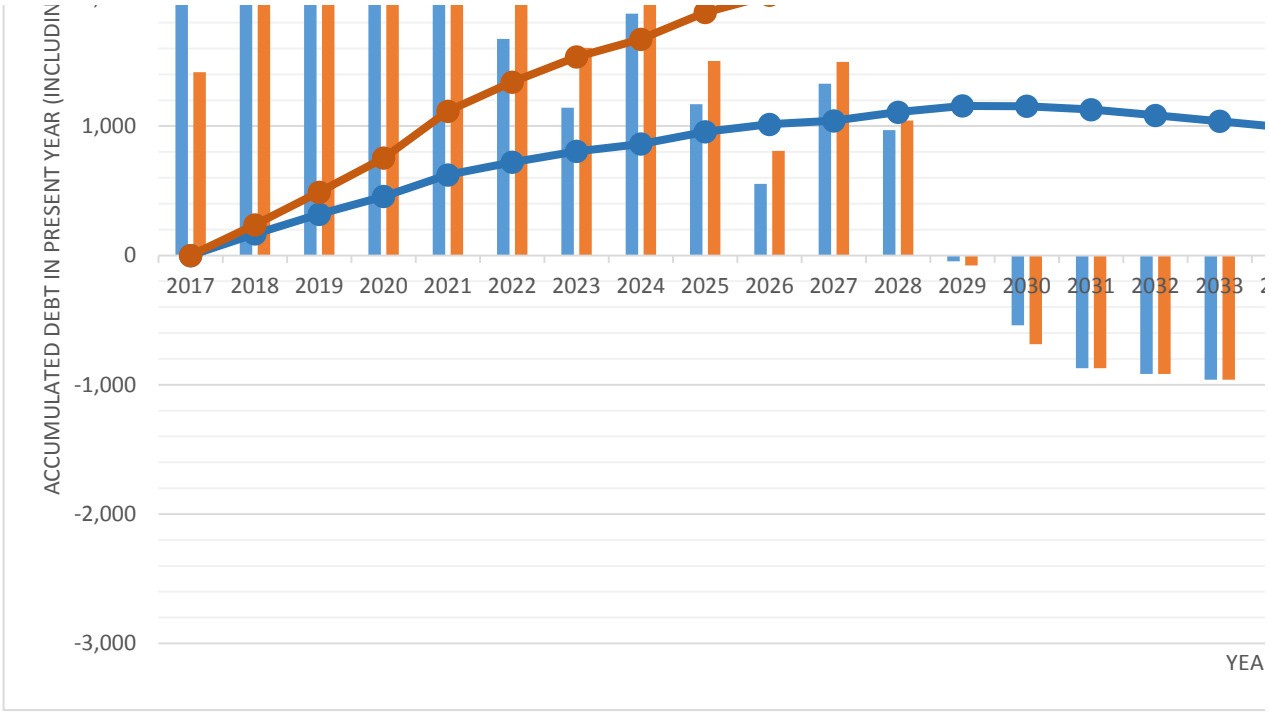
**Scenario 1a - F**

4,000




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| al Impact, Scenario 1a | 3,326 | 3,057 | 2,748 | 3,319 | 1,975 | 1,673 | 1,142 | 1,870 | 1,170 | 554 | 1,328 | 969 | -45 | -540 | -873 |

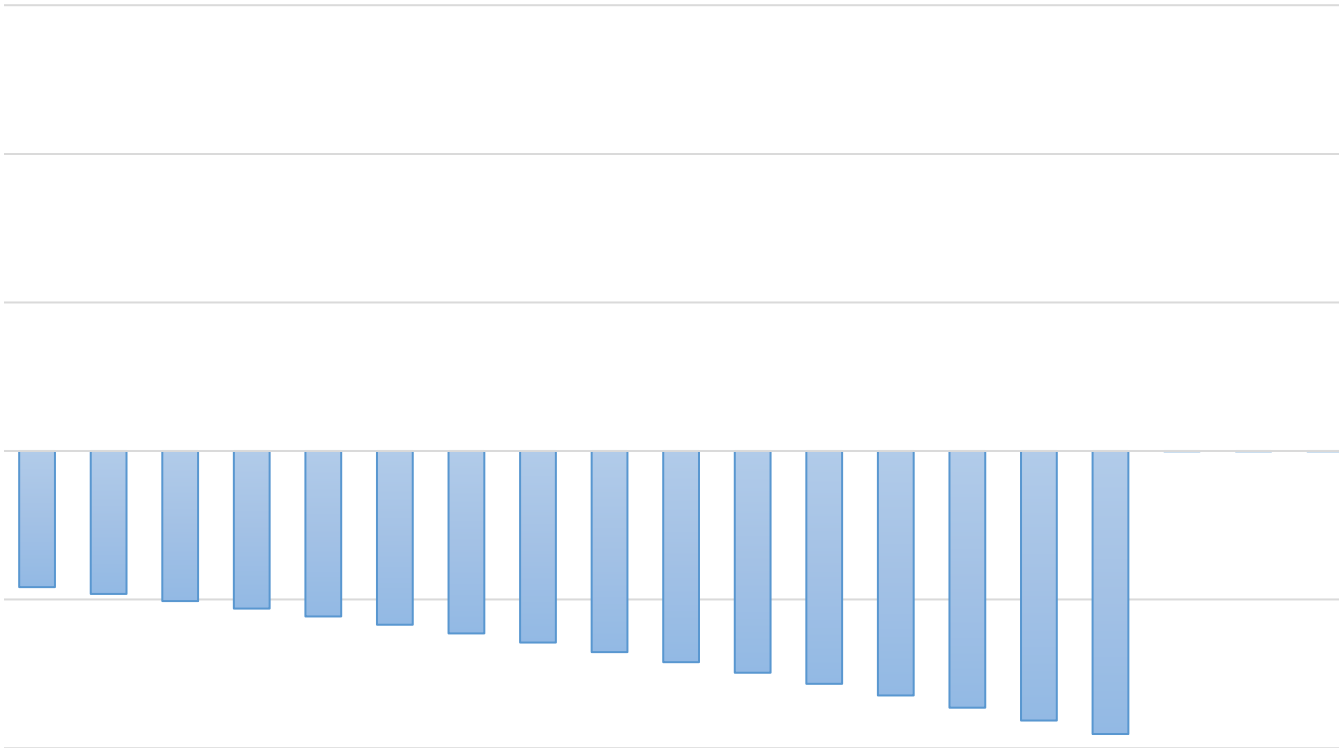



ACCUMULATED DEBT IN PRESENT YEAR (INCLUDIN
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
YEA

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|---|---|---|---|---|---|---|---|---|---|
| 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 |
| 9,306 | 9,492 | 9,682 | 9,875 | 10,073 | 10,274 | 10,480 | 10,689 | 10,903 | 11,121 |
| 2,862 | 1,352 | 952 | 337 | 1,008 | 215 | -460 | 286 | -139 | -1,202 |
| 9,131 | 12,450 | 14,425 | 16,098 | 17,240 | 19,110 | 20,280 | 20,834 | 22,162 | 23,131 |
| *457* | *623* | *721* | *805* | *862* | *955* | *1,014* | *1,042* | *1,108* | *1,157* |
| 2,862 | 1,352 | 952 | 337 | 1,008 | 215 | -460 | 286 | -139 | -1,202 |
| 12,450 | 14,425 | 16,098 | 17,240 | 19,110 | 20,280 | 20,834 | 22,162 | 23,131 | 23,085 |
| 3,319 | 1,975 | 1,673 | 1,142 | 1,870 | 1,170 | 554 | 1,328 | 969 | -45 |
| 12,451 | 14,425 | 16,098 | 17,240 | 19,111 | 20,281 | 20,836 | 22,164 | 23,133 | 23,087 |
| 1 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 2 |

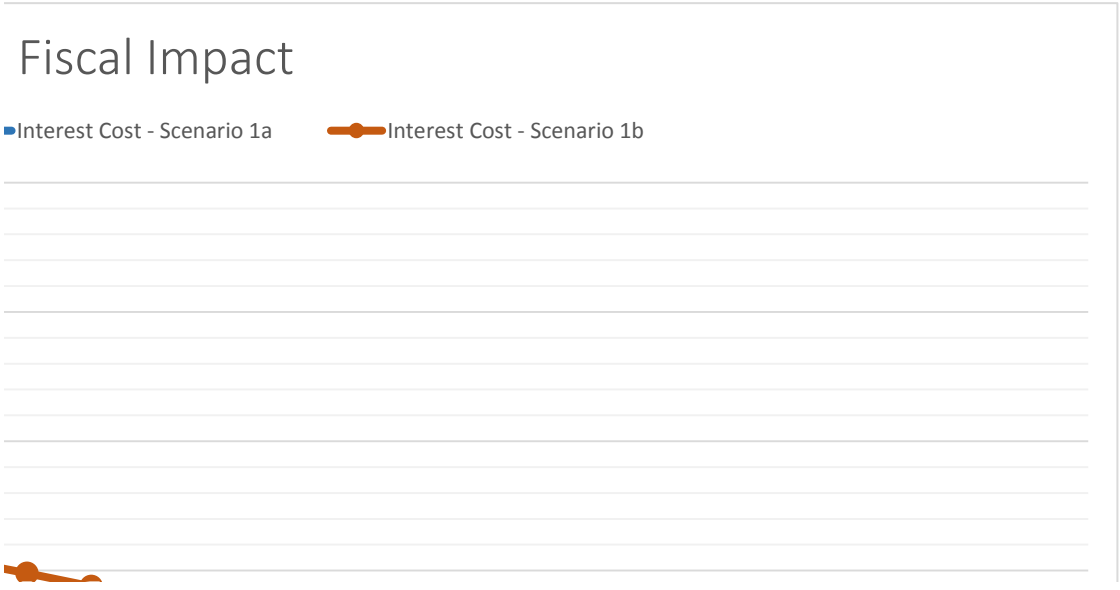
| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|---|---|---|---|---|---|---|---|---|---|
| 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 |
| 8,540 | 8,798 | 9,063 | 9,337 | 9,619 | 9,910 | 10,209 | 10,517 | 10,835 | 11,162 |
| 3,628 | 2,046 | 1,571 | 875 | 1,462 | 579 | -189 | 458 | -71 | -1,243 |
| 5,932 | 9,857 | 12,396 | 14,587 | 16,191 | 18,462 | 19,965 | 20,774 | 22,270 | 23,313 |
| *297* | *493* | *620* | *729* | *810* | *923* | *998* | *1,039* | *1,114* | *1,166* |
| 3,628 | 2,046 | 1,571 | 875 | 1,462 | 579 | -189 | 458 | -71 | -1,243 |
| 9,857 | 12,396 | 14,587 | 16,191 | 18,462 | 19,965 | 20,774 | 22,270 | 23,313 | 23,236 |
| 3,925 | 2,539 | 2,191 | 1,604 | 2,272 | 1,502 | 809 | 1,497 | 1,043 | -77 |
| 9,857 | 12,396 | 14,586 | 16,190 | 18,462 | 19,964 | 20,774 | 22,271 | 23,313 | 23,236 |
| 0 | 0 | -1 | -1 | 0 | -1 | 0 | 1 | 0 | 0 |

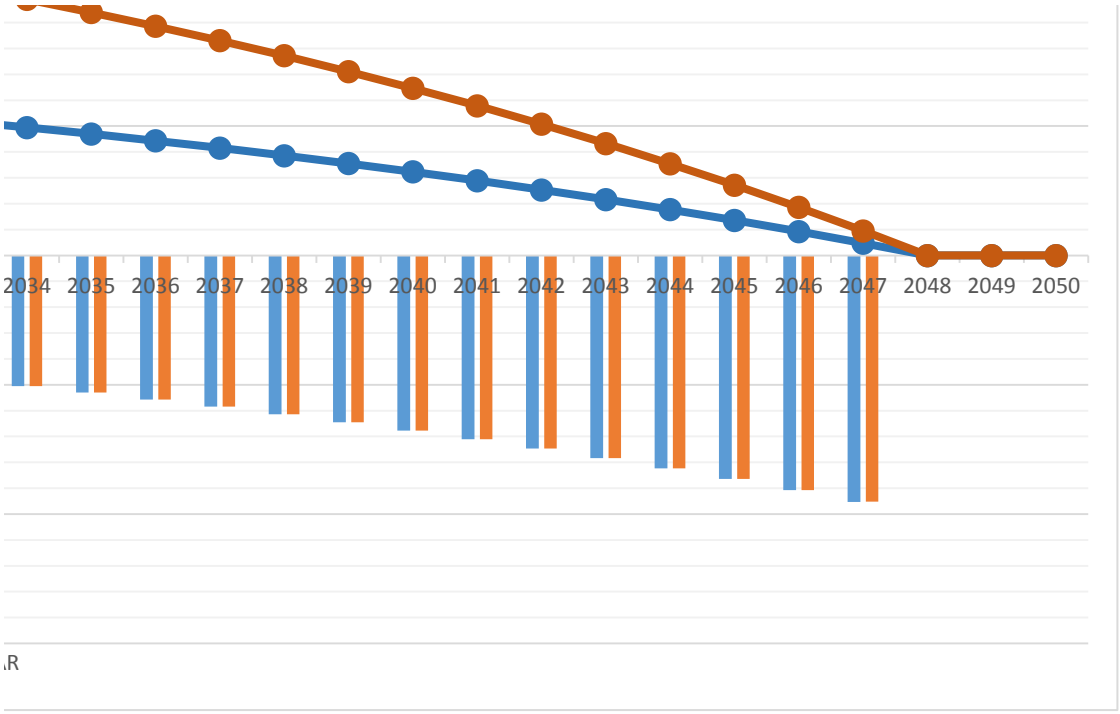
## Fiscal Impact



| 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 205 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 | -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | 0 | 0 | 0 |

YEAR




2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
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2046
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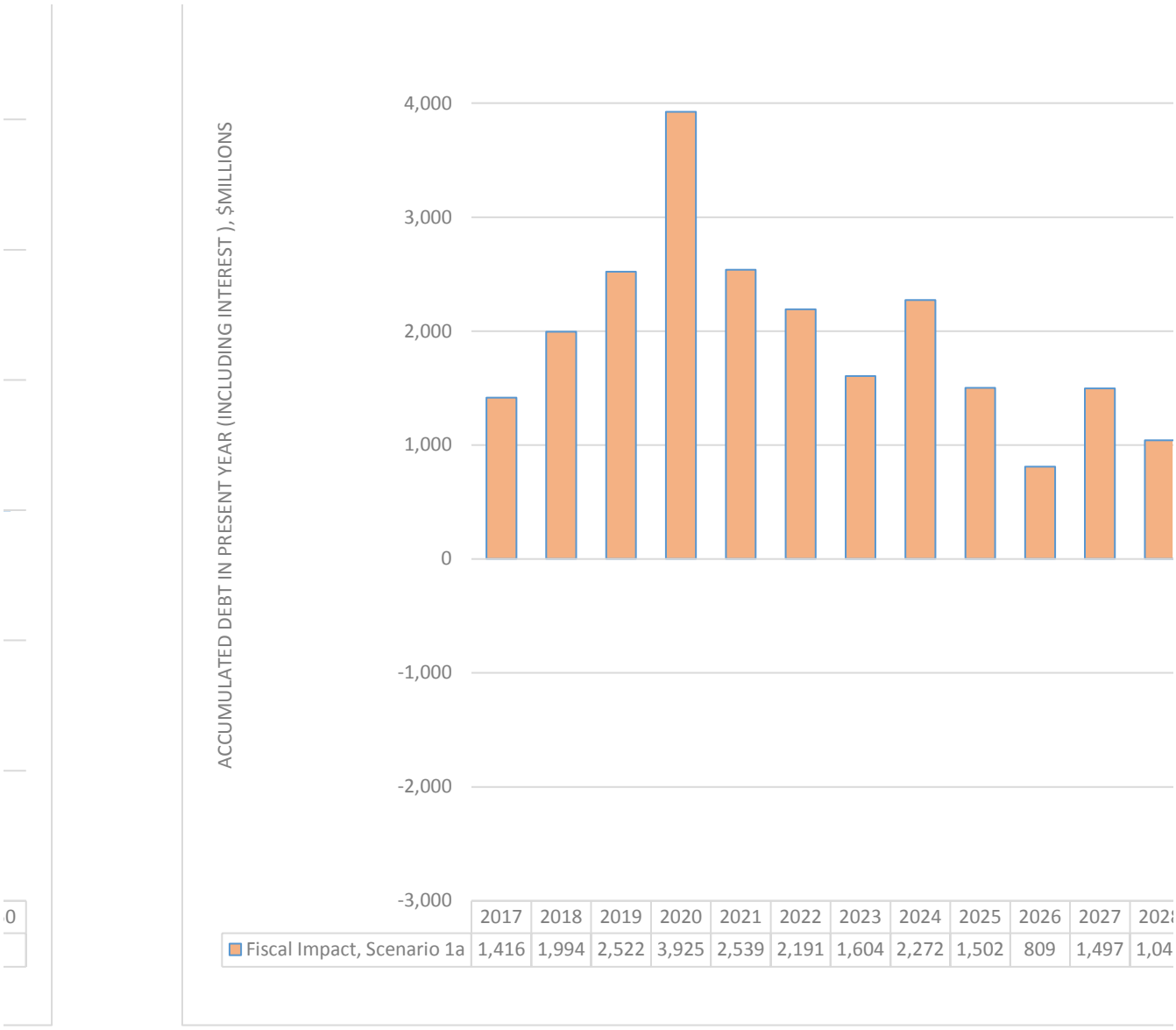
2049
2050
AR

| 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
|---|---|---|---|---|---|---|---|---|---|
| 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 |
| 11,344 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 |
| -1,694 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 |
| 23,085 | 22,546 | 21,673 | 20,757 | 19,795 | 18,784 | 17,723 | 16,610 | 15,440 | 14,212 |
| *1,154* | *1,127* | *1,084* | *1,038* | *990* | *939* | *886* | *830* | *772* | *711* |
| -1,694 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 |
| 22,546 | 21,673 | 20,757 | 19,795 | 18,784 | 17,723 | 16,610 | 15,440 | 14,212 | 12,923 |
| -540 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 |
| 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 |
| 2 | 3 | 2 | 2 | 3 | 4 | 3 | 3 | 4 | 3 |

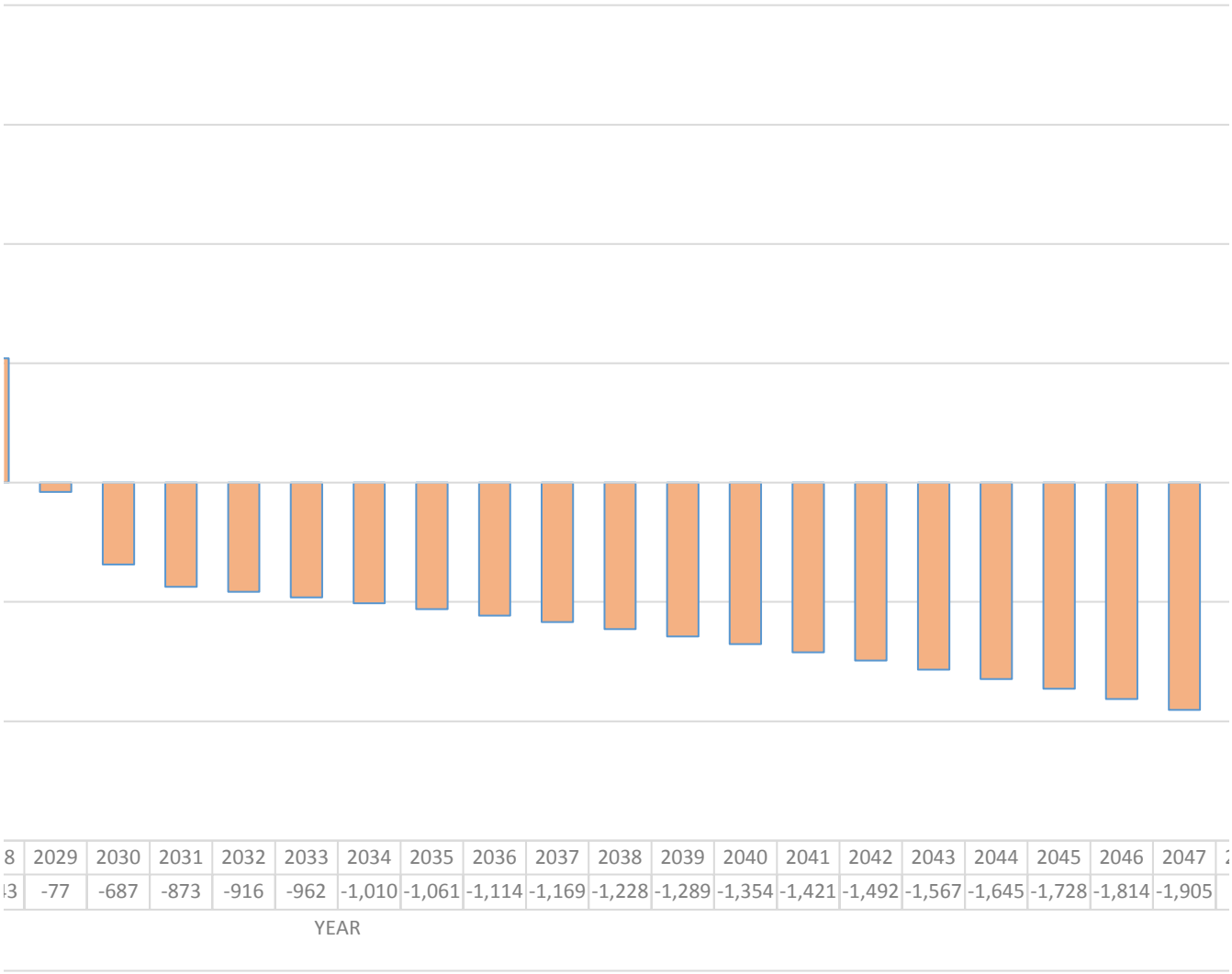
| 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
|---|---|---|---|---|---|---|---|---|---|
| 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 |
| 11,499 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 |
| -1,849 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 |
| 23,236 | 22,548 | 21,676 | 20,760 | 19,798 | 18,787 | 17,727 | 16,613 | 15,444 | 14,216 |
| *1,162* | *1,127* | *1,084* | *1,038* | *990* | *939* | *886* | *831* | *772* | *711* |
| -1,849 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 |
| 22,548 | 21,676 | 20,760 | 19,798 | 18,787 | 17,727 | 16,613 | 15,444 | 14,216 | 12,927 |
| -687 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,169 | -1,228 | -1,289 |
| 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 |
| 0 | 0 | -1 | -1 | 0 | 0 | 0 | -1 | 0 | -1 |


ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST ), $MILLIONS
4,000
3,000
2,000
1,000
0
-1,000
-2,000
-3,000
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027
Fiscal Impact, Scenario 1a 1,416 1,994 2,522 3,925 2,539 2,191 1,604 2,272 1,502 809 1,497

| 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 |
|---|---|---|---|---|---|---|---|---|---|
| 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 |
| 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 |
| -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | 0 | 0 |
| 12,923 | 11,569 | 10,147 | 8,655 | 7,087 | 5,442 | 3,714 | 1,900 | -5 | -6 |
| *646* | *578* | *507* | *433* | *354* | *272* | *186* | *95* | *0* | *0* |
| -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | 0 | 0 |
| 11,569 | 10,147 | 8,655 | 7,087 | 5,442 | 3,714 | 1,900 | -5 | -6 | -6 |
| -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | 0 | 0 |
| 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 |
| 4 | 4 | 4 | 5 | 4 | 5 | 5 | 5 | 6 | 6 |

| 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 |
|---|---|---|---|---|---|---|---|---|---|
| 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 |
| 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 |
| -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | 0 | 0 |
| 12,927 | 11,573 | 10,152 | 8,659 | 7,092 | 5,447 | 3,719 | 1,905 | 1 | 1 |
| *646* | *579* | *508* | *433* | *355* | *272* | *186* | *95* | *0* | *0* |
| -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | 0 | 0 |
| 11,573 | 10,152 | 8,659 | 7,092 | 5,447 | 3,719 | 1,905 | 1 | 1 | 1 |
| -1,354 | -1,421 | -1,492 | -1,567 | -1,645 | -1,728 | -1,814 | -1,905 | 0 | 0 |
| 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 |
| 0 | -1 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | -1 |

## Scenario 1b - Fiscal Impact

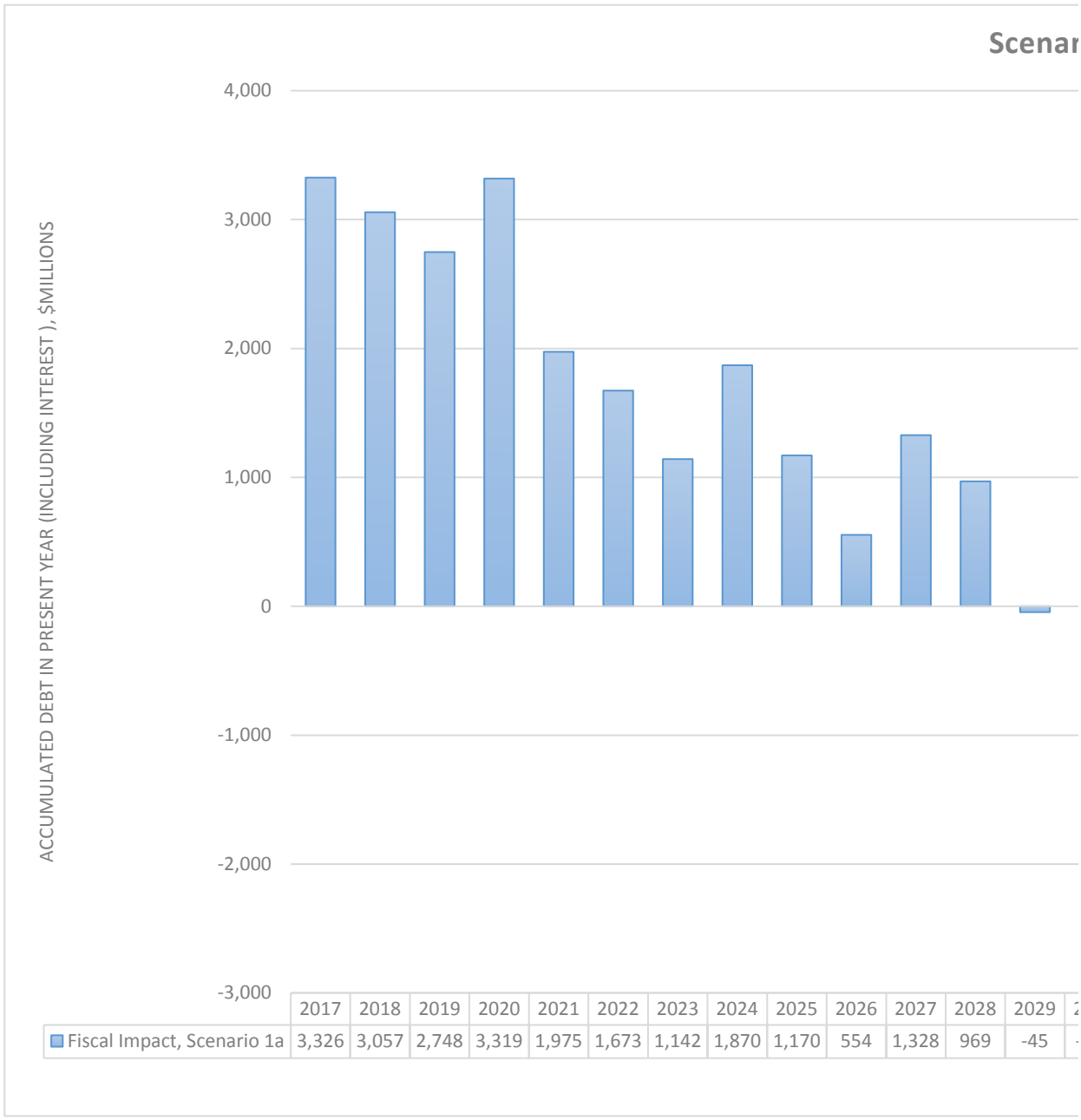


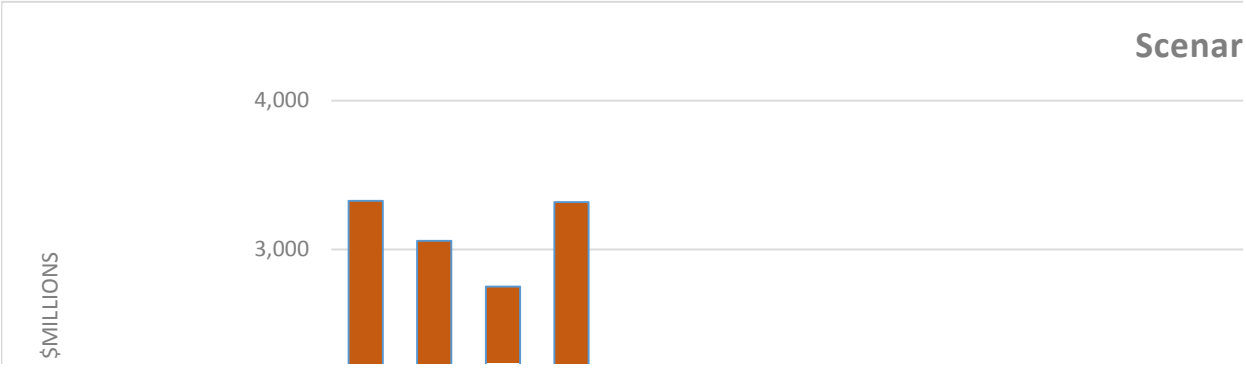
| 8 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | -77 | -687 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,169 | -1,228 | -1,289 | -1,354 | -1,421 | -1,492 | -1,567 | -1,645 | -1,728 | -1,814 | -1,905 | |

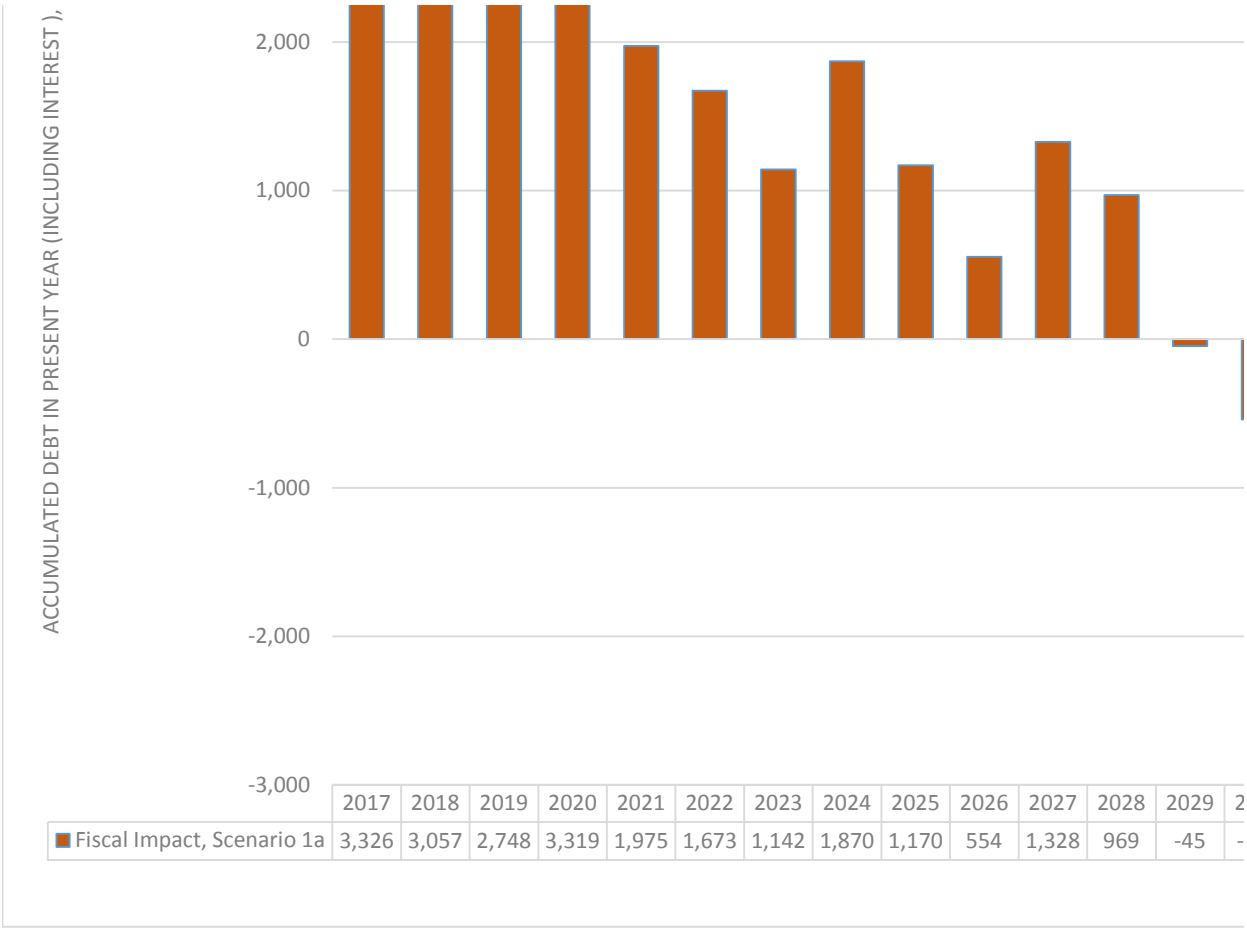
YEAR

| 2050 |
|---|
| |
| 2,616 |
| 2,616 |
| 0 |
| |
| -6 |
| *0* |
| 0 |
| -6 |
| |
| 0 |
| |
| 0 |
| 6 96 |
| |
| 2050 |
| |
| 2,616 |
| 2,616 |
| 0 |
| |
| 1 |
| *0* |
| 0 |
| 1 |
| |
| 0 |
| |
| 0 |
| -1 -10 |

| 2048 | 2049 | 2050 |
|---|---|---|
| 0 | 0 | 0 |

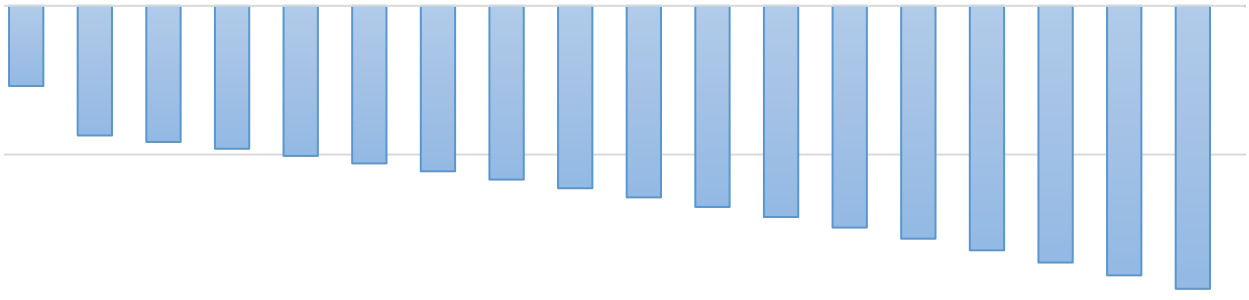

Scenar
4,000
3,000
2,000
1,000
0
-1,000
-2,000
-3,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST ), $MILLIONS
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029
Fiscal Impact, Scenario 1a 3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,170 554 1,328 969 -45


Scenar
4,000
3,000
$MILLIONS




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fiscal Impact, Scenario 1a | 3,326 | 3,057 | 2,748 | 3,319 | 1,975 | 1,673 | 1,142 | 1,870 | 1,170 | 554 | 1,328 | 969 | -45 | - |

## rio 1a - Fiscal Impact



| 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -540 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 | -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | |

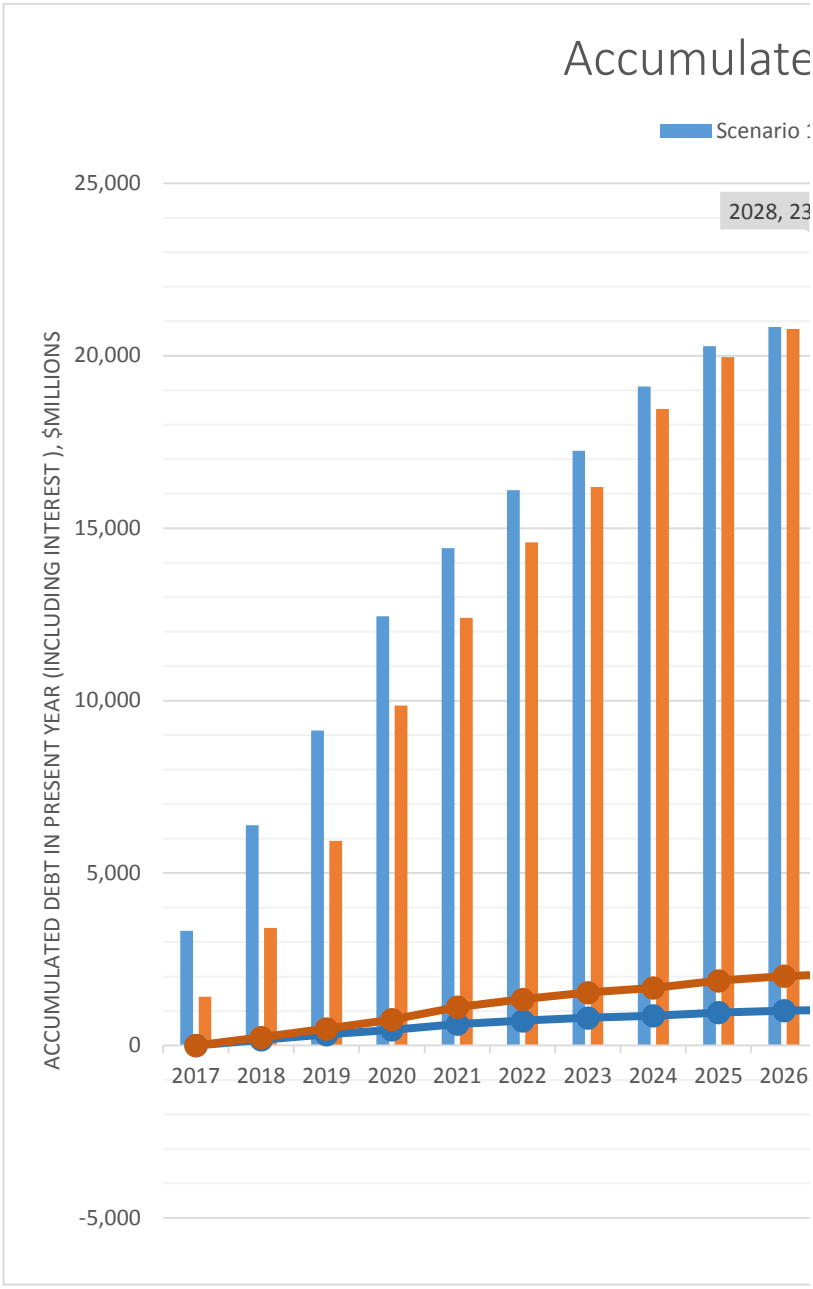
YEAR

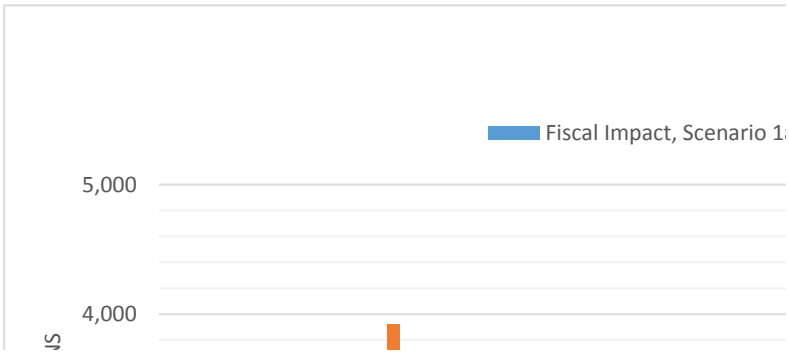
## io 1b - Fiscal Impact

| 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -540 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 | -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | |

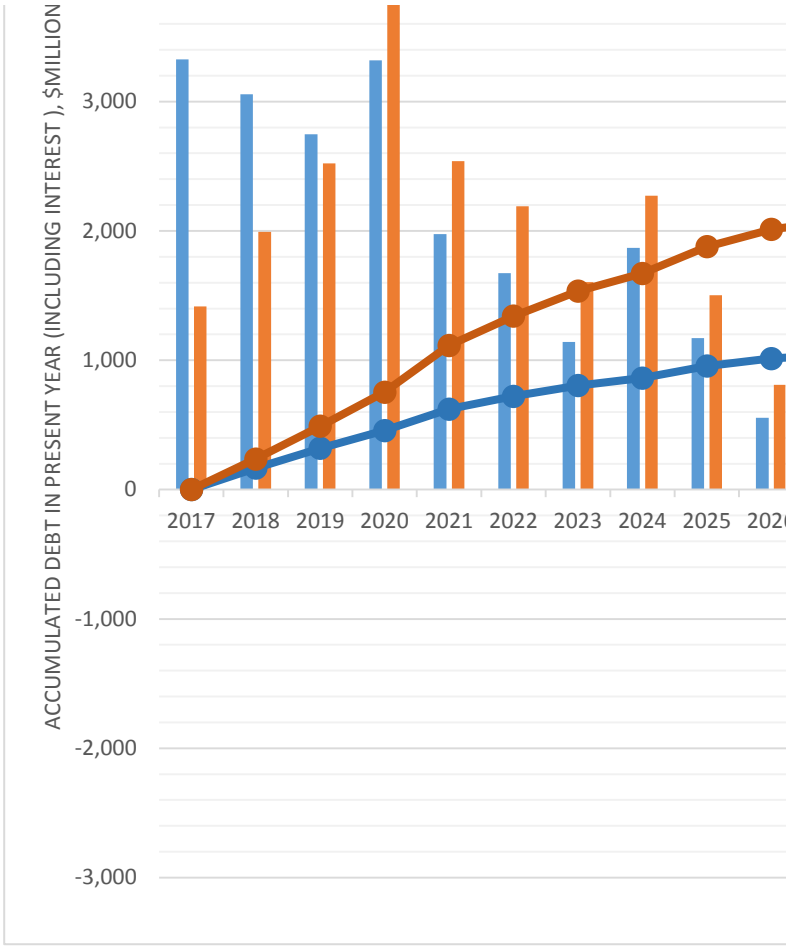
YEAR

| 2048 | 2049 | 2050 |
|---|---|---|
| 0 | 0 | 0 |

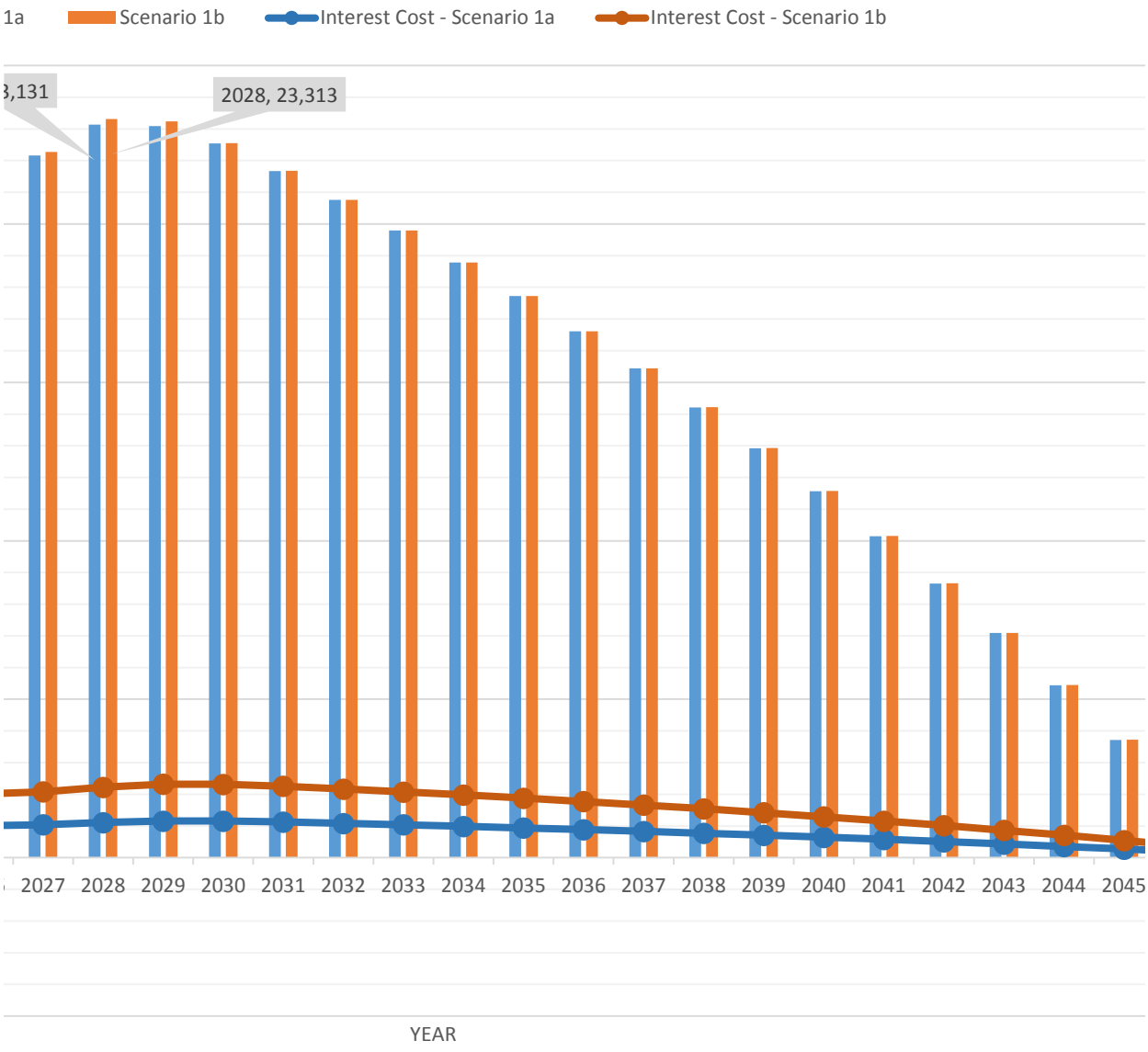


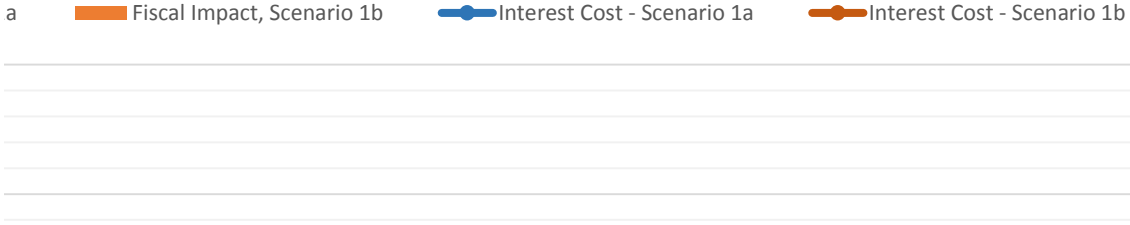
| 2048 | 2049 | 2050 |
|---|---|---|
| 0 | 0 | 0 |

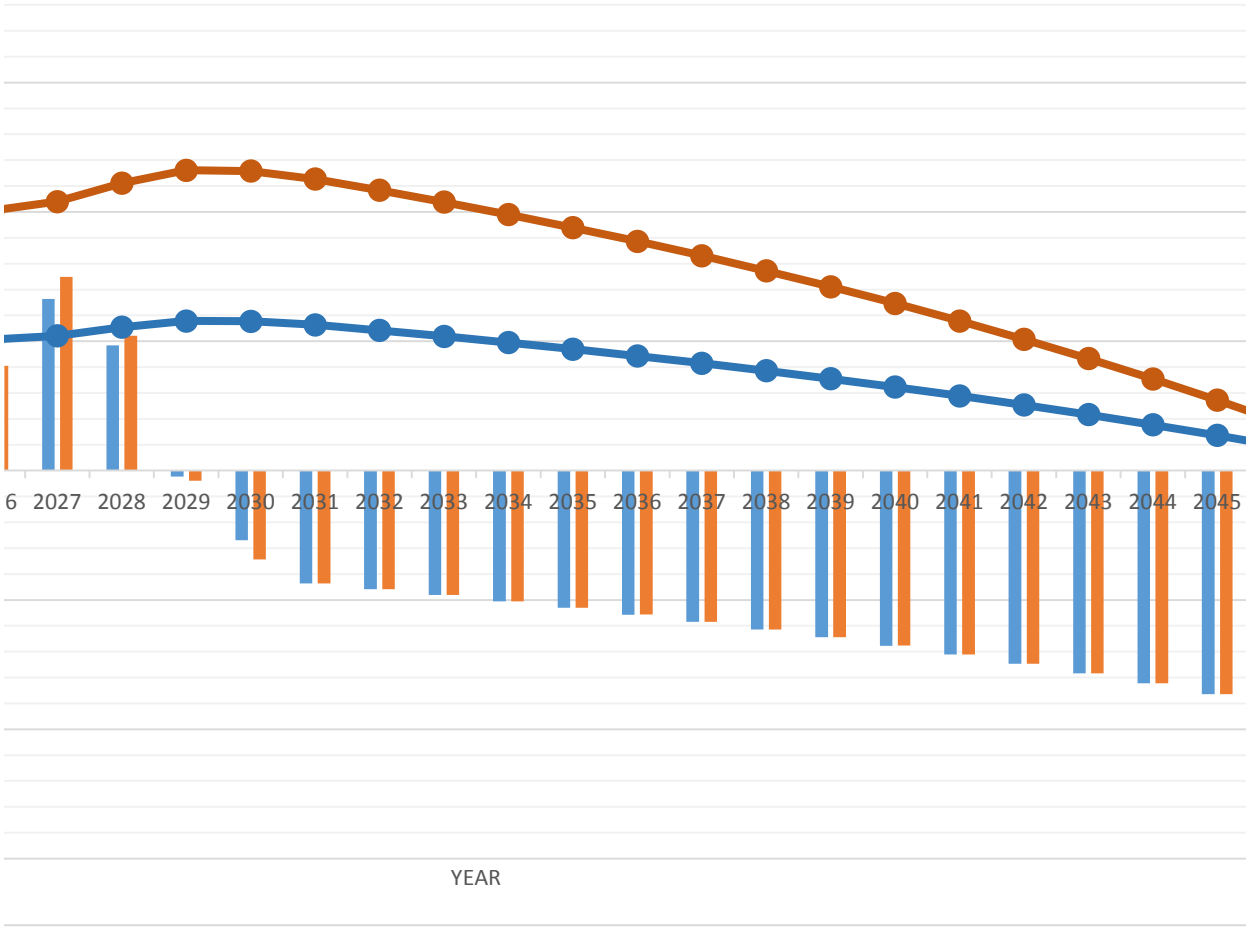


## ed debt in present year, with annual interest costs




## Scenario 1a and 1b - Fiscal Impact




6
2027
2028
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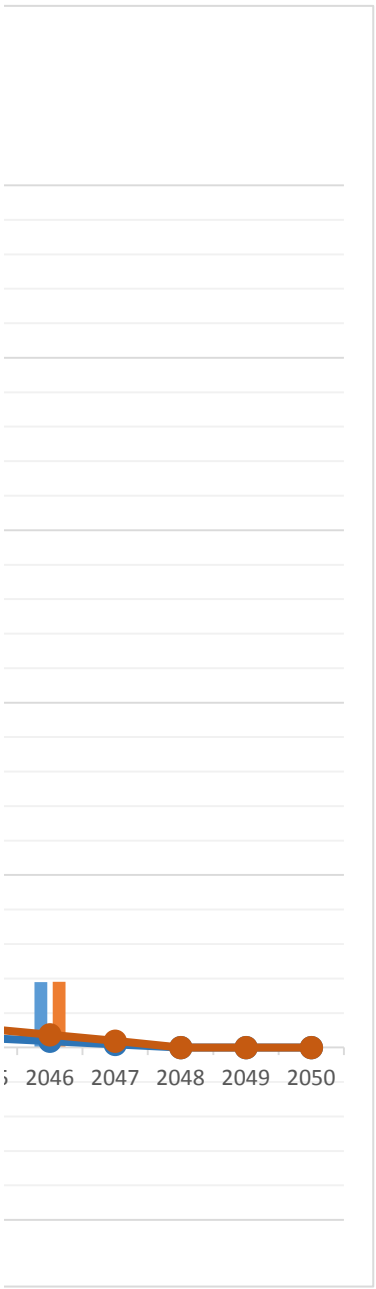
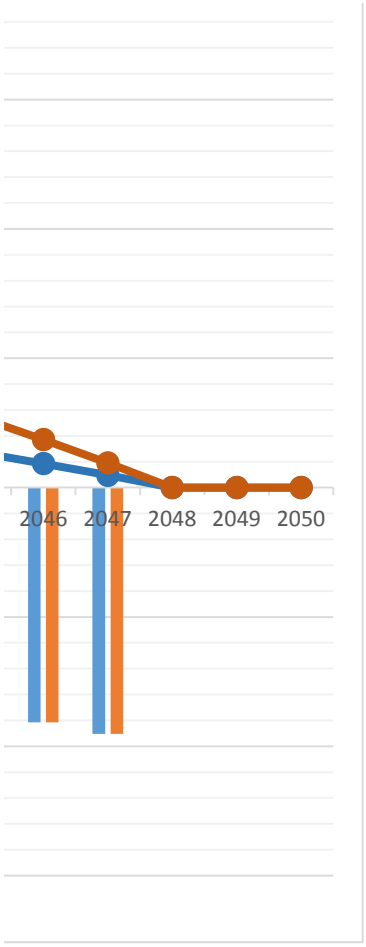
2044
2045
YEAR


2046
2047
2048
2049
2050


2046
2047
2048
2049
2050

**From:** Salman Qadir
**To:** John Kim
**Cc:** Shajee Kathirgamanathan; Adam Prokop; Gavin He
**Subject:** RE: GA scenario
**Date:** Thursday, January 26, 2017 12:08:49 PM
**Attachments:** GA Financing - Scenario 1a 1b v1.xlsx

Hi John,

Attached is a few charts for the fiscal impact for each scenario. Note that the assumption is that the debt is drawn down at the end of the year and interest on that drawdown incurs the following year.

Salman

---

**From:** John Kim
**Sent:** Thursday, January 26, 2017 10:53 AM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: GA scenario

Hi Salman,

Would you mind doing a fiscal impact chart for each scenarios? Essentially, the bump up in the debt would potentially be fiscal impact on the downside.

Thanks,

John.

---

**From:** Malecki, Justin (ENERGY) [mailto:Justin.Malecki@ontario.ca]
**Sent:** Thursday, January 26, 2017 9:34 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Tim Christie (ENERGY) <Tim.Christie@ontario.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: GA scenario

Hello John,

Yes, the table Tim sent you yesterday is the 30-year financing version of scenario 1a. Below is the same table but for the 30-year financing version of scenario 1b. Don't hesitate to let us know if there is anything else you need.

Cheers,

Justin Malecki, PhD
Senior Advisor, Energy System Planning
Ontario Ministry of Energy
416-325-9372

| ***Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments ($ million)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 10,679 | 9,912 | 9,200 | 8,540 | 8,798 | 9,063 | 9,337 | 9,619 | 9,910 | 10,209 | 10,517 | 10,835 | 11,162 | 11,499 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 1,416 | 3,410 | 5,932 | 9,857 | 12,396 | 14,586 | 16,190 | 18,462 | 19,964 | 20,774 | 22,271 | 23,313 | 23,236 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-26-17 8:17 AM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA); Malecki, Justin (ENERGY)
**Subject:** RE: GA scenario

Thanks Tim.

Am I right in thinking this is the latest 1A? Could we also get the 1B?

John.

---

**From:** Christie, Tim (ENERGY) [mailto:Tim.Christie@ontario.ca]
**Sent:** Wednesday, January 25, 2017 3:59 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Justin Malecki (ENERGY) <Justin.Malecki@ontario.ca>
**Subject:** RE: GA scenario

John, here's the data you requested. Note that we have not included in-year interest costs (so any deferral doesn't start accumulating interest until the next year). We have since done it using a monthly schedule, but this is the version that was used in the deck. Let me know if you have any questions.

| **Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing *($ millions)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 8,769 | 8,944 | 9,123 | 9,306 | 9,492 | 9,682 | 9,875 | 10,073 | 10,274 | 10,480 | 10,689 | 10,903 | 11,121 | 11,344 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 | 12,451 | 14,425 | 16,098 | 17,240 | 19,111 | 20,281 | 20,836 | 22,164 | 23,133 | 23,087 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-23-17 4:50 PM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA)
**Subject:** GA scenario

Hi Tim,

Hope all's well.

I left you a voicemail and wanted to clarify what I'm looking for. Would you have the accumulated debt figure, by year, for the 23bn scenario?

Thanks,

John.

Y. John Kim
Director, Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

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**Annual Interest Rate = 5%**

## Scenario 1a

**Debt Borrowing/Payment Sched**
***($ millions)***

a
c = a*5%
b
d = a+b+c

## Fiscal Impact, Scenario 1a

Provided by Energy

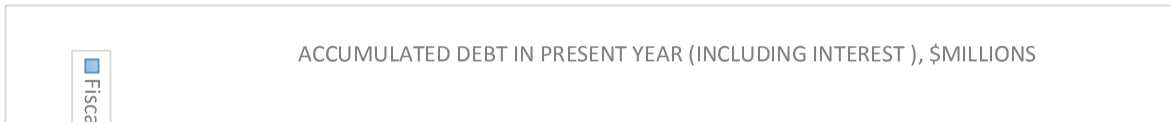
## Scenario 1b

**Debt Borrowing Payment Sched**
***($ million)***

a
c = a*5%
b
d = a+b+c

## Fiscal Impact, Scenario 1b

Provided by Energy


ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST ), $MILLIONS
Fisca

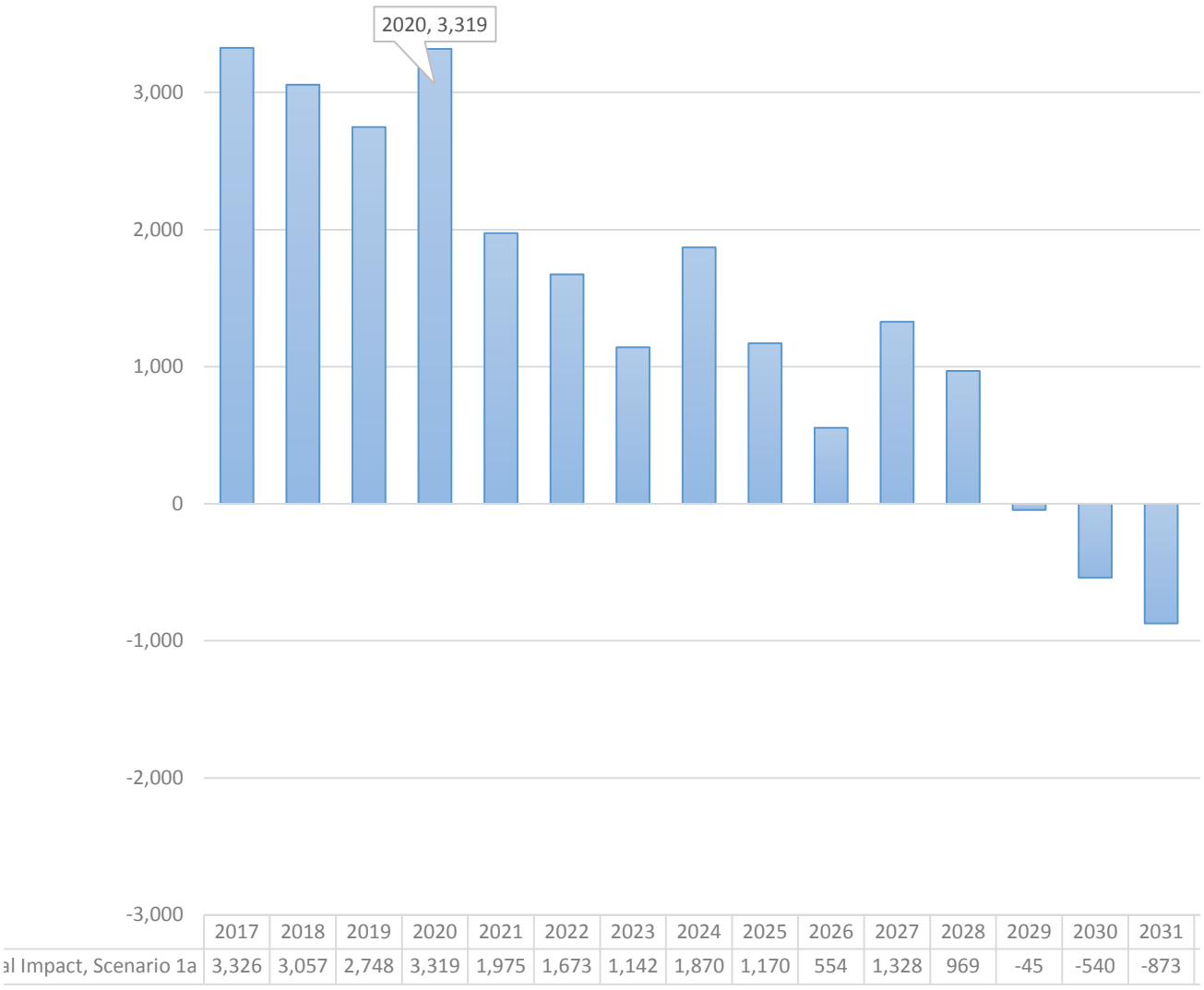
**Debt is drawn-down at end of Year**

| | 2017 | 2018 | 2019 |
|---|---|---|---|
| **dule for Scenario 1a. Moderate / GA Financing 30-year financing** | | | |
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 |
| Ratepayer GA Payment | 8,769 | 8,944 | 9,123 |
| GA Debt Requirement | 3,326 | 2,891 | 2,429 |
| Debt, Beginning of Year | 0 | 3,326 | 6,383 |
| *Interest Cost - Scenario 1a* | *0* | *166* | *319* |
| Additional GA Debt Drawdown, End of Year | 3,326 | 2,891 | 2,429 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 |
| | 3,326 | 3,057 | 2,748 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 |
| Errors | 0 | 0 | 0 |

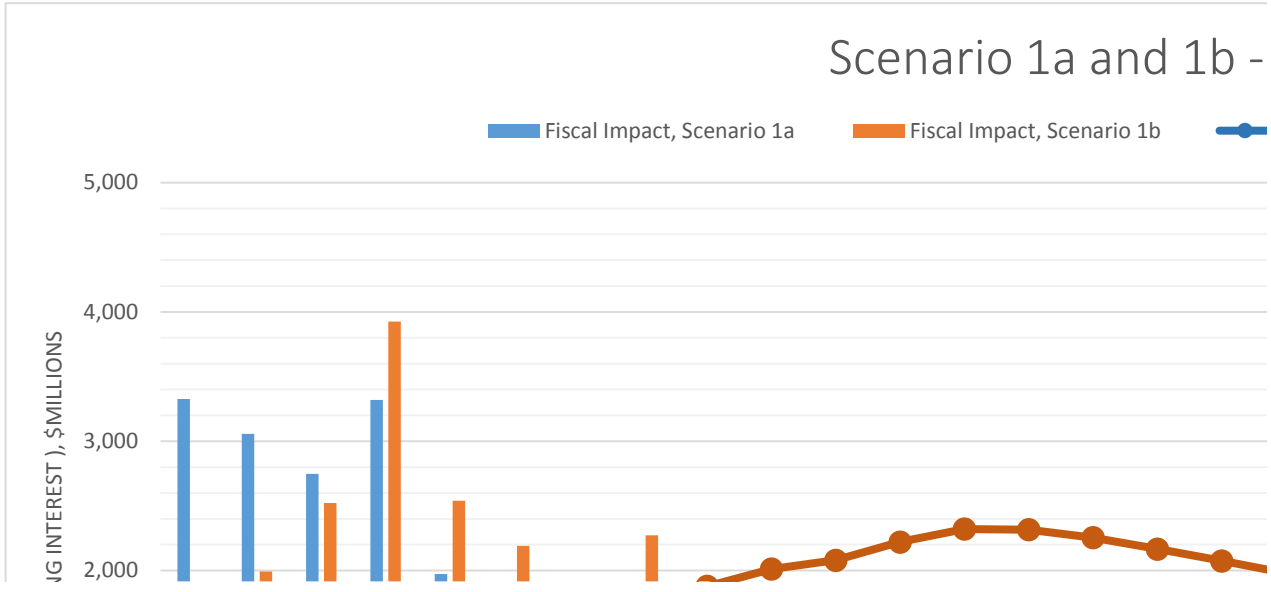
| | 2017 | 2018 | 2019 |
|---|---|---|---|
| **lule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments** | | | |
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 |
| Ratepayer GA Payment | 10,679 | 9,912 | 9,200 |
| GA Debt Requirement | 1,416 | 1,923 | 2,352 |
| Debt, Beginning of Year | 0 | 1,416 | 3,410 |
| *Interest Cost - Scenario 1b* | *0* | *71* | *170* |
| Additional GA Debt Drawdown, End of Year | 1,416 | 1,923 | 2,352 |
| Accumulated debt in present year (including 5% annual interest) | 1,416 | 3,410 | 5,932 |
| | 1,416 | 1,994 | 2,522 |
| Accumulated debt in present year (including 5% annual interest) | 1,416 | 3,410 | 5,932 |
| Errors | 0 | 0 | 0 |

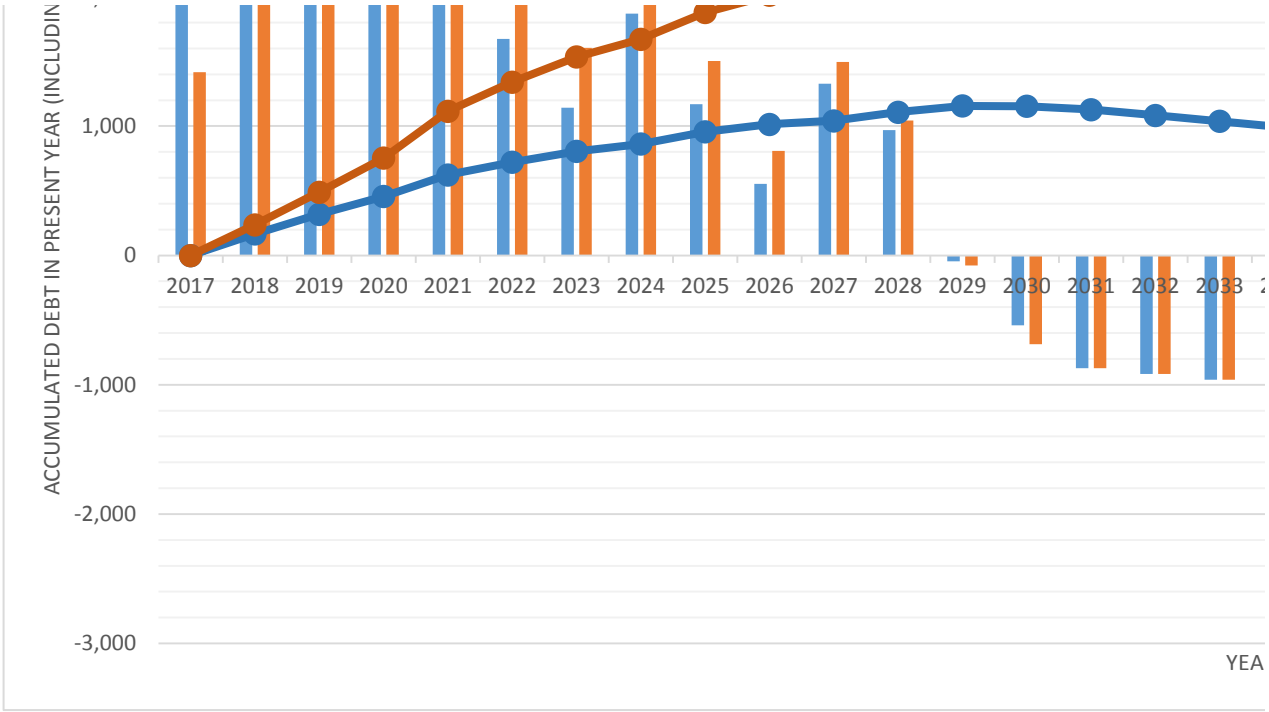
**Scenario 1a - F**

4,000




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| al Impact, Scenario 1a | 3,326 | 3,057 | 2,748 | 3,319 | 1,975 | 1,673 | 1,142 | 1,870 | 1,170 | 554 | 1,328 | 969 | -45 | -540 | -873 |

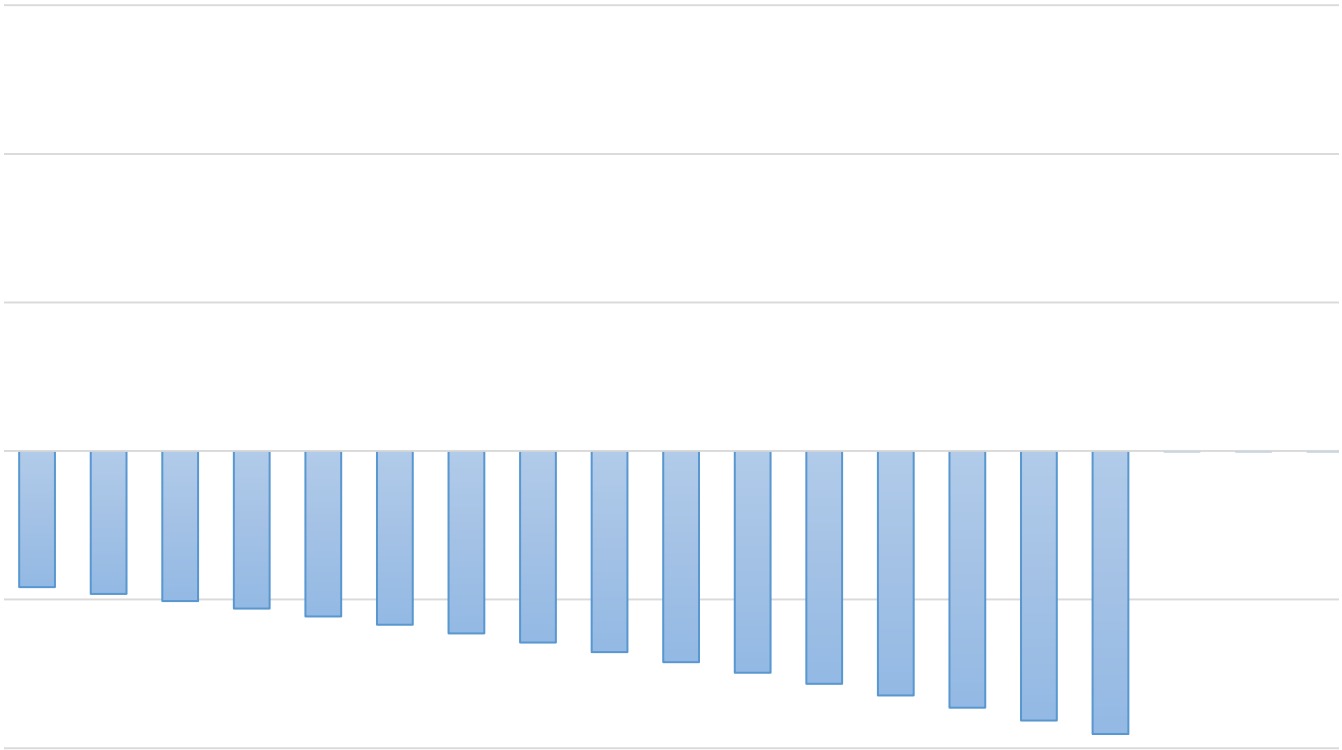



ACCUMULATED DEBT IN PRESENT YEAR (INCLUDIN
1,000
0
-1,000
-2,000
-3,000
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
YEA

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|---|---|---|---|---|---|---|---|---|---|
| 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 |
| 9,306 | 9,492 | 9,682 | 9,875 | 10,073 | 10,274 | 10,480 | 10,689 | 10,903 | 11,121 |
| 2,862 | 1,352 | 952 | 337 | 1,008 | 215 | -460 | 286 | -139 | -1,202 |
| 9,131 | 12,450 | 14,425 | 16,098 | 17,240 | 19,110 | 20,280 | 20,834 | 22,162 | 23,131 |
| *457* | *623* | *721* | *805* | *862* | *955* | *1,014* | *1,042* | *1,108* | *1,157* |
| 2,862 | 1,352 | 952 | 337 | 1,008 | 215 | -460 | 286 | -139 | -1,202 |
| 12,450 | 14,425 | 16,098 | 17,240 | 19,110 | 20,280 | 20,834 | 22,162 | 23,131 | 23,085 |
| 3,319 | 1,975 | 1,673 | 1,142 | 1,870 | 1,170 | 554 | 1,328 | 969 | -45 |
| 12,451 | 14,425 | 16,098 | 17,240 | 19,111 | 20,281 | 20,836 | 22,164 | 23,133 | 23,087 |
| 1 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 2 |

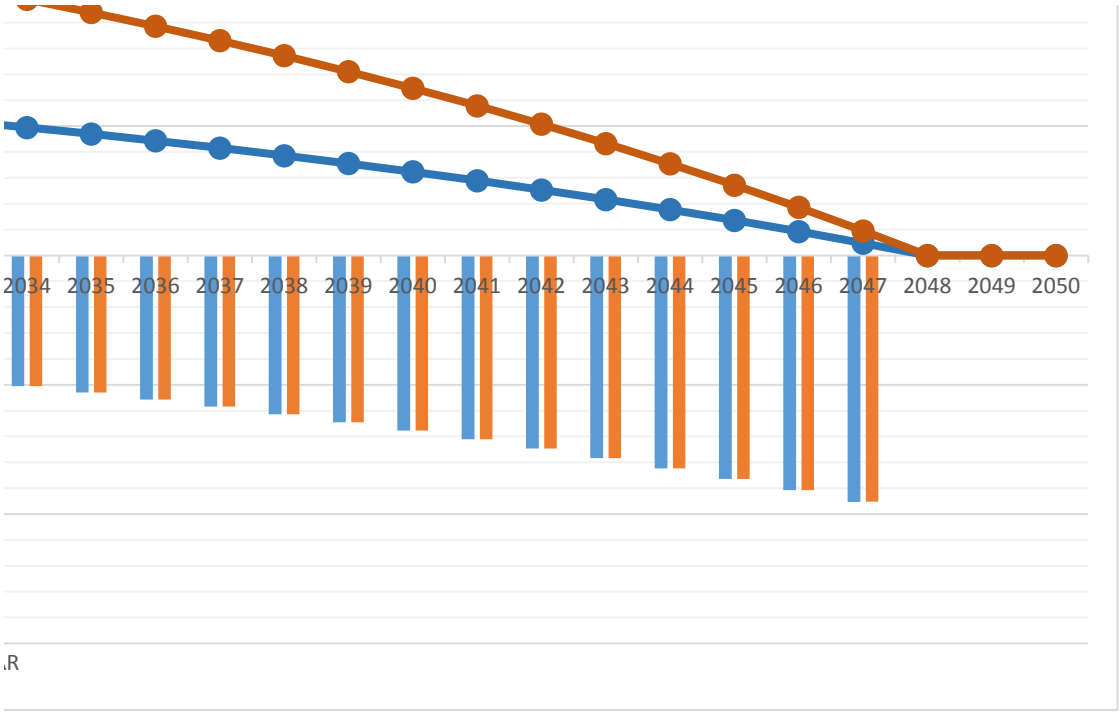
| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|---|---|---|---|---|---|---|---|---|---|
| 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 |
| 8,540 | 8,798 | 9,063 | 9,337 | 9,619 | 9,910 | 10,209 | 10,517 | 10,835 | 11,162 |
| 3,628 | 2,046 | 1,571 | 875 | 1,462 | 579 | -189 | 458 | -71 | -1,243 |
| 5,932 | 9,857 | 12,396 | 14,587 | 16,191 | 18,462 | 19,965 | 20,774 | 22,270 | 23,313 |
| *297* | *493* | *620* | *729* | *810* | *923* | *998* | *1,039* | *1,114* | *1,166* |
| 3,628 | 2,046 | 1,571 | 875 | 1,462 | 579 | -189 | 458 | -71 | -1,243 |
| 9,857 | 12,396 | 14,587 | 16,191 | 18,462 | 19,965 | 20,774 | 22,270 | 23,313 | 23,236 |
| 3,925 | 2,539 | 2,191 | 1,604 | 2,272 | 1,502 | 809 | 1,497 | 1,043 | -77 |
| 9,857 | 12,396 | 14,586 | 16,190 | 18,462 | 19,964 | 20,774 | 22,271 | 23,313 | 23,236 |
| 0 | 0 | -1 | -1 | 0 | -1 | 0 | 1 | 0 | 0 |

## Fiscal Impact



| 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 205 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 | -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | 0 | 0 | 0 |

YEAR


2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
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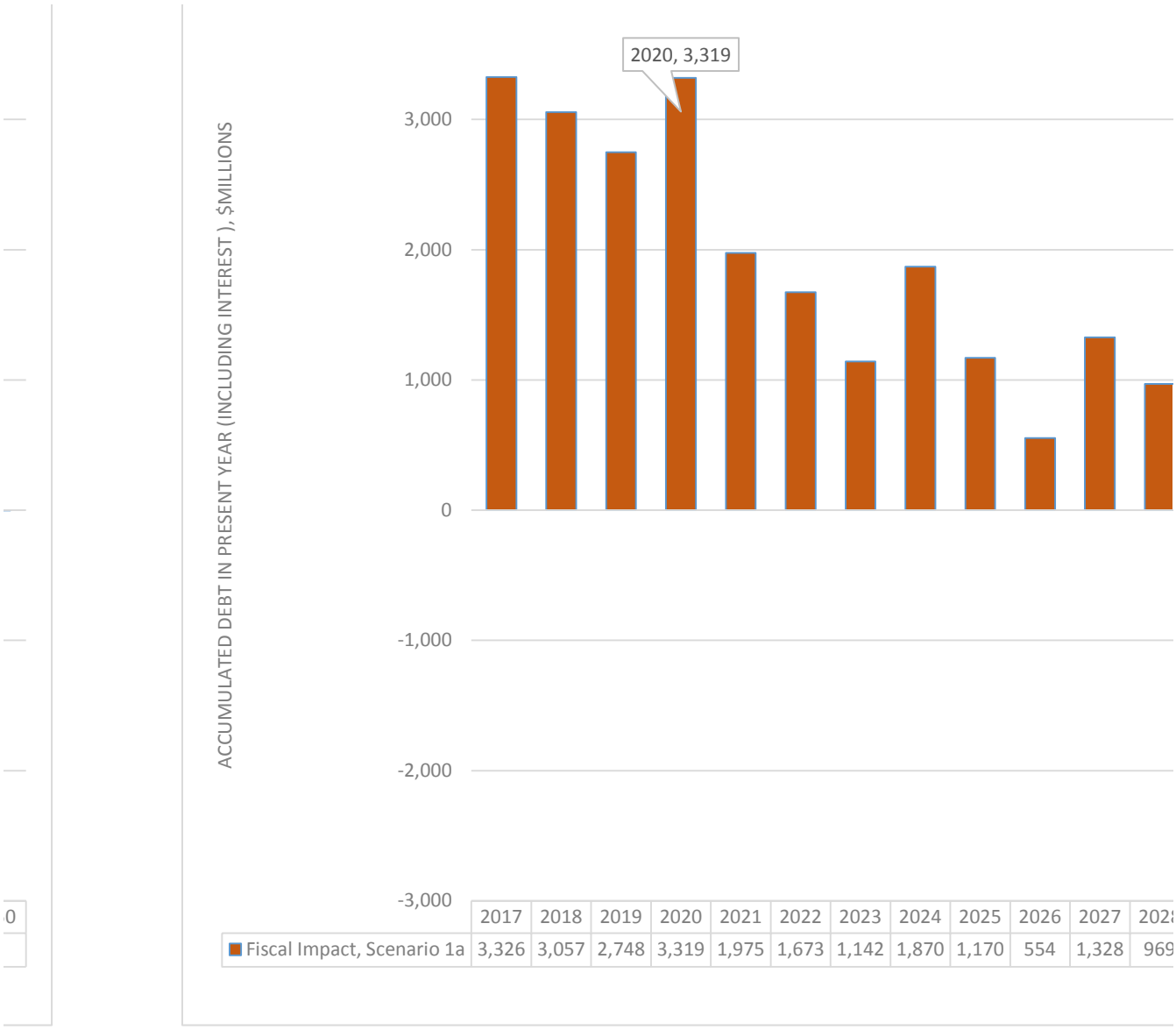
2049
2050
AR

| 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
|---|---|---|---|---|---|---|---|---|---|
| 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 |
| 11,344 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 |
| -1,694 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 |
| 23,085 | 22,546 | 21,673 | 20,757 | 19,795 | 18,784 | 17,723 | 16,610 | 15,440 | 14,212 |
| *1,154* | *1,127* | *1,084* | *1,038* | *990* | *939* | *886* | *830* | *772* | *711* |
| -1,694 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 |
| 22,546 | 21,673 | 20,757 | 19,795 | 18,784 | 17,723 | 16,610 | 15,440 | 14,212 | 12,923 |
| -540 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 |
| 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 |
| 2 | 3 | 2 | 2 | 3 | 4 | 3 | 3 | 4 | 3 |

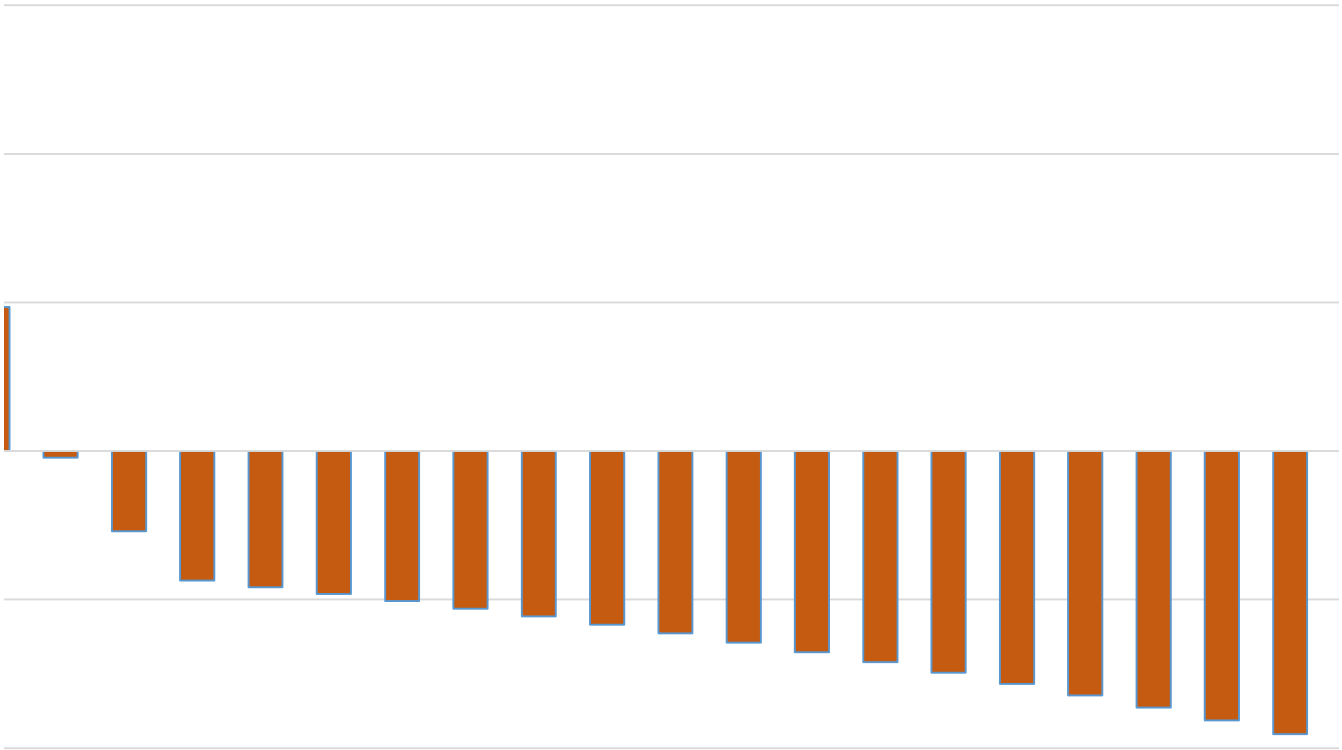
| 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
|---|---|---|---|---|---|---|---|---|---|
| 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 |
| 11,499 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 |
| -1,849 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 |
| 23,236 | 22,548 | 21,676 | 20,760 | 19,798 | 18,787 | 17,727 | 16,613 | 15,444 | 14,216 |
| *1,162* | *1,127* | *1,084* | *1,038* | *990* | *939* | *886* | *831* | *772* | *711* |
| -1,849 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 |
| 22,548 | 21,676 | 20,760 | 19,798 | 18,787 | 17,727 | 16,613 | 15,444 | 14,216 | 12,927 |
| -687 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,169 | -1,228 | -1,289 |
| 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 |
| 0 | 0 | -1 | -1 | 0 | 0 | 0 | -1 | 0 | -1 |


2020, 3,319
3,000
2,000
1,000
0
-1,000
-2,000
-3,000
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST ), $MILLIONS
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027
Fiscal Impact, Scenario 1a 3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,170 554 1,328

| 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 |
|---|---|---|---|---|---|---|---|---|---|
| 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 |
| 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 |
| -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | 0 | 0 |
| 12,923 | 11,569 | 10,147 | 8,655 | 7,087 | 5,442 | 3,714 | 1,900 | -5 | -6 |
| *646* | *578* | *507* | *433* | *354* | *272* | *186* | *95* | *0* | *0* |
| -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | 0 | 0 |
| 11,569 | 10,147 | 8,655 | 7,087 | 5,442 | 3,714 | 1,900 | -5 | -6 | -6 |
| -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | 0 | 0 |
| 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 |
| 4 | 4 | 4 | 5 | 4 | 5 | 5 | 5 | 6 | 6 |

| 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 |
|---|---|---|---|---|---|---|---|---|---|
| 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 |
| 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 |
| -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | 0 | 0 |
| 12,927 | 11,573 | 10,152 | 8,659 | 7,092 | 5,447 | 3,719 | 1,905 | 1 | 1 |
| *646* | *579* | *508* | *433* | *355* | *272* | *186* | *95* | *0* | *0* |
| -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | -2,000 | 0 | 0 |
| 11,573 | 10,152 | 8,659 | 7,092 | 5,447 | 3,719 | 1,905 | 1 | 1 | 1 |
| -1,354 | -1,421 | -1,492 | -1,567 | -1,645 | -1,728 | -1,814 | -1,905 | 0 | 0 |
| 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 |
| 0 | -1 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | -1 |

## Scenario 1b - Fiscal Impact



| 8 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ) | -45 | -540 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 | -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | |

YEAR

| 2050 |
|---|
| |
| 2,616 |
| 2,616 |
| 0 |
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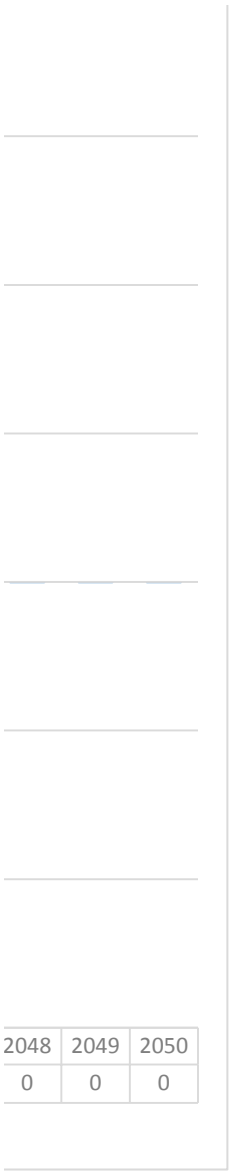

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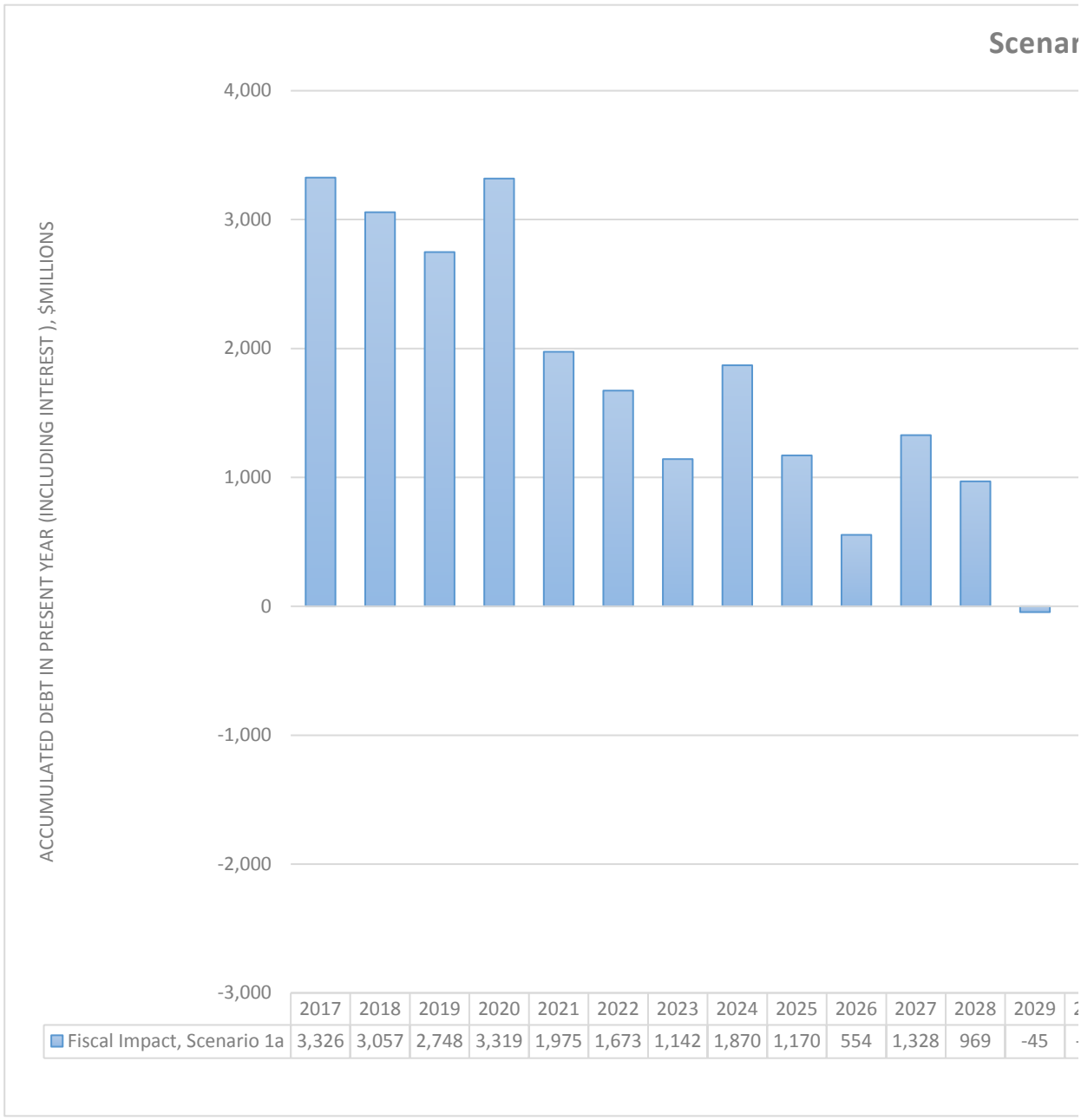
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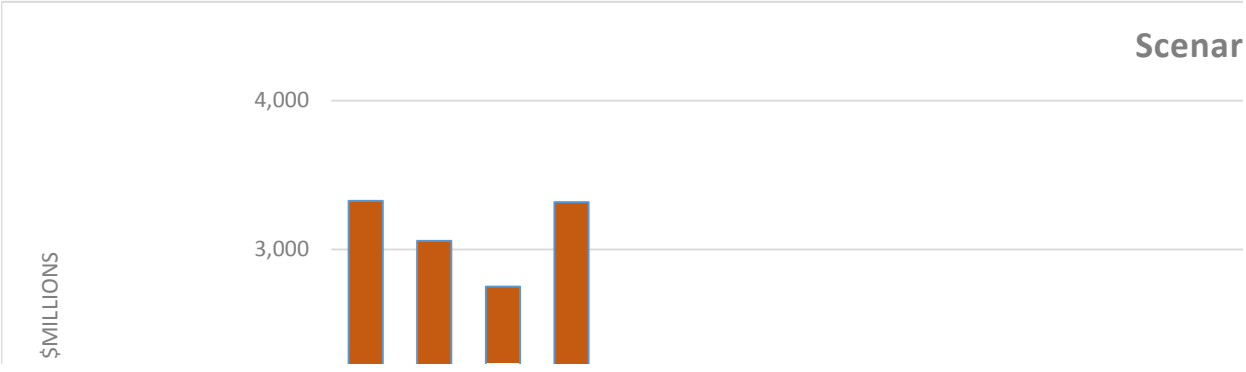
ACCUMULATED DEBT IN PRESENT YEAR (INCLUDING INTEREST ), $MILLIONS
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029
Fiscal Impact, Scenario 1a 3,326 3,057 2,748 3,319 1,975 1,673 1,142 1,870 1,170 554 1,328 969 -45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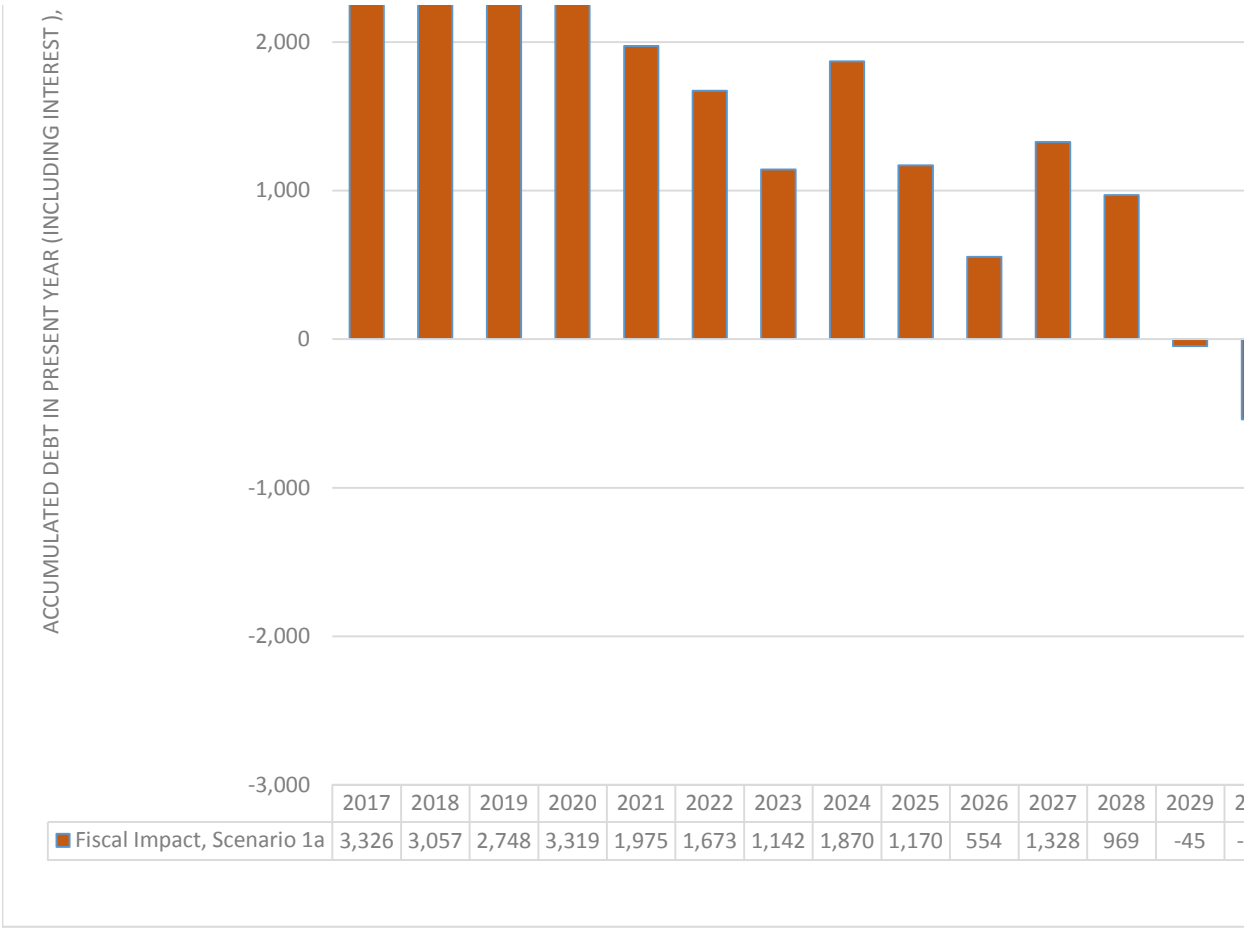
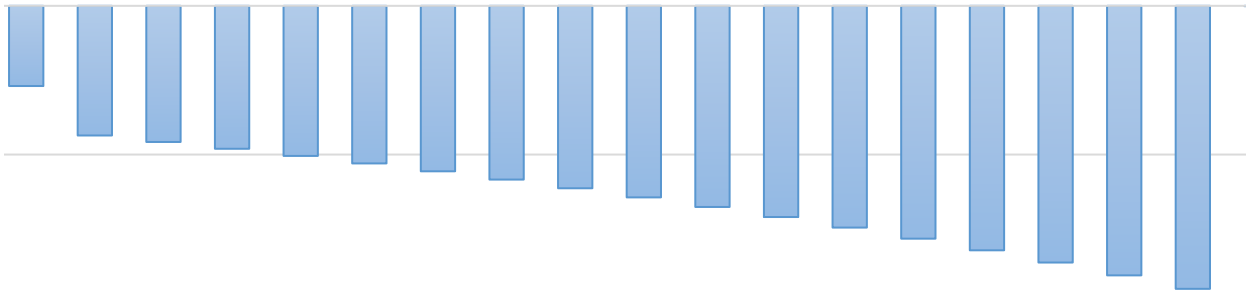



| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fiscal Impact, Scenario 1a | 3,326 | 3,057 | 2,748 | 3,319 | 1,975 | 1,673 | 1,142 | 1,870 | 1,170 | 554 | 1,328 | 969 | -45 | - |

## rio 1a - Fiscal Impact



| 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -540 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 | -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | |

YEAR

## io 1b - Fiscal Impact

| 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -540 | -873 | -916 | -962 | -1,010 | -1,061 | -1,114 | -1,170 | -1,228 | -1,289 | -1,354 | -1,422 | -1,493 | -1,567 | -1,646 | -1,728 | -1,814 | -1,905 | |

YEAR

| 2048 | 2049 | 2050 |
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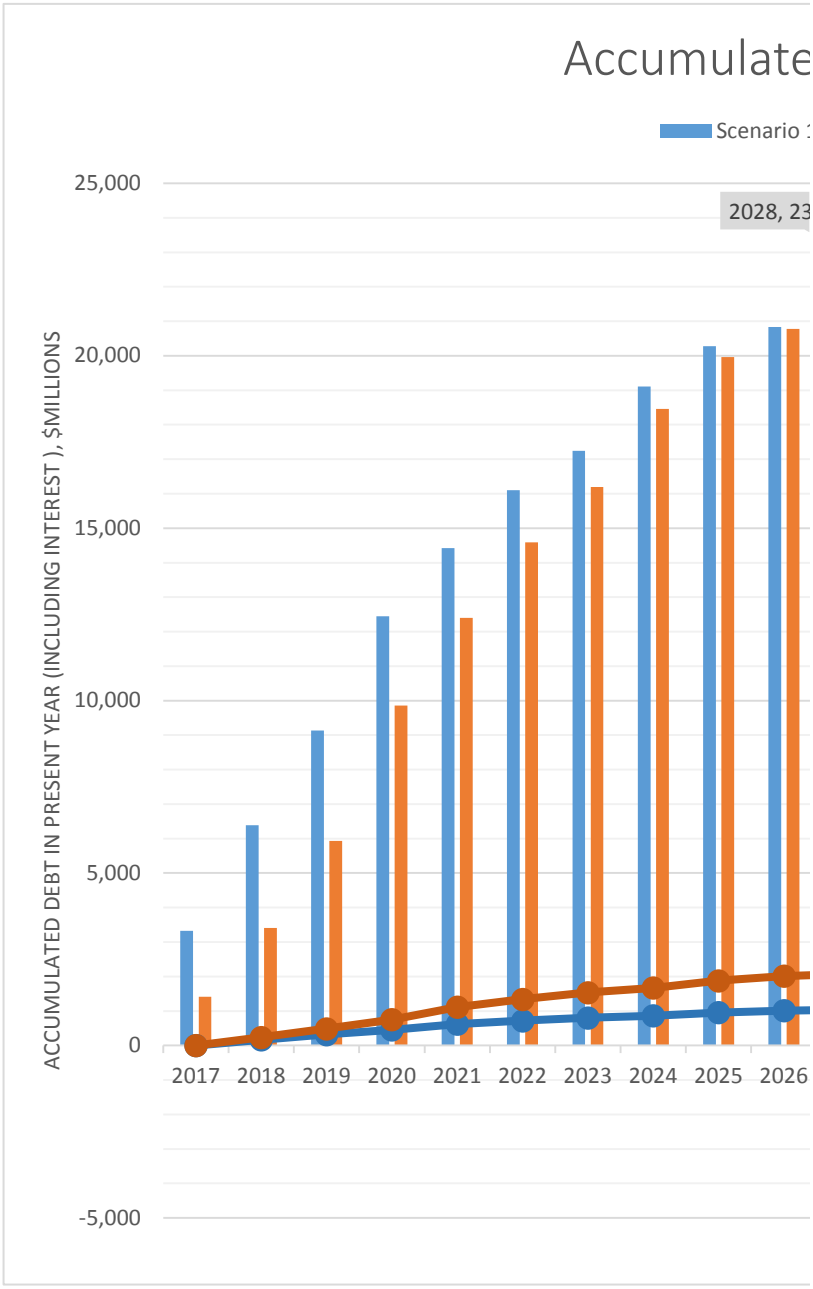


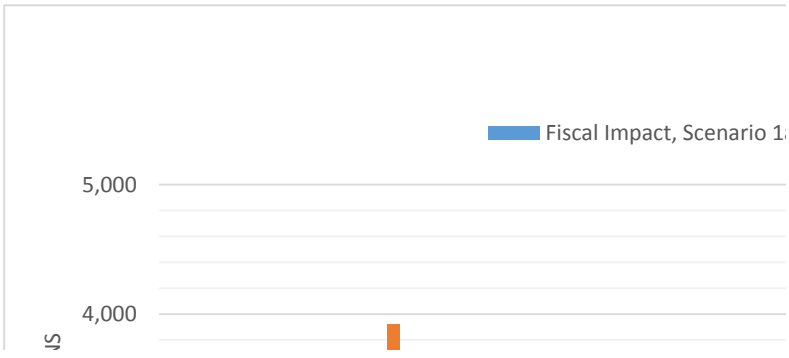

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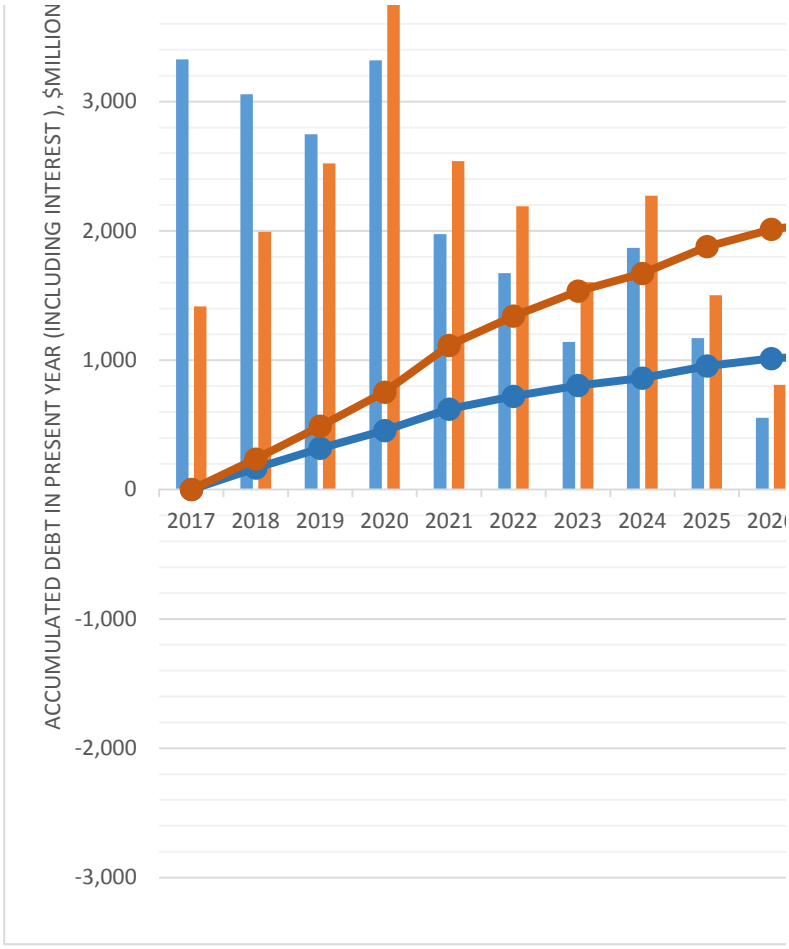
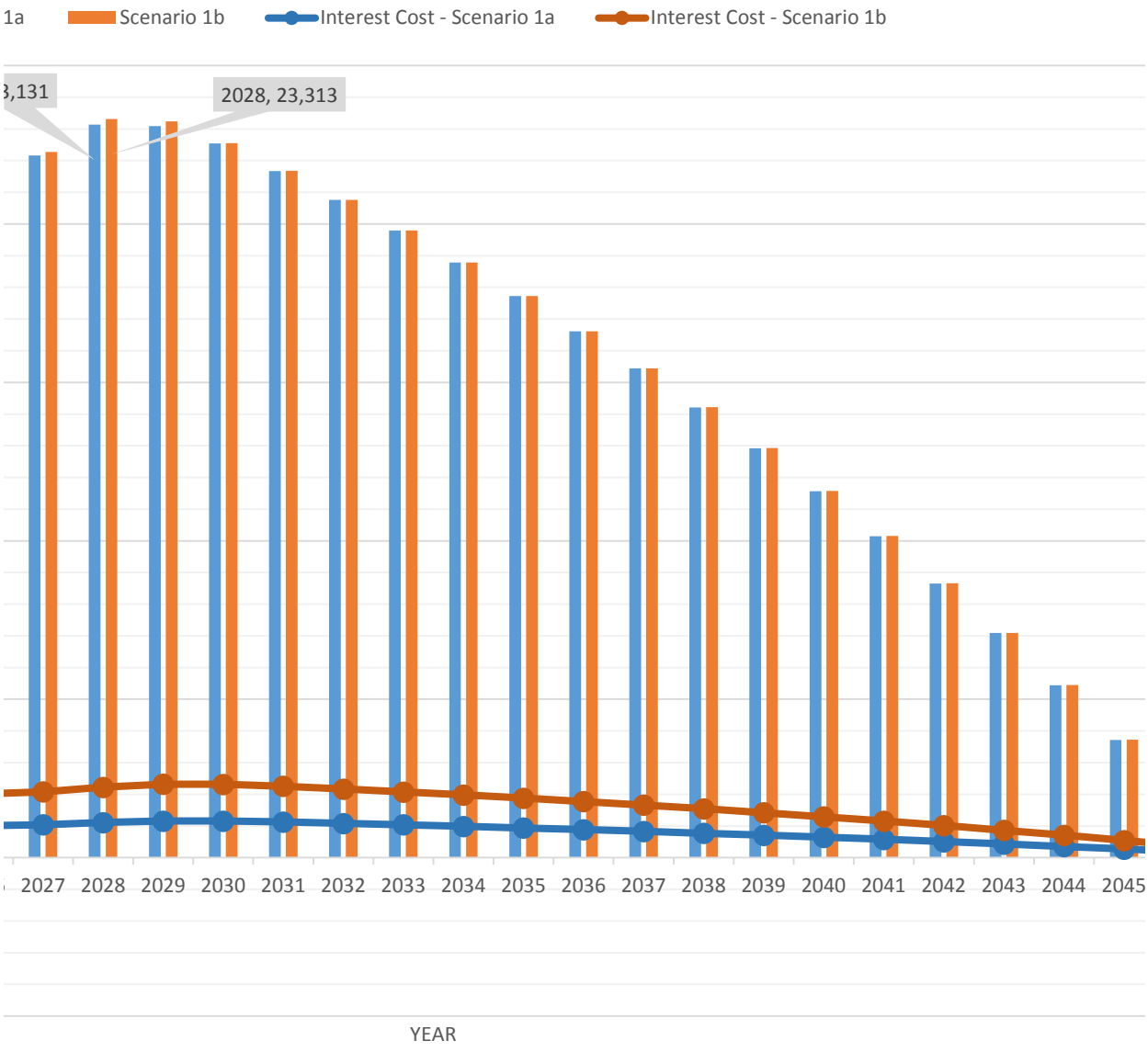
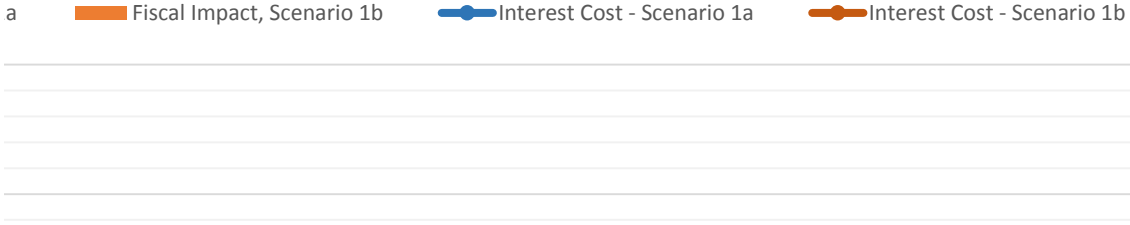
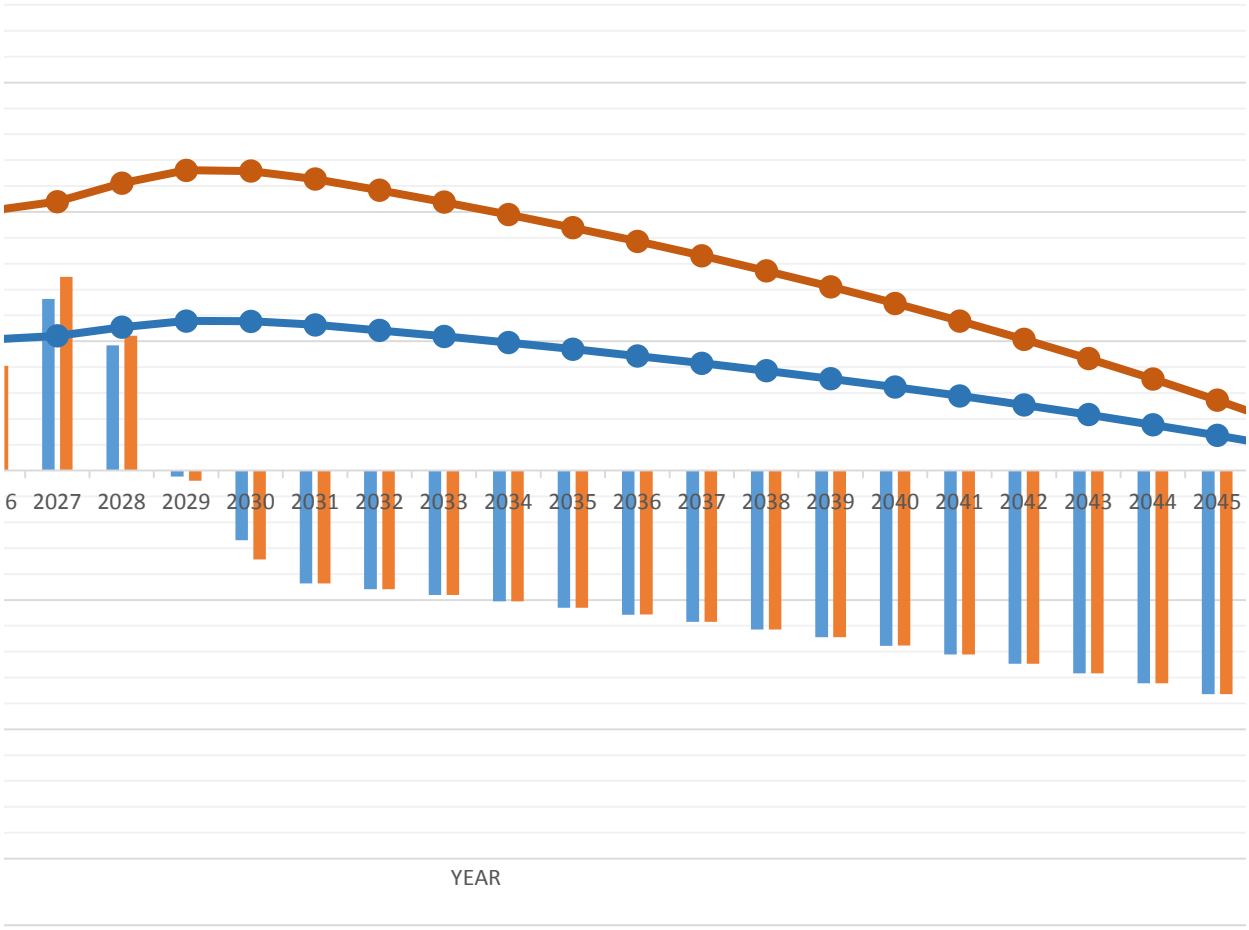


## ed debt in present year, with annual interest costs




## Scenario 1a and 1b - Fiscal Impact

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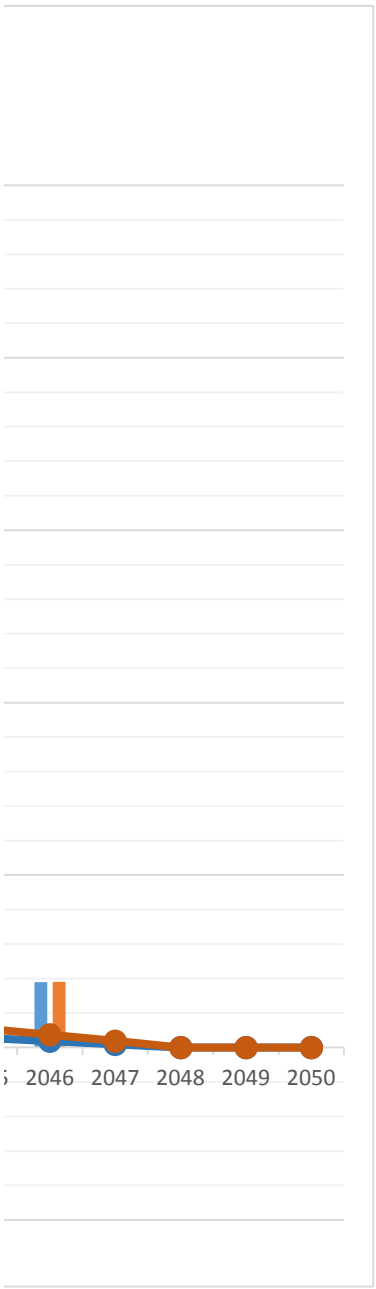
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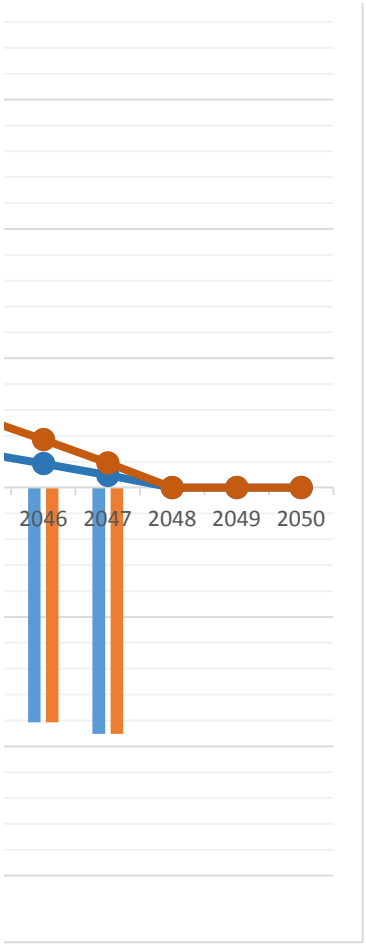
2046
2047
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2050

**From:** Salman Qadir
**To:** John Kim
**Cc:** Shajee Kathirgamanathan; Adam Prokop; Gavin He
**Subject:** RE: GA scenario
**Date:** Thursday, January 26, 2017 10:57:03 AM

Sure – np. Putting it together now.

**From:** John Kim
**Sent:** Thursday, January 26, 2017 10:53 AM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: GA scenario

Hi Salman,

Would you mind doing a fiscal impact chart for each scenarios? Essentially, the bump up in the debt would potentially be fiscal impact on the downside.

Thanks,

John.

**From:** Malecki, Justin (ENERGY) [mailto:Justin.Malecki@ontario.ca]
**Sent:** Thursday, January 26, 2017 9:34 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Tim Christie (ENERGY) <Tim.Christie@ontario.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: GA scenario

Hello John,

Yes, the table Tim sent you yesterday is the 30-year financing version of scenario 1a. Below is the same table but for the 30-year financing version of scenario 1b. Don't hesitate to let us know if there is anything else you need.

Cheers,

Justin Malecki, PhD
Senior Advisor, Energy System Planning
Ontario Ministry of Energy
416-325-9372

| ***Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments ($ million)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 10,679 | 9,912 | 9,200 | 8,540 | 8,798 | 9,063 | 9,337 | 9,619 | 9,910 | 10,209 | 10,517 | 10,835 | 11,162 | 11,499 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 1,416 | 3,410 | 5,932 | 9,857 | 12,396 | 14,586 | 16,190 | 18,462 | 19,964 | 20,774 | 22,271 | 23,313 | 23,236 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-26-17 8:17 AM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA); Malecki, Justin (ENERGY)
**Subject:** RE: GA scenario

Thanks Tim.

Am I right in thinking this is the latest 1A? Could we also get the 1B?

John.

**From:** Christie, Tim (ENERGY) [mailto:Tim.Christie@ontario.ca]
**Sent:** Wednesday, January 25, 2017 3:59 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Justin Malecki (ENERGY) <Justin.Malecki@ontario.ca>
**Subject:** RE: GA scenario

John, here's the data you requested. Note that we have not included in-year interest costs (so any deferral doesn't start accumulating interest until the next year). We have since done it using a monthly schedule, but this is the version that was used in the deck. Let me know if you have any questions.

| **Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing ($ millions)** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 8,769 | 8,944 | 9,123 | 9,306 | 9,492 | 9,682 | 9,875 | 10,073 | 10,274 | 10,480 | 10,689 | 10,903 | 11,121 | 11,344 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 | 12,451 | 14,425 | 16,098 | 17,240 | 19,111 | 20,281 | 20,836 | 22,164 | 23,133 | 23,087 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-23-17 4:50 PM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA)
**Subject:** GA scenario

Hi Tim,

Hope all's well.

I left you a voicemail and wanted to clarify what I'm looking for. Would you have the accumulated debt figure, by year, for the 23bn scenario?

Thanks,

John.

Y. John Kim
Director, Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

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**From:** Malecki, Justin (ENERGY)
**To:** John Kim; Tim Christie (ENERGY)
**Cc:** Emily Kerr
**Subject:** RE: GA scenario
**Date:** Thursday, January 26, 2017 9:33:39 AM

Hello John,

Yes, the table Tim sent you yesterday is the 30-year financing version of scenario 1a. Below is the same table but for the 30-year financing version of scenario 1b. Don't hesitate to let us know if there is anything else you need.

Cheers,

Justin Malecki, PhD
Senior Advisor, Energy System Planning
Ontario Ministry of Energy
416-325-9372

| ***Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments ($ million)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| Ratepayer GA Payment | 10,679 | 9,912 | 9,200 | 8,540 | 8,798 | 9,063 | 9,337 | 9,619 | 9,910 | 10,209 | 10,517 | 10,835 | 11,162 | 11,499 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 1,416 | 3,410 | 5,932 | 9,857 | 12,396 | 14,586 | 16,190 | 18,462 | 19,964 | 20,774 | 22,271 | 23,313 | 23,236 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

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**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-26-17 8:17 AM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA); Malecki, Justin (ENERGY)
**Subject:** RE: GA scenario

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---

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**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Justin Malecki (ENERGY) <Justin.Malecki@ontario.ca>
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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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**Sent:** January-23-17 4:50 PM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA)
**Subject:** GA scenario

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John.

Y. John Kim
Director, Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

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**From:** John Kim
**To:** Tim Christie (ENERGY)
**Cc:** Emily Kerr; Justin Malecki (ENERGY)
**Subject:** RE: GA scenario
**Date:** Thursday, January 26, 2017 8:16:38 AM

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John.

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**Sent:** Wednesday, January 25, 2017 3:59 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Justin Malecki (ENERGY) <Justin.Malecki@ontario.ca>
**Subject:** RE: GA scenario

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 8,769 | 8,944 | 9,123 | 9,306 | 9,492 | 9,682 | 9,875 | 10,073 | 10,274 | 10,480 | 10,689 | 10,903 | 11,121 | 11,344 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 | 12,451 | 14,425 | 16,098 | 17,240 | 19,111 | 20,281 | 20,836 | 22,164 | 23,133 | 23,087 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-23-17 4:50 PM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA)
**Subject:** GA scenario

Hi Tim,

Hope all's well.

I left you a voicemail and wanted to clarify what I'm looking for. Would you have the accumulated debt figure, by year, for the 23bn scenario?

Thanks,

John.

Y. John Kim
Director, Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

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**From:** Christie, Tim (ENERGY)
**To:** John Kim
**Cc:** Emily Kerr; Justin Malecki (ENERGY)
**Subject:** RE: GA scenario
**Date:** Wednesday, January 25, 2017 3:59:40 PM

John, here's the data you requested. Note that we have not included in-year interest costs (so any deferral doesn't start accumulating interest until the next year). We have since done it using a monthly schedule, but this is the version that was used in the deck. Let me know if you have any questions.

| **Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing** ***($ millions)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 8,769 | 8,944 | 9,123 | 9,306 | 9,492 | 9,682 | 9,875 | 10,073 | 10,274 | 10,480 | 10,689 | 10,903 | 11,121 | 11,344 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 | 12,451 | 14,425 | 16,098 | 17,240 | 19,111 | 20,281 | 20,836 | 22,164 | 23,133 | 23,087 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-23-17 4:50 PM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA)
**Subject:** GA scenario

Hi Tim,

Hope all's well.

I left you a voicemail and wanted to clarify what I'm looking for. Would you have the accumulated debt figure, by year, for the 23bn scenario?

Thanks,

John.

Y. John Kim
Director, Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

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**From:** Salman Qadir
**To:** Ronald Kwan; John Kim
**Cc:** Gavin He
**Subject:** RE: GA scenario
**Date:** Thursday, January 26, 2017 5:19:24 PM

No problem - I can build it into the spreadsheet to start.

Salman

---

**From:** Ronald Kwan
**Sent:** Thursday, January 26, 2017 5:17 PM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: GA scenario

Thanks, I see that now in his email. We should make an adjustment, and/or get his adjusted numbers.

Ron

---

**From:** Salman Qadir
**Sent:** January-26-17 17:15
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: GA scenario

Hi Ron,

You're absolutely correct. This is confirmed in the original email response below from Tim Christie as well.

I've changed the language to Fiscal Exposure and added a Notes box with that note.

Saved it here:
Z\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA

Salman

---

**From:** Ronald Kwan
**Sent:** Thursday, January 26, 2017 5:04 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: GA scenario

Hi,

So assumption is borrowing is all end of year, not 1/12 per month, or even assumed mid-year on average? Not realistic, if so.

And can we label it fiscal exposure, and footnote it as accounting treatment is TBD?

Thanks,
Ron

---

**From:** John Kim
**Sent:** January-26-17 16:59
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: GA scenario

Hi Ron,

Pls. see attached spreadsheet from Salman which ties in with the scenarios provided.

Thanks,

John.

---

**From:** Salman Qadir
**Sent:** Thursday, January 26, 2017 1:33 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: GA scenario

Apologies, there was a referencing error in the charting. Updated is attached.

Salman

---

**From:** Salman Qadir
**Sent:** Thursday, January 26, 2017 12:07 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: GA scenario

Hi John,

Attached is a few charts for the fiscal impact for each scenario. Note that the assumption is that the debt is drawn down at the end of the year and interest on that drawdown incurs the following year.

Salman

---

**From:** John Kim
**Sent:** Thursday, January 26, 2017 10:53 AM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: GA scenario

Hi Salman,

Would you mind doing a fiscal impact chart for each scenarios? Essentially, the bump up in the debt would potentially be fiscal impact on the downside.

Thanks,

John.

---

**From:** Malecki, Justin (ENERGY) [mailto:Justin.Malecki@ontario.ca]
**Sent:** Thursday, January 26, 2017 9:34 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Tim Christie (ENERGY) <Tim.Christie@ontario.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: GA scenario

Hello John,

Yes, the table Tim sent you yesterday is the 30-year financing version of scenario 1a. Below is the same table but for the 30-year financing version of scenario 1b. Don't hesitate to let us know if there is anything else you need.

Cheers,

Justin Malecki, PhD
Senior Advisor, Energy System Planning
Ontario Ministry of Energy
416-325-9372

| ***Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments ($ million)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 10,679 | 9,912 | 9,200 | 8,540 | 8,798 | 9,063 | 9,337 | 9,619 | 9,910 | 10,209 | 10,517 | 10,835 | 11,162 | 11,499 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 1,416 | 3,410 | 5,932 | 9,857 | 12,396 | 14,586 | 16,190 | 18,462 | 19,964 | 20,774 | 22,271 | 23,313 | 23,236 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-26-17 8:17 AM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA); Malecki, Justin (ENERGY)
**Subject:** RE: GA scenario

Thanks Tim.

Am I right in thinking this is the latest 1A? Could we also get the 1B?

John.

**From:** Christie, Tim (ENERGY) [mailto:Tim.Christie@ontario.ca]
**Sent:** Wednesday, January 25, 2017 3:59 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Justin Malecki (ENERGY) <Justin.Malecki@ontario.ca>
**Subject:** RE: GA scenario

John, here's the data you requested. Note that we have not included in-year interest costs (so any deferral doesn't start accumulating interest until the next year). We have since done it using a monthly schedule, but this is the version that was used in the deck. Let me know if you have any questions.

| **Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing *($ millions)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 8,769 | 8,944 | 9,123 | 9,306 | 9,492 | 9,682 | 9,875 | 10,073 | 10,274 | 10,480 | 10,689 | 10,903 | 11,121 | 11,344 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 | 12,451 | 14,425 | 16,098 | 17,240 | 19,111 | 20,281 | 20,836 | 22,164 | 23,133 | 23,087 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-23-17 4:50 PM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA)
**Subject:** GA scenario

Hi Tim,

Hope all's well.

I left you a voicemail and wanted to clarify what I'm looking for. Would you have the accumulated debt figure, by year, for the 23bn scenario?

Thanks,

John.

Y. John Kim
Director, Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

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**From:** Shajee Kathirgamanathan
**To:** John Kim
**Subject:** RE: HST on electricity bills
**Date:** Friday, September 16, 2016 11:14:57 AM
**Attachments:** Electricity Data Request v2.docx

---

Hi John,

Made a few additions. I added a little bit more about the initial information, or lack thereof. Also added Appendix B on the OCEB program.

S:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation -- Energy\Electricity Data Request v2.docx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, September 15, 2016 12:43 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: HST on electricity bills

Hi John,

Please see file attached, also found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation -- Energy\Electricity Data Request v1.docx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Thursday, September 15, 2016 12:15 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: HST on electricity bills

No problem.

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, September 15, 2016 12:13 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: HST on electricity bills

Hi John,

Hope to get you this shortly. I'm just aggregating all the information/fields that are available in the portal as well as information requested in the letter.

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, September 15, 2016 9:28 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: HST on electricity bills

Sounds good

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Thursday, September 15, 2016 9:18 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: HST on electricity bills

Hi Shajee,

Let's finalize this this morning.

Thanks,

John.

**From:** Shajee Kathirgamanathan
**Sent:** Wednesday, September 14, 2016 2:15 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: HST on electricity bills

Hi John,

I just whipped this together.

File found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation -- Energy\Electricity Data Request.docx

Also in this folder you can find the past letters in the Portal from Energy to the LDCs stipulating the data requests. Similar to what we are asking but not excat:
S:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation -- Energy\Portal Data Letters\

Thanks,
Shajees

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, September 13, 2016 8:43 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: HST on electricity bills

Sorry meant, sure. Will work on it tomorrow

Sent from my mobile device, please excuse any typos or brevity.

On Sep 13, 2016, at 5:43 PM, John Kim <John.Kim@ofina.on.ca> wrote:

> Could we pull together a short bullet form document?
>
> On Sep 13, 2016, at 5:32 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> Hi,

If the portal were revived, what would be our wish list of data to be submitted by LDCs?

Ron

---

**From:** Ronald Kwan
**Sent:** September 13, 2016 10:07 AM
**To:** Sandy Roberts; John Kim; Shajee Kathirgamanathan
**Cc:** Darren Scanlan
**Subject:** FW: HST on electricity bills

Hi,

FYI on Energy's request.

Do you have a few minutes to chat, right now.

John (and Darren, Shajee?), when was the last time we received price forecasts from Energy for the purposes of the MOU, and that we provided cost projections?

Ron

---

**From:** Ronald Kwan
**Sent:** September-13-16 10:03
**To:** Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Sarah Neville <Sarah.Neville@ofina.on.ca>
**Subject:** RE: HST on electricity bills

Hi Gadi,

See attached MOU. The last version I have readily in my files.

Ron

---

**From:** Ronald Kwan
**Sent:** September-13-16 09:59
**To:** Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Sarah Neville <Sarah.Neville@ofina.on.ca>
**Subject:** RE: HST on electricity bills

Coincidentally, I was chatting with Mahmood yesterday up at Frost on the process for OCEB, back in the day.

Ron

---

**From:** Gadi Mayman
**Sent:** September-13-16 09:57
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Sarah Neville <Sarah.Neville@ofina.on.ca>
**Subject:** HST on electricity bills

Serge called Scott and asked if the OFA could provide the same services for the LDCs with this new rebate as we did for OCEB. I told Scott that we could talk to him about it at the beginning of the OFA / OEFC briefing at 10:45 this morning, so please be ready for that and bring along anybody that you'll need to assist in the conversation

Thanks,
Gadi

## DATA REQUEST – ONTARIO REBATE FOR ELECTRICITY CONSUMERS

The following note provides details of data request related to the proposals under the Ontario Rebate ~~for the Ontario Rebate~~ for Electricity Consumers Act if the central reporting mechanism or the portal used for the Ontario Clean Energy Benefit (OCEB) is to be revived for the new rebate program proposed in September 2016.

~~**ISSUE**~~

### CONTEXT

- The Ontario Rebate for Electricity Consumers Act proposes to rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
- ~~Like~~ Similar to the previous ~~Ontario Clean Energy Benefit (~~OCEB~~)~~ program, which started on January 1, 2011 and ended on December 31, 2015, the proposed rebate under the Ontario Rebate for Electricity Consumers Act would serve to provide electricity rate mitigation from~~as a transfer from the tax base to~~ the ~~rate~~ tax base. The proposal would rebate the provincial portion of the HST (8%) from the electricity bills of Regulated Price Plan eligible consumers. More details on the OCEB program in Appendix B.
- Under the prior OCEB program, Local Distribution Companies (LDCs) were requested to provide a variety of data on electricity consumption~~,~~ and rebates ~~and~~ through a central~~ly~~ reporting mechanism, ~~(henceforth referred to as~~ the 'OCEB Portal'~~)~~.
- Accurate data was required from LDCs ~~In~~ in order to effectively assess the fiscal impact of this proposed initiative and forecast future program costs~~, accurate data would be required from Local Distribution Companies~~.
  - However due to issues with data consistency and accuracy, the resulting data from the OCEB Portal across LDCs were insufficiently calibrated for fiscal projection purposes.
  - In addition, delays in setting up the data request process meant the **first 8 months of the OCEB program did not have data available in the Portal**.
- This note serves to inform the data request for the proposed Ontario Rebate for Electricity Consumers (OREC).
  - **Should the nature of the OREC program change (eg. the introduction of caps, inclusion/exclusion of certain customer classes), the data requested will change. This note relates to the data request under the current proposal of the OREC.**

### DATA REQUEST

The following data is requested from the LDCs, Submeter Providers (SMP), Retailers. See Column 3 of Appendix A for a detailed breakdown.

- Name of each LDC / Submeter provider ~~(SMP)~~ / Retailer

**Commented [JK1]:** Can we say when it started, etc. Also provide a flavor of the portal data as it existed before.

**Commented [SK22R1]:** Done. Also provided details on prior OCEB portal data in the last section.

**Formatted:** Font: Bold

- For each class of customer: Residential, Multi-Unit Residential, Small Business and Farms:
  - Volume of Electricity
  - Rebated amount
    - Nice to have: Information on the portion of the rebate that is directed to offsetting the 8% of *Electricity, Delivery, Regulatory*
  - Number of Customers/Eligible Accounts
- Information on the billing period/cycle that the ~~the~~ volume, ~~/~~rebate, and ~~d amount/~~customer~~s~~ data relates.
  - If this varies by Customer Class, provide details.
- Contact information or an ability to get in touch with the person inputting the data to confirm minor typos and other transcription errors.

**CURRENT DATA REQUEST RELATIVE TO PRIOR REQUEST**

- The prior OCEB Portal had a request for a wide assortment of data (See Table in Appendix A, Columns 1 and 2). However, only a portion of that data was utilized for OCEB fiscal forecasting.
  - To alleviate the workload of the reporting requirements for LDCs and enable accurate data entry, LDCs and ~~Submeter providers~~ SMPs are requested to provide a breakdown of only the above information (in section 'DATA REQUEST'), see column 3 of table in ~~Appendix~~ Appendix A.
- Prior data from LDCs and SMPs had minor errors and typos. Providing an ability to contact the individual – via email, phone or internal portal messaging system – would allow the correction/clarification of this suspect information.
- ~~This~~ The reduced reporting requirement under the OREC proposal will be sufficient for OFA/MOF/CEFD for fiscal projection purposes. However the Ministry of ~~ENERGY~~ Energy may have additional data requirements from the LDCs.
- The OCEB data request made an initial questionnaire for data from LDCs and SMPs, such as the number of customers, proportion of customers on a billing cycle and methodology to forecast OCEB payments for the upcoming months.
  - Note: Though LDC developed OCEB forecasts for the upcoming months may have been useful, due to the discrepancy in the OCEB forecasts across LDCs and the longer term nature of the OCEB model, these distributor provided forecasts were not utilized.
- Some of the information from the questionnaires was not needed for fiscal reporting purposes. Other information would vary over time, and as a result would be out-of-date shortly after the initial questionnaire.
  - The current data request asks for specific data – all for fiscal projection purposes – to be provided on a regular basis rather than on an initial detailed questionnaire.

**Corporate and Electricity Finance Division, Ontario Financing Authority**
**September 15, 2016**

## APPENDIX A –DATA

| Prior Data Request via Letter to LDCs/SMP | Data Available i n Portal | CURRENT DATA REQUEST |
|---|---|---|
| Local Distribution Company | Local Distribution Company | LDC / Submeter Provider / Retailer |
| Residential - (OCEB) Claim | Accounting Method | Residential - Claim |
| Residential - Number of Eligible Accounts | Customer Base Claim Current Month | Residential - Number of Eligible Accounts |
| Residential - Volume of Electricity | Customer Base Claim Previous Month | Residential - Volume of Electricity |
| Gen Serv <50kw - (OCEB) Claim | Customer Base Claim Total | Multi Unit Res - Claim |
| Gen Serv <50kw - Number of Eligible Accounts | Customer Base Customers Current Month | Multi Unit Res - Number of Eligible Accounts |
| Gen Serv <50kw - Volume of Electricity | Customer Base Customers Previous Month | Multi Unit Res - Volume of Electricity |
| Gen Serv >50kw - (OCEB) Claim | Customer Base Customers Total | Small Business - Claim |
| Gen Serv >50kw - Number of Eligible Accounts | Customer Base Volume Current Month | Small Business - Number of Eligible Accounts |
| Gen Serv >50kw - Volume of Electricity | Customer Base Volume Previous Month | Small Business - Volume of Electricity |
| Other - (OCEB) Claim | Customer Base Volume Total | Farms - Claim |
| Other - Number of Eligible Accounts | Date Submitted | Farms - Number of Eligible Accounts |
| Other - Volume of Electricity | Distributor Name | Farms - Volume of Electricity |
| Multi Unit Res - (OCEB) Claim | Month1 Forecast | *Rebate offsetting Electricity Component ($) [Nice to have]* |
| Multi Unit Res - Number of Eligible Accounts | Month2 Forecast | *Rebate offsetting Delivery Component ($)[Nice to have]* |
| Multi Unit Res - Volume of Electricity | Month3 Forecast | *Rebate offsetting Regulatory Component ($)[Nice to have]* |
| Retailer - (OCEB) Claim | Multi Unit Claim Current Month | Invoicing Period |
| Retailer - Number of Eligible Accounts | Multi Unit Claim Previous Month | Applicable Settlement Period |
| Retailer - Volume of Electricity | Multi Unit Claim Total | Contact Information of User Entering Data |
| Forecasted OCEB Claim in 1 month | Multi Unit Customers Current Month | |
| Forecasted OCEB Claim in 2 months | Multi Unit Customers Previous Month | |
| Forecasted OCEB Claim in 3 months | Multi Unit Customers Total | |
| Written Response to attached questions | Multi Unit Volume Current Month | |
| Sub-Metering Provider | Multi Unit Volume Previous Month | |
| (OCEB) Claim | Multi Unit Volume Total | |
| Number of Eligible Accounts | Other Claim Current Month | |
| Volume of Electricity | Other Claim Previous Month | |
| Fees and Charges | Other Claim Total | |
| Forecasted OCEB Claim in 1 month | Other Customers Current Month | |
| Forecasted OCEB Claim in 2 months | Other Customers Previous Month | |
| Forecasted OCEB Claim in 3 months | Other Customers Total | |
| Written Response to attached questions | Other Volume Current Month | |
| | Other Volume Previous Month | |
| | Other Volume Total | |
| | Residential Claim Current Month | |
| | Residential Claim Previous Month | |
| | Residential Claim Total | |
| | Residential Customers Current Month | |
| | Residential Customers Previous Month | |
| | Residential Customers Total | |

| Prior Data Request via Letter to LDCs/SMP | Data Available in Portal | CURRENT DATA REQUEST |
|---|---|---|
| | Residential Volume Current Month | |
| | Residential Volume Previous Month | |
| | Residential Volume Total | |
| | Retail Claim Current Month | |
| | Retail Claim Previous Month | |
| | Retail Claim Total | |
| | Retail Customers Current Month | |
| | Retail Customers Previous Month | |
| | Retail Customers Total | |
| | Retail Volume Current Month | |
| | Retail Volume Previous Month | |
| | Retail Volume Total | |
| | Service Over 50kW Claim Current Month | |
| | Service Over 50kW Claim Previous Month | |
| | Service Over 50kW Claim Total | |
| | Service Over 50kW Customers Current Month | |
| | Service Over 50kW Customers Previous Month | |
| | Service Over 50kW Customers Total | |
| | Service Over 50kW Volume Current Month | |
| | Service Over 50kW Volume Previous Month | |
| | Service Over 50kW Volume Total | |
| | Service Under 50kW Claim Current Month | |
| | Service Under 50kW Claim Previous Month | |
| | Service Under 50kW Claim Total | |
| | Service Under 50kW Customers Current Month | |
| | Service Under 50kW Customers Previous Month | |
| | Service Under 50kW Customers Total | |
| | Service Under 50kW Volume Current Month | |
| | Service Under 50kW Volume Previous Month | |
| | Service Under 50kW Volume Total | |
| | Settlement Month | |
| | Settlement Month Name | |
| | Settlement Period | |
| | Settlement Year | |
| | Submitter | |
| | Item Type | |
| | Path | |
| | Submeter Provider | |
| | Accounting Method | |
| | Claim Current Month | |
| | Claim Previous Month | |
| | Claim Total | |
| | Customers Current Month | |

| Prior Data Request via Letter to LDCs/SMP | Data Available in Portal | CURRENT DATA REQUEST |
|---|---|---|
| | Customers Previous Month | |
| | Customers Total | |
| | Date Submitted | |
| | Fees And Charges | |
| | IESO Market Participant ID | |
| | Month1 Forecast | |
| | Month2 Forecast | |
| | Month3 Forecast | |
| | Provider Name | |
| | Settlement Month | |
| | Settlement Month Name | |
| | Settlement Period | |
| | Settlement Year | |
| | Submitter | |
| | Volume Current Month | |
| | Volume Previous Month | |
| | Volume Total | |
| | Item Type | |
| | Path | |

## APPENDIX B – BACKGROUND: ONTARIO CLEAN ENERGY BENEFIT

- OCEB was in effect from 2011 to 2015, and provided residential, farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax.
    - Effective September 2012 electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month.
- OCEB helped Ontario families through the transition to a more reliable and cleaner electricity system, with the monthly cap balancing the fiscal implications of providing electricity relief.
- OCEB costs totalled $1,006 million in 2013-14 and $1,078 million in 2014-15, with a projected cost for 2015-16 of $860 million (for the 9 months remaining in the program).

| **Eligible Consumers** | |
|---|---|
| **Categories Listed in Legislation (coincides with categories eligible for RPP)** | |
| **Residential** | • a dwelling<br>• a property within the meaning of the Condominium Act, 1998<br>• a residential complex, within the meaning of the Residential Tenancies Act, 2006<br>• a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the Co-operative Corporations Act |
| **Farms** | • carries on a business that is a farming business for the purposes of the Farm Registration and Farm Organizations Funding Act, 1993, and<br>• holds a valid registration number assigned under that Act or the consumer's obligation to file a farming business registration form was waived pursuant to an order made under subsection 22 (6) of that Act |
| **Demand for electricity of 50 kW or less, or consumes not more than 250,000 kWh annually** | Would include small business, smaller broader- public-sector entities, and other small users. |
| **Special Cases (not eligible for RPP, but eligible for OCEB)** | |
| **Consumers On Retail Contracts** | Includes consumers with existing retail contracts and those who sign them during the duration of the program. |
| **Cornwall Electric and Hydro One Remote Communities Inc.** | Included since they are licensed distributors. |
| **Other Consumers Prescribed by Regulation** | 10 First Nations remote unlicensed distributors have been added by regulation. |
| **Exclusions** | |
| **Generators** | Generation station service and the microFIT distribution service charge are excluded in legislation. |

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Tomasz Bugajski |
| **Cc:** | Shajee Kathirgamanathan |
| **Subject:** | RE: IESO credit facility |
| **Date:** | Monday, October 24, 2016 4:07:04 PM |

---

No, not yet but I think it'd be a good idea to move this week for sure.

---

**From:** Tomasz Bugajski
**Sent:** Monday, October 24, 2016 4:07 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: IESO credit facility

It's sitting with Ron. Reminded him on Friday. Are you being asked about it?

---

**From:** John Kim
**Sent:** Monday, October 24, 2016 3:40 PM
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** IESO credit facility

Hi Tomasz,

Would you know what the status is on the credit facility request? I know we gave you the hardcopy.

Thanks,

John.

Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

| | |
|---|---|
| **From:** | Karim Javeri |
| **To:** | Tomasz Bugajski; Ronald Kwan |
| **Cc:** | Sandy Roberts; John Kim |
| **Subject:** | RE: LRC note for fact check - comments due Monday 5 pm |
| **Date:** | Monday, November 07, 2016 5:39:10 PM |
| **Attachments:** | REG-11246_ID47240_LRC_Committee_Note Nov 7 to minisries for fact check_CEFD_TPD.docx |

Hello,

Combined edits with TPD's and addressed/commented on Ron's notes/comments.

Karim

---

**From:** Tomasz Bugajski
**Sent:** Monday, November 07, 2016 5:18 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Karim Javeri <Karim.Javeri@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: LRC note for fact check - comments due Monday 5 pm

DMO reached out for the regs, but they want to know if they're necessary before we submit comments.

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

---

**From:** Ronald Kwan
**Sent:** Monday, November 07, 2016 5:06 PM
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Cc:** Karim Javeri <Karim.Javeri@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: LRC note for fact check - comments due Monday 5 pm

Hi,

Thanks. I made a few suggested edits.

Do we know if others in MOF (TPD?) or TBS are reviewing and commenting?

And can we get copies of the proposed regulations too?

Ron

**From:** Tomasz Bugajski
**Sent:** November 7, 2016 4:04 PM
**To:** Ronald Kwan
**Cc:** Karim Javeri; Sandy Roberts
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

Thanks Karim.

Ron – see SPFB's comments on the LRC note for the ENERGY item. CO asked for our comments by 4pm.

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

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**From:** Karim Javeri
**Sent:** Monday, November 07, 2016 4:02 PM
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>
**Subject:** RE: LRC note for fact check - comments due Monday 5 pm

Hi Tomasz - Our comments are attached.

---

**From:** Tomasz Bugajski
**Sent:** Monday, November 07, 2016 3:53 PM
**To:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

How's this coming along?

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

---

**From:** Tomasz Bugajski
**Sent:** Monday, November 07, 2016 2:19 PM
**To:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

Here are the final materials.

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

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**From:** Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
**Sent:** Monday, November 07, 2016 2:17 PM
**To:** Jenarra DeSouza (MEDTE/MRI) <Jenarra.DeSouza@ontario.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Cc:** Gwendolynne Young (ENE) <Gwendolynne.Young@ontario.ca>; David McLean (MOF) <David.McLean@ontario.ca>
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

FYI – in context of electricity rate mitigation pink note fact check. Final materials attached.

---

**From:** Wittman, Nancy (CAB)
**Sent:** November 7, 2016 2:15 PM
**To:** Pearce, Christopher (MOF)
**Subject:** LRC note for fact check - comments due Monday 5 pm

Chris – here you go.

Nancy

**LEGISLATION AND REGULATIONS COMMITTEE**
**BRIEFING NOTE**

Energy
**Electricity Rate Mitigation**

| CAB | TB/MBC | LRC | CAB | Effective Date |
|---|---|---|---|---|
| Sept. 12, 2016 | Sept. 12, 2016 | Nov. 14, 2016 | Nov. 16, 2016 | January 1, 2017 |

## Summary of Proposal

The following proposal contains a variance from Cabinet direction, which is detailed in the Cabinet Office Analysis section of this note and attached variance memo.

The following proposal is posted on the Regulatory Registry until November 12th. This note contains a placeholder for a summary of feedback from the Regulatory Registry.

**Context for Decision:**

On Sept. 12, 2016 the Ministry of Energy received Cabinet Approval to introduce legislation that would enable a broader Electricity Rate Mitigation Strategy for electricity consumers across the province. On September 15, the Minister of Energy introduced Bill 13, the *Ontario Rebate for Electricity for Electricity Consumers Act, 2016,* (ORECA~~)~~), that puts in place an 8% rebate for residential, small business customers and farms. ~~Bill 13 is scheduled to come into force on January 1, 2017.~~

Bill 13 passed on October 19, 2016 and received Royal Assent on November 2, 2016 and is scheduled to come into force on January 1, 2017.

**Commented [RK1]:** Could include wording that the Bill passed and has received Royal Assent.

DONE

**Summary of Proposal:**

To implement the rate relief provided for under Bill 13, one additional regulation and several regulatory amendments are needed.

1. Creating a new General regulation under the *Ontario Rebate for Electricity Consumers Act, 2016*.

   This proposed new regulation will provide the necessary mechanics to support the implementation of the 8% rebate. Provisions in this regulation include direction to Local Distribution Companies (LDCs) on:

   - Base invoice amounts for invoices (direction on what amounts should be included in the calculation of the 8% rebate).

- Flow through of financial assistance (direction on passing through the rebate to eligible consumers).
- Records keeping, reimbursement requirements for vendors, financial assistance re: fees and charges imposed by unit sub-meter providers.

2. Amending O. Reg. 442/01(Rural or Remote Electricity Rate Protection) made under the *Ontario Energy Board Act, 1998*.
   - This proposed amendment will update the Rural or Remote Rate Protection (RRRP) program, to provide increased rate relief to eligible rural customers (low-density customers of Hydro One). The increased subsidy would result in an approximate increased monthly subsidy from $31.50 to $60.50.
   - Cabinet previously approved an increase of $110 million. Hydro One has provided updated numbers of eligible customers and ENERGY is seeking approval for a regulation that would result in an additional $6.4 million from the rate base in order to fulfill the intention of the proposal.
3. Amending O. Reg. 429/04 (Adjustments under Section 25.33 of the Act) made under the *Electricity Act, 1998.*
   - This regulation governs how the Global Adjustment is charged to different classes of electricity consumers. This includes setting eligibility requirements for being a participant in the Industrial Conservation Initiative).
   - Under this proposed amendment, the Industrial Conservation Initiative would be expanded so that all electricity consumers over 1 MW would be eligible for the program. Currently, only electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A electricity consumers). ~~This proposed amendment would provide eligible electricity consumers with an average monthly peak demand between 1 MW and 5 MW with the opportunity to participate in the Industrial Conservation Initiative.~~ Current sector restrictions for consumers in the 3 to 5 MW range would be removed and smaller industrial, institutional and commercial businesses between 1 and 3 MW would be eligible. Newly eligible consumers would have to opt-in, should they wish to participate.
4. Amending O. Reg 495/10 (General) made under the *Ontario Clean Energy Benefit Act, 2010.*
   - For the period of 2011-2015 the Ontario Clean Energy Benefit provided certain consumers with a credit of ten percent of the total cost of electricity. The credit was put in place as a temporary measure, and there is currently no end date by which to claim retroactive payments.
   - The proposed amendment will prescribe an end date for electricity consumers to submit Ontario Clean Energy Benefit claims to service providers, and a second end date for licensed distributors and sub-meter providers to submit invoices.

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**Commented [KJ2]:** Energy deck: Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A electricity consumers).

Under the reg change:

ICI would be expanded so that all electricity consumers over 1 MW are eligible for the program.

5. and 6. Amending O. Reg. 275/04 (Information on Invoices to Certain Classes of Consumer of Electricity) made under the *Ontario Energy Board Act, 1998* and O. Reg 161/99 (Definitions and Exemptions) made under the *Ontario Energy Board Act, 1998*.

    - These proposed amendments are consequential to the implementation of the *Ontario Rebate for Electricity Consumers Act, 2016,* including adding the ORECA to the list of Acts and Regulations that can alter the presentation of the invoice from the standard messaging.

**Terms you need to know**

- **Local Distribution Companies (LDCs)** – Local electricity utilities, responsible for distributing power from transmission lines to people's homes (e.g., Hydro Ottawa, Toronto Hydro, etc.)
- **Regulated Price Plan (RPP)** - Since April 2005, the Ontario Energy Board (OEB) has administered an electricity price plan that provides stable and predictable electricity pricing, encourages conservation and ensures the price consumers pay for electricity better reflects the price paid to generators. This pricing plan is known as the Regulated Price Plan (RPP). About 5 million residential consumers, small businesses and farms are eligible for the RPP.
- **Class B Consumer** – commercial, institutional and small industrial consumers, typically with load size between 0.05 – 3 MW. Class B consumers pay GA as a flat rate applied to electricity consumption. Class B consumers include those that choose not to become Class A.
- **Class A Consumer** – large commercial and large industrial consumers with average peak load size above 3 MW, subject to eligibility. Class A consumers pay GA based on their electricity consumption during the five highest peak demand hours during the year.

**Why does Ontario need these changes? Why now?**

Electricity costs have been increasing as investments have been made to decarbonize and modernize the province's electricity infrastructure. Since 2010, electricity prices have risen considerably, particularly for households and small businesses.

The Ministry of Energy, working with the ~~and~~ Ministry of Finance ~~were~~, ~~were~~as asked to develop a proposal to provide rate relief to Ontario electricity consumers. On September 12, in the Speech from the Throne, the government committed to introducing measures that would provide consumers with rate relief on their electricity bills.

**What is the expected cost to government?**

The 8% rebate is expected to cost about $1.2 billion per year (approximately $4 billion from 2017-2020). Other smaller incremental costs include that LDCs and other providers will likely incur some costs with updating their systems~~;~~, however, as the

LDCs recently delivered the OCEB set up costs should not be substantial, and increased administrative costs or borrowing costs for the IESO.

The cost of the ICI and RRRP program expansions will be shared across the electricity rate base, and are estimated to cost approximately $0.60/month (RRRP) and $0.74/month (ICI) for the average residential customer. The total new costs to the rate base for each program expansion are $82 million and $116.4 million, respectively (pending Cabinet approval of the additional support for the RRRP through this proposal).

## Cabinet Office Analysis

Following the ~~Speech from the Throne and the~~ ~~introduction~~ passage of the ORECA ~~in~~, 2016 ~~in~~on October 19, 2016 ~~September~~, Ontarians are expecting to see electricity rate relief as of January 1, ~~in January~~ 2017. This proposal provides the mechanisms to implement this commitment. For the rate relief to be implementation by January 1, there is a need to move forward with the regulation changes as soon as possible (e.g. so that bill issuers can prepare Customer Information Systems for setting new RRRP rates and calculate associated benefits, so that LDCs have time to prepare for the expected increase in the ICI program, all in advance of the January implementation). The following regulations and regulatory amendments are being proposed:

**Commented [RK3]:** Substitute as passage and the date

DONE

1. General Regulation

The proposed General Regulation under the *Ontario Rebate for Electricity Consumers ~~Rebate~~ Act, 2016* will put in place a framework very similar to the framework developed to deliver the Ontario Clean Energy Benefit. The regulation provides instruction to LDCs on how the rebate is to be calculated (e.g., rebate is calculated before taxes; clarifies how the rebate is applied to those receiving Ontario Electricity Support Program assistance).

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The proposed General Regulation also provides an outline on how the payments flow through to customers. Through the proposed General Regulation, a parallel process will be created to ensure that Independent Power Authorities and have the opportunity to participate and have their customers receive the provincial rebate. There were six communities that did not enroll to receive the OCEB. These communities would be eligible for the 8% rebate, but would need to go through the enrollment process.

2. Rural or Remote Electricity Rate Protection (RRRP) Expansion – Regulation

The RRRP framework was put in place to ensure that all Ontario residents pay similar prices for electricity distribution, regardless of their geographic location. The Ministry of Energy is seeking to increase the amount of rate protection available for eligible rural or remote electricity customers. Under the RRRP regulation the amount of rate protection available to Hydro One's R2 customers (residential customers who are classified as low density) is capped at a fixed amount of $127 million – which amounts to a monthly

subsidy of $31.50. The RRRP program is paid for by all electricity customers across the province, and costs the average residential consumer approximately $1/month.

In September 2016, Cabinet approved an additional $110 million in RRRP program funding that was intended to provide an increased benefit of approximately $29/month for all eligible Hydro One R2~~RRRP~~ customers. The additional monthly cost of this proposal for an average residential consumer was estimated to be $0.60.

**Variance from cabinet direction:** The Ministry of Energy is proposing to increase rate protection for eligible customers by an additional $6.4M, based on a revised estimate of eligible customers provided by Hydro One. The additional $6.4M will not increase the monthly cost for an average residential consumer.

As part of the Price Mitigation initiatives, Cabinet directed that the funding for R2 customers be adjusted annually to reflect any increases on their electricity bills. The proposed amendments to the regulation will add an escalating factor to the new base rate protection amount. Starting in 2018, and every year after, the total amount of rate protection available to Hydro One's R2 customers would be increased by a percentage, as calculated by the Ontario Energy Board~~.~~. This percentage would be based on the simple average, as calculated by the OEB, of the change in base distribution rates of all distributors from the previous year

3. Industrial Conservation Initiative Expansion (ICI)

The ICI is intended to incent a greater number of Ontario businesses to lower their electricity costs by shifting energy demand away from peak demand periods. Reducing peak demand increases the reliability of the power grid, reduces greenhouse gas (GHG) emissions and helps to defer the need to procure more resources. In 2010, when Ontario introduced ICI, the program was available to customers with a peak demand greater than 5 MW and in 2013 was subsequently expanded to allow eligible customers in certain sectors with a peak demand for electricity above 3 MW and less than or equal to 5 MW to opt in to the program.

The Ministry of Energy is proposing to expand eligibility under ICI to include all electricity consumers and market participants with an average monthly peak demand greater than one MW and to remove sector restrictions so that smaller (1-5MW?) institutional and commercial businesses would also be eligible. This would expand the ICI to include more than 1000 new customers. Non-ICI participants will likely see an increase on their bills but the extent of the impact is dependent on the uptake of the expanded ICI program.

4. Amending O. Reg. 495/10 (General) made under the Ontario Clean Energy Benefit Act, 2010

In addition to enacting the provisions for the 8% rebate, Bill 13 also included amendments to the Ontario Clean Energy Benefit Act, 2010 that provided the necessary

**Commented [KJ4]:** This calculation is based on the total cost of the RRRP program - $174 million, not $127 million as implied in the text.

OEB "This RRRP rate is underpinned by a RRRP amount to be provided to eligible customers in 2015 of $174 million. Also, the IESO's 2015 demand forecast is 136 TWh. The resulting RRRP rate is therefore 0.13 cents (rounded) per kilowatt-hour."

**Commented [MC5]:** ENERGY to fact check

**Commented [KJ6]:** RRRP is funded by ratepayers. Might be better to change to:

The impact of this $6.4 million increase is minimal and has no material impact on the estimated cost of approximately $0.60 per month for an average consumer using 750 kWh per month.

(From LRC Appendix C)

**Commented [RK7]:** Should Energy be asked to specify, at least for the Minute, what the escalating factor would be – e.g., linked to CPI, or to an index of urban residential electricity prices?

K: They have identified the mechanism in their deck

**Commented [RK8]:** How? Based on what?

K: Added language from Energy deck. According to Energy, this is a similar mechanism that is used with Algoma Power which is also a recipient of RRRP and has RRRP adjusted every year by the OEB

authority to prescribe end dates for retroactive claims, eliminating further crown liability for reimbursements after the prescribed date. Proposed amendments will establish February 1, 2017 as the cut-off date for customers with an eligible account to claim unpaid OCEB amounts.

Although this proposal is not expected to affect the majority of OCEB customers (as the Ministry of Finance has concluded that there were minimal errors in the application of the program), the potential size of the liability related to retroactive payments is highly uncertain due to data limitations. ENERGY's rough estimate for this liability is $10 million.

**Commented [MC9]:** ENERGY to provide a sense of magnitude – how much was paid out under OCEB during the life of the program?

5. Amending O. Reg. 161/99 (Definitions and Exemptions) made under the Ontario Energy Board Act, 1998.

This proposed amendment is required to help ensure that the 8% rebate is passed on to individual units in multi-unit complexes.

**Commented [MC10]:** ENERGY to clarify - to what degree of certainty? To individually metered units or to all individual units?

6. Amending O. Reg. 275/04 (Information on Invoices to Certain Classes of Consumer of Electricity) made under the Ontario Energy Board Act, 1998

This amendment allows for the rebate legislation and any regulations under it to alter the presentation of invoices. This proposal is necessary for the invoice to present the 8% rebate as a separate line item.

There is also one related Minister's Regulation on invoicing requirements (to provide clear direction to energy vendors) that is moving forward in parallel with this package.

**Linkages:**

Ontario's Climate Change Action Plan (CCAP)

The CCAP, released in summer 2016, reiterated the 2016 Budget commitment and stated that Ontario intends to invest in initiatives that both reduce greenhouse gas (GHG) emissions and ensure that the net impact of cap and trade would not result in an overall increase in electricity costs for commercial and industrial consumers, and that there would be a modest benefit of up to $2 per month, on average, to residential consumers.

At the time, it was estimated that redirecting cap and trade auction proceeds to lower the cost of electricity would reduce up to 3,000,000 tonnes of greenhouse gas (GHG) emissions by 2020.

Electricity Rate Mitigation Initiatives:

The OCEB was a five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. ~~OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST).~~ The Province also put in place the energy portion of the Ontario Energy and Property Tax Credit, as well as the Northern Ontario Energy Credit at that time to provide on-going targeted relief, in addition to the

**Commented [MK11]:** OCEB was created in response to the expected 46% increase in residential electricity prices over the life of the program (see LTEP 2010).

The HST was never a stated reason for the creation of OCEB.

general sales tax credit. ~~Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base.~~ OCEB expired on December 31, 2015.

~~The~~As part of the transition to the end of the OCEB, ~~T~~the government also recently ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and put in place the low-income targeted Ontario Electricity Support Program (OESP).

**Delivery:**

For the 8% rebate, LDCs have indicated they will likely be operational by January 1 2017. However, the legislation gives LDCs until July 1 2017 to begin delivering the 8% rebate and associated messaging. If LDCs are not operational on January 1 2017, customers would receive any back-owed rebate in a lump sum once the LDC is able to deliver the rebate.

A dedicated information portal will be created by ENERGY for oversight and tracking of the rebate (similar to what was created under the Clean Energy Benefit program).

Pending approval of the increased amount of rate protection through the RRRP, the OEB will be required to set the RRRP rate. This rate is typically set by the OEB in December and then Hydro One would implement the changes. This would be complete by January 1 2017.

**Commented [MC12]:** ENERGY to confirm

The ICI expansion would be implemented by the IESO and LDCs by XXX

**Commented [MC13]:** ENERGY to provide.

**Stakeholder Consultations:**

Regulatory Registry

- On September 28, the Ministry of Energy posted a proposal for comment on the Regulatory Registry to provide stakeholders with the opportunity to comment on the electricity mitigation initiative.
- The posting included the proposed changes to the RRRP, ICI and new regulations needed to support the 8% rebate.
- **[placeholder – summary of RR feedback]**

LDC Working Group

- In October 2016 The Ministry hosted an LDC Working Group with nearly 40 LDCs representatives where feedback was provided to the ministry to consider in the development of the regulatory package. This included feedback on the billing system limitations that was incorporated into proposed bill presentment requirements.

**Commented [MC14]:** What was the specific change?

Standing Committee of Justice – Public Hearings for Bill 13

- On October 3, a number of organizations as well as individual citizens made presentations to the standing committee on Justice regarding Bill 13, including requesting additional rate relief, support for the rate relief package, and support for provisions that would limit disconnection of customers.

**Risks**

- The 8% rebate would be structured and delivered in a similar fashion to the former OCEB. There is a risk that the government could be criticized for replacing the OCEB with a smaller rate relief package, just one year after the OCEB ended.
    - The new rebate would have a wider base, and would be uncapped, compared to the OCEB, which was capped at 3,000 kWh per month (and per residential unit in a bulk-metered, multi-residential building).
- The rebate is likely to have a higher annualised fiscal cost than the earlier presented annualised cost estimate of $1 billion. With the increase in the base of eligible consumers that was decided on in the latter part of the policy development, the Ministry of Energy had circulated cost estimates that were rising to about $1.1 to $1.2 billion over the next two years. It was indicated that revised estimates would be part of Energy's PRRT submission.
- For the rate-based portions of the proposal (i.e., the expansion of ICI and RRRP) the result is an increase in costs for ratepayers not included in those programs (i.e., primarily residential, small business and farms). Shifting costs to some electricity consumers to lower rates for others carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.
- Under the proposal, some eligible consumers (e.g., multi-unit residential buildings) may receive multiple benefits (8% rebate and proceeds recycling), while others would be eligible for only one type of benefit.
- The Electricity Distributor Association raised concerns related to the costs of supporting the proposed increased RRRP, as the RRRP is paid for by a charge across all LDCs

**Commented [MC15]:** ENERGY to note any additional risks

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**Commented [KJ16]:** Ro: Earlier in the note they say the 8% rebate is expected to cost about $1.2 billion per year (approximately $4 billion from 2017-2020), so we could say:

The 8% rebate is expected to cost about $1.2 billion per year (approximately $4 billion from 2017-2020). It was indicated that revised estimates would be part of Energy's PRRT submission.

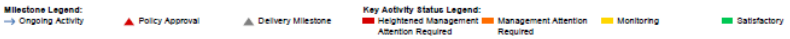
**Commented [MC17]:** ENERGY to comment

**Commented [KJ18]:** Legal should review this language. It is likely too strong given recent com law opinions.

**Commented [MC19]:** ENERGY to provide – response to the concern/mitigation measures

## APPENDIX A: Multi-Year Action Plan (Electricity Rate Mitigation)

*Below is an extract taken from the MYAP which demonstrates the overall strategic plan for the initiative that this policy submission supports. This excerpt represents the approved plan to date, and may not reflect the specific policy and delivery timelines identified in the Cabinet Minute above.*




**MYAP Slice 2016-11-06**

| KEY ACTIVITIES | YEAR 1 (2014-2015) | YEAR 2 (2015-2016) | YEAR 3 (2016-2017) | YEAR 4 (2017-2018) | YEAR 5 (2018-2019) | GOVERNANCE AND RISKS |
|---|---|---|---|---|---|---|
| 15.21 \| Electricity Rate Mitigation<br><br>Pillar: Managing Ontario's Energy Resources | | CCAP Update | Price Mitig Leg introduced<br>Electricity Price Mitigation | Price Mitig implemented | | Lead: ENERGY<br>Risk Categories:<br>Last updated: 24-10-16 |

| | |
|---|---|
| **From:** | Tomasz Bugajski |
| **To:** | Ronald Kwan |
| **Cc:** | Karim Javeri; Sandy Roberts; John Kim |
| **Subject:** | RE: LRC note for fact check - comments due Monday 5 pm |
| **Date:** | Monday, November 07, 2016 5:18:04 PM |

DMO reached out for the regs, but they want to know if they're necessary before we submit comments.

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

---

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**Sent:** Monday, November 07, 2016 5:06 PM
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**Cc:** Karim Javeri <Karim.Javeri@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
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Do we know if others in MOF (TPD?) or TBS are reviewing and commenting?

And can we get copies of the proposed regulations too?

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Ron – see SPFB's comments on the LRC note for the ENERGY item. CO asked for our comments by 4pm.

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**To:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
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How's this coming along?

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Here are the final materials.

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**Sent:** Monday, November 07, 2016 2:17 PM
**To:** Jenarra DeSouza (MEDTE/MRI) <Jenarra.DeSouza@ontario.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Cc:** Gwendolynne Young (ENE) <Gwendolynne.Young@ontario.ca>; David McLean (MOF)

<David.McLean@ontario.ca>
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

FYI – in context of electricity rate mitigation pink note fact check. Final materials attached.

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**From:** Wittman, Nancy (CAB)
**Sent:** November 7, 2016 2:15 PM
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**Subject:** LRC note for fact check - comments due Monday 5 pm

Chris – here you go.

Nancy

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| **Subject:** | RE: LRC note for fact check - comments due Monday 5 pm |
| **Date:** | Monday, November 07, 2016 5:14:21 PM |
| **Attachments:** | REG-11246_ID47240_LRC_Committee_Note Nov 7 to minisries for fact check -....docx |

TPD's comments attached. This was only actioned to us and them. Will ask DMO for copies of the regs.

**Tomasz Bugajski**
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**LEGISLATION AND REGULATIONS COMMITTEE**
**BRIEFING NOTE**

Energy
**Electricity Rate Mitigation**

| CAB | TB/MBC | LRC | CAB | Effective Date |
|---|---|---|---|---|
| Sept. 12, 2016 | Sept. 12, 2016 | Nov. 14, 2016 | Nov. 16, 2016 | January 1, 2017 |

## Summary of Proposal

The following proposal contains a variance from Cabinet direction, which is detailed in the Cabinet Office Analysis section of this note and attached variance memo.

The following proposal is posted on the Regulatory Registry until November 12th. This note contains a placeholder for a summary of feedback from the Regulatory Registry.

**Context for Decision:**

On Sept. 12, 2016 the Ministry of Energy received Cabinet Approval to introduce legislation that would enable a broader Electricity Rate Mitigation Strategy for electricity consumers across the province. On September 15, the Minister of Energy introduced Bill 13, the *Ontario Rebate for Electricity for Electricity Consumers Act, 2016,* (ORECA) that puts in place an 8% rebate for residential, small business customers and farms. Bill 13 is scheduled to come into force on January 1, 2017.

**Summary of Proposal:**

To implement the rate relief provided for under Bill 13, one additional regulation and several regulatory amendments are needed.

1. Creating a new General regulation under the *Ontario Rebate for Electricity Consumers Act, 2016*.

   This proposed new regulation will provide the necessary mechanics to support the implementation of the 8% rebate. Provisions in this regulation include direction to Local Distribution Companies (LDCs) on:

   - Base invoice amounts for invoices (direction on what amounts should be included in the calculation of the 8% rebate).
   - Flow through of financial assistance (direction on passing through the rebate to eligible consumers).

- Records keeping, reimbursement requirements for vendors, financial assistance re: fees and charges imposed by unit sub-meter providers.

2. Amending O. Reg. 442/01(Rural or Remote Electricity Rate Protection) made under the *Ontario Energy Board Act, 1998*.

   - This proposed amendment will update the Rural or Remote Rate Protection (RRRP) program, to provide increased rate relief to eligible rural customers (low-density customers of Hydro One). The increased subsidy would result in an approximate increased monthly subsidy from $31.50 to $60.50.
   - Cabinet previously approved an increase of $110 million. Hydro One has provided updated numbers of eligible customers and ENERGY is seeking an additional 6.4 million from the rate base in order to fulfill the intention of the proposal.

3. Amending O. Reg. 429/04 (Adjustments under Section 25.33 of the Act) made under the *Electricity Act, 1998.*

   - This regulation governs how the Global Adjustment is charged to different classes of electricity consumers. This includes setting eligibility requirements for being a participant in the Industrial Conservation Initiative).
   - This proposed amendment would provide eligible electricity consumers with an average monthly peak demand between 1 MW and 5 MW with the opportunity to participate in the Industrial Conservation Initiative. Current sector restrictions would be removed and smaller institutional and commercial businesses would be eligible. Newly eligible consumers would have to opt-in, should they wish to participate.

4. Amending O. Reg 495/10 (General) made under the *Ontario Clean Energy Benefit Act, 2010.*

   - For the period of 2011-2015 the Ontario Clean Energy Benefit provided certain consumers with a credit of ten percent of the total cost of electricity. The credit was put in place as a temporary measure, and there is currently no end date by which to claim retroactive payments.
   - The proposed amendment will prescribe an end date for electricity consumers to submit Ontario Clean Energy Benefit claims to service providers, and a second end date for licensed distributors and sub-meter providers to submit invoices.

5. and 6. Amending O. Reg. 275/04 (Information on Invoices to Certain Classes of Consumer of Electricity) made under the *Ontario Energy Board Act, 1998* and O. Reg 161/99 (Definitions and Exemptions) made under the *Ontario Energy Board Act, 1998*.

   - These proposed amendments are consequential to the implementation of the *Ontario Rebate for Electricity Consumers Act, 2016,* including adding the ORECA to the list of Acts and Regulations that can alter the presentation of the invoice from the standard messaging.

**Terms you need to know**

- **Local Distribution Companies (LDCs)** – Local electricity utilities, responsible for distributing power from transmission lines to people's homes (e.g., Hydro Ottawa, Toronto Hydro, etc.)
- **Regulated Price Plan (RPP)** - Since April 2005, the Ontario Energy Board (OEB) has administered an electricity price plan that provides stable and predictable electricity pricing, encourages conservation and ensures the price consumers pay for electricity better reflects the price paid to generators. This pricing plan is known as the Regulated Price Plan (RPP). About 5 million residential consumers, small businesses and farms are eligible for the RPP.
- **Class B Consumer** – commercial, institutional and small industrial consumers, typically with load size between 0.05 – 3 MW. Class B consumers pay GA as a flat rate applied to electricity consumption. Class B consumers include those that choose not to become Class A.
- **Class A Consumer** – large commercial and large industrial consumers with average peak load size above 3 MW, subject to eligibility. Class A consumers pay GA based on their electricity consumption during the five highest peak demand hours during the year.

**Why does Ontario need these changes? Why now?**

Electricity costs have been increasing as investments have been made to decarbonize and modernize the province's electricity infrastructure. Since 2010, electricity prices have risen considerably, particularly for households and small businesses.

The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers. On September 12, in the Speech from the Throne, the government committed to introducing measures that would provide consumers with rate relief on their electricity bills.

**What is the expected cost to government?**

The 8% rebate is expected to cost about $1.2 billion per year (approximately $4 billion from 2017-2020). Other smaller incremental costs include that LDCs and other providers will likely incur some costs with updating their systems, however as the LDCs recently delivered the OCEB set up costs should not be substantial, and increased administrative costs or borrowing costs for the IESO.

The cost of the ICI and RRRP program expansions will be shared across the electricity rate base, and are estimated to cost approximately $0.60/month (RRRP) and $0.74/month (ICI) for the average residential customer. The total new costs to the rate base for each program expansion are $82 million and $116.4 million, respectively (pending Cabinet approval of the additional support for the RRRP through this proposal).

## Cabinet Office Analysis

Following the Speech from the Throne and the introduction of the ORECA in September, Ontarians are expecting to see electricity rate relief in January 2017. This proposal provides the mechanisms to implement this commitment. For the rate relief to be implementation by January 1, there is a need to move forward with the regulation changes as soon as possible (e.g. so that bill issuers can prepare Customer Information Systems for setting new RRRP rates and calculate associated benefits, so that LDCs have time to prepare for the expected increase in the ICI program, all in advance of the January implementation). The following regulations and regulatory amendments are being proposed:

1. General Regulation

The proposed General Regulation under the *Ontario Rebate for Electricity Consumers ~~Rebate~~ Act, 2016* will put in place a framework very similar to the framework developed to deliver the Ontario Clean Energy Benefit. The regulation provides instruction to LDCs on how the rebate is to be calculated (e.g., rebate is calculated before taxes; clarifies how the rebate is applied to those receiving Ontario Electricity Support Program assistance).

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The proposed General Regulation also provides an outline on how the payments flow through to customers. Through the proposed General Regulation, a parallel process will be created to ensure that Independent Power Authorities and have the opportunity to participate and have their customers receive the provincial rebate. There were six communities that did not enroll to receive the OCEB. These communities would be eligible for the 8% rebate, but would need to go through the enrollment process.

2. Rural or Remote Electricity Rate Protection (RRRP) Expansion – Regulation

The RRRP framework was put in place to ensure that all Ontario residents pay similar prices for electricity distribution, regardless of their geographic location. The Ministry of Energy is seeking to increase the amount of rate protection available for eligible rural or remote electricity customers. Under the RRRP regulation the amount of rate protection available to Hydro One's R2 customers (residential customers who are classified as low density) is capped at a fixed amount of $127 million – which amounts to a monthly subsidy of $31.50. The RRRP program is paid for by all electricity customers across the province, and costs the average residential consumer approximately $1/month.

In September 2016, Cabinet approved an additional $110 million in RRRP program funding that was intended to provide an increased benefit of approximately $29/month for all eligible RRRP customers. The additional monthly cost of this proposal for an average residential consumer was estimated to be $0.60.

**Variance from cabinet direction:** The Ministry of Energy is proposing to increase rate protection for eligible customers by an additional $6.4M, based on a revised estimate of

eligible customers provided by Hydro One. The additional $6.4M will not increase the monthly cost for an average residential consumer.

Commented [MC1]: ENERGY to fact check

As part of the Price Mitigation initiatives, Cabinet directed that the funding for R2 customers be adjusted annually to reflect any increases on their electricity bills. The proposed amendments to the regulation will add an escalating factor to the new base rate protection amount. Starting in 2018, and every year after, the total amount of rate protection available to Hydro One's R2 customers would be increased by a percentage, as calculated by the Ontario Energy Board.

3. Industrial Conservation Initiative Expansion (ICI)

The ICI is intended to incent a greater number of Ontario businesses to lower their electricity costs by shifting energy demand away from peak demand periods. Reducing peak demand increases the reliability of the power grid, reduces greenhouse gas (GHG) emissions and helps to defer the need to procure more resources. In 2010, when Ontario introduced ICI, the program was available to customers with a peak demand greater than 5 MW and in 2013 was subsequently expanded to allow eligible customers with a peak demand for electricity above 3 MW and less than or equal to 5 MW to opt in to the program.

The Ministry of Energy is proposing to expand eligibility under ICI to include all electricity consumers and market participants with an average monthly peak demand greater than one MW and to remove sector restrictions so that smaller institutional and commercial businesses would be eligible. This would expand the ICI to include more than 1000 new customers. Non-ICI participants will likely see an increase on their bills but the extent of the impact is dependent on the uptake of the expanded ICI program.

4. Amending O. Reg. 495/10 (General) made under the Ontario Clean Energy Benefit Act, 2010

In addition to enacting the provisions for the 8% rebate, Bill 13 also included amendments to the Ontario Clean Energy Benefit Act, 2010 that provided the necessary authority to prescribe end dates for retroactive claims, eliminating further crown liability for reimbursements after the prescribed date. Proposed amendments will establish February 1, 2017 as the cut-off date for customers with an eligible account to claim unpaid OCEB amounts.

Although this proposal is not expected to affect the majority of OCEB customers (as the Ministry of Finance has concluded that there were minimal errors in the application of the program), the potential size of the liability related to retroactive payments is highly uncertain due to data limitations. ENERGY's rough estimate for this liability is $10 million.

Commented [MC2]: ENERGY to provide a sense of magnitude – how much was paid out under OCEB during the life of the program?

5. Amending O. Reg. 161/99 (Definitions and Exemptions) made under the Ontario Energy Board Act, 1998.

This proposed amendment is required to help ensure that the 8% rebate is passed on to individual units in multi-unit complexes.

Commented [MC3]: ENERGY to clarify - to what degree of certainty? To individually metered units or to all individual units?

6. Amending O. Reg. 275/04 (Information on Invoices to Certain Classes of Consumer of Electricity) made under the Ontario Energy Board Act, 1998

This amendment allows for the rebate legislation and any regulations under it to alter the presentation of invoices. This proposal is necessary for the invoice to present the 8% rebate as a separate line item.

There is also one related Minister's Regulation on invoicing requirements (to provide clear direction to energy vendors) that is moving forward in parallel with this package.

**Linkages:**

Ontario's Climate Change Action Plan (CCAP)

The CCAP, released in summer 2016, reiterated the 2016 Budget commitment and stated that Ontario intends to invest in initiatives that both reduce greenhouse gas (GHG) emissions and ensure that the net impact of cap and trade would not result in an overall increase in electricity costs for commercial and industrial consumers, and that there would be a modest benefit of up to $2 per month, on average, to residential consumers.

At the time, it was estimated that redirecting cap and trade auction proceeds to lower the cost of electricity would reduce up to 3,000,000 tonnes of greenhouse gas (GHG) emissions by 2020.

Electricity Rate Mitigation Initiatives:

The OCEB was a five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. ~~OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base.~~ OCEB expired on December 31, 2015.

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- The 8% rebate would be structured and delivered in a similar fashion to the former OCEB. There is a risk that the government could be criticized for replacing the OCEB with a smaller rate relief package, just one year after the OCEB ended.
- For the rate-based portions of the proposal (i.e., the expansion of ICI and RRRP) the result is an increase in costs for ratepayers not included in those programs (i.e., primarily residential, small business and farms). Shifting costs to some electricity consumers to lower rates for others carries the risk that the charge

would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

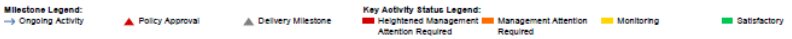
- Under the proposal, some eligible consumers (e.g., multi-unit residential buildings) may receive multiple benefits (8% rebate and proceeds recycling), while others would be eligible for only one type of benefit.
- The Electricity Distributor Association raised concerns related to the costs of supporting the proposed increased RRRP, as the RRRP is paid for by a charge across all LDCs

**Commented [MC9]:** ENERGY to comment

**Commented [MC10]:** ENERGY to provide – response to the concern/mitigation measures

## APPENDIX A: Multi-Year Action Plan (Electricity Rate Mitigation)

*Below is an extract taken from the MYAP which demonstrates the overall strategic plan for the initiative that this policy submission supports. This excerpt represents the approved plan to date, and may not reflect the specific policy and delivery timelines identified in the Cabinet Minute above.*




**MYAP Slice 2016-11-06**

| KEY ACTIVITIES | YEAR 1 (2014-2015) | YEAR 2 (2015-2016) | YEAR 3 (2016-2017) | YEAR 4 (2017-2018) | YEAR 5 (2018-2019) | GOVERNANCE AND RISKS |
|---|---|---|---|---|---|---|
| 15.21 \| Electricity Rate Mitigation<br><br>Pillar: Managing Ontario's Energy Resources | | CCAP Update | Price Mitig Leg introduced<br>Electricity Price Mitigation | Price Mitig implemented | | Lead: ENERGY<br>Risk Categories:<br>Last updated: 24-10-16 |

| | |
|---|---|
| **From:** | Karim Javeri |
| **To:** | Ronald Kwan |
| **Cc:** | Tomasz Bugajski; Sandy Roberts; John Kim |
| **Subject:** | RE: LRC note for fact check - comments due Monday 5 pm |
| **Date:** | Monday, November 07, 2016 6:18:28 PM |
| **Attachments:** | REG-11246_ID47240_LRC_Committee_Note Nov 7 to minisries for fact check_CEFD_TPD v2.docx |

Hi all –

Please see attached. I have removed all the internal comments.

Regards,

Karim

---

**From:** Ronald Kwan
**Sent:** Monday, November 07, 2016 6:12 PM
**To:** Karim Javeri <Karim.Javeri@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: LRC note for fact check - comments due Monday 5 pm

Thanks. Pease remove the internal comments and comments and comments.

We should clarify my earlier comment on fiscal cost risk that what was presented in September was an annualized cost of $1 bn, and communicated that way publicly. And the fiscal plan includes that amount, not the $1.2 bn.

Thanks,
Ron

On Nov 7, 2016, at 5:39 PM, Karim Javeri <Karim.Javeri@ofina.on.ca> wrote:

> Hello,
>
> Combined edits with TPD's and addressed/commented on Ron's notes/comments.
>
> Karim
>
> ---
>
> **From:** Tomasz Bugajski
> **Sent:** Monday, November 07, 2016 5:18 PM
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Karim Javeri <Karim.Javeri@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Subject:** RE: LRC note for fact check - comments due Monday 5 pm
>
> DMO reached out for the regs, but they want to know if they're necessary before we

submit comments.

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

---

**From:** Ronald Kwan
**Sent:** Monday, November 07, 2016 5:06 PM
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Cc:** Karim Javeri <Karim.Javeri@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: LRC note for fact check - comments due Monday 5 pm

Hi,

Thanks. I made a few suggested edits.

Do we know if others in MOF (TPD?) or TBS are reviewing and commenting?

And can we get copies of the proposed regulations too?

Ron

---

**From:** Tomasz Bugajski
**Sent:** November 7, 2016 4:04 PM
**To:** Ronald Kwan
**Cc:** Karim Javeri; Sandy Roberts
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

Thanks Karim.

Ron – see SPFB's comments on the LRC note for the ENERGY item. CO asked for our comments by 4pm.

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

---

**From:** Karim Javeri
**Sent:** Monday, November 07, 2016 4:02 PM
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>
**Subject:** RE: LRC note for fact check - comments due Monday 5 pm

Hi Tomasz - Our comments are attached.

---

**From:** Tomasz Bugajski
**Sent:** Monday, November 07, 2016 3:53 PM
**To:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

How's this coming along?

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

---

**From:** Tomasz Bugajski
**Sent:** Monday, November 07, 2016 2:19 PM
**To:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

Here are the final materials.

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

---

**From:** Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
**Sent:** Monday, November 07, 2016 2:17 PM
**To:** Jenarra DeSouza (MEDTE/MRI) <Jenarra.DeSouza@ontario.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Cc:** Gwendolynne Young (ENE) <Gwendolynne.Young@ontario.ca>; David McLean (MOF) <David.McLean@ontario.ca>
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

FYI – in context of electricity rate mitigation pink note fact check. Final materials attached.

---

**From:** Wittman, Nancy (CAB)
**Sent:** November 7, 2016 2:15 PM
**To:** Pearce, Christopher (MOF)
**Subject:** LRC note for fact check - comments due Monday 5 pm

Chris – here you go.

Nancy

<REG-11246_ID47240_LRC_Committee_Note Nov 7 to minisries for fact check_CEFD_TPD.docx>

**LEGISLATION AND REGULATIONS COMMITTEE**
**BRIEFING NOTE**

Energy
**Electricity Rate Mitigation**

| CAB | TB/MBC | LRC | CAB | Effective Date |
|---|---|---|---|---|
| Sept. 12, 2016 | Sept. 12, 2016 | Nov. 14, 2016 | Nov. 16, 2016 | January 1, 2017 |

## Summary of Proposal

The following proposal contains a variance from Cabinet direction, which is detailed in the Cabinet Office Analysis section of this note and attached variance memo.

The following proposal is posted on the Regulatory Registry until November 12th. This note contains a placeholder for a summary of feedback from the Regulatory Registry.

**Context for Decision:**

On Sept. 12, 2016 the Ministry of Energy received Cabinet Approval to introduce legislation that would enable a broader Electricity Rate Mitigation Strategy for electricity consumers across the province. On September 15, the Minister of Energy introduced Bill 13, the *Ontario Rebate for Electricity for Electricity Consumers Act, 2016,* (ORECA~~)~~), that puts in place an 8% rebate for residential, small business customers and farms. ~~Bill 13 is scheduled to come into force on January 1, 2017.~~

Bill 13 passed on October 19, 2016 and received Royal Assent on November 2, 2016 and is scheduled to come into force on January 1, 2017.

**Summary of Proposal:**

To implement the rate relief provided for under Bill 13, one additional regulation and several regulatory amendments are needed.

1. Creating a new General regulation under the *Ontario Rebate for Electricity Consumers Act, 2016*.

   This proposed new regulation will provide the necessary mechanics to support the implementation of the 8% rebate. Provisions in this regulation include direction to Local Distribution Companies (LDCs) on:

   - Base invoice amounts for invoices (direction on what amounts should be included in the calculation of the 8% rebate).

- Flow through of financial assistance (direction on passing through the rebate to eligible consumers).
- Records keeping, reimbursement requirements for vendors, financial assistance re: fees and charges imposed by unit sub-meter providers.

2. Amending O. Reg. 442/01(Rural or Remote Electricity Rate Protection) made under the *Ontario Energy Board Act, 1998*.
   - This proposed amendment will update the Rural or Remote Rate Protection (RRRP) program, to provide increased rate relief to eligible rural customers (low-density customers of Hydro One). The increased subsidy would result in an approximate increased monthly subsidy from $31.50 to $60.50.
   - Cabinet previously approved an increase of $110 million. Hydro One has provided updated numbers of eligible customers and ENERGY is seeking approval for a regulation that would result in an additional $6.4 million from the rate base in order to fulfill the intention of the proposal.
3. Amending O. Reg. 429/04 (Adjustments under Section 25.33 of the Act) made under the *Electricity Act, 1998.*
   - This regulation governs how the Global Adjustment is charged to different classes of electricity consumers. This includes setting eligibility requirements for being a participant in the Industrial Conservation Initiative).
   - Under this proposed amendment, the Industrial Conservation Initiative would be expanded so that all electricity consumers over 1 MW would be eligible for the program. Currently, only electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A electricity consumers). ~~This proposed amendment would provide eligible electricity consumers with an average monthly peak demand between 1 MW and 5 MW with the opportunity to participate in the Industrial Conservation Initiative.~~ Current sector restrictions for consumers in the 3 to 5 MW range would be removed and smaller industrial, institutional and commercial businesses between 1 and 3 MW would be eligible. Newly eligible consumers would have to opt-in, should they wish to participate.
4. Amending O. Reg 495/10 (General) made under the *Ontario Clean Energy Benefit Act, 2010.*
   - For the period of 2011-2015 the Ontario Clean Energy Benefit provided certain consumers with a credit of ten percent of the total cost of electricity. The credit was put in place as a temporary measure, and there is currently no end date by which to claim retroactive payments.
   - The proposed amendment will prescribe an end date for electricity consumers to submit Ontario Clean Energy Benefit claims to service providers, and a second end date for licensed distributors and sub-meter providers to submit invoices.

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5. and 6. Amending O. Reg. 275/04 (Information on Invoices to Certain Classes of Consumer of Electricity) made under the *Ontario Energy Board Act, 1998* and O. Reg 161/99 (Definitions and Exemptions) made under the *Ontario Energy Board Act, 1998*.

    - These proposed amendments are consequential to the implementation of the *Ontario Rebate for Electricity Consumers Act, 2016,* including adding the ORECA to the list of Acts and Regulations that can alter the presentation of the invoice from the standard messaging.

**Terms you need to know**

- **Local Distribution Companies (LDCs)** – Local electricity utilities, responsible for distributing power from transmission lines to people's homes (e.g., Hydro Ottawa, Toronto Hydro, etc.)
- **Regulated Price Plan (RPP)** - Since April 2005, the Ontario Energy Board (OEB) has administered an electricity price plan that provides stable and predictable electricity pricing, encourages conservation and ensures the price consumers pay for electricity better reflects the price paid to generators. This pricing plan is known as the Regulated Price Plan (RPP). About 5 million residential consumers, small businesses and farms are eligible for the RPP.
- **Class B Consumer** – commercial, institutional and small industrial consumers, typically with load size between 0.05 – 3 MW. Class B consumers pay GA as a flat rate applied to electricity consumption. Class B consumers include those that choose not to become Class A.
- **Class A Consumer** – large commercial and large industrial consumers with average peak load size above 3 MW, subject to eligibility. Class A consumers pay GA based on their electricity consumption during the five highest peak demand hours during the year.

**Why does Ontario need these changes? Why now?**

Electricity costs have been increasing as investments have been made to decarbonize and modernize the province's electricity infrastructure. Since 2010, electricity prices have risen considerably, particularly for households and small businesses.

The Ministry of Energy, working with the ~~and~~ Ministry of Finance ~~were~~, were~~as~~ asked to develop a proposal to provide rate relief to Ontario electricity consumers. On September 12, in the Speech from the Throne, the government committed to introducing measures that would provide consumers with rate relief on their electricity bills.

**What is the expected cost to government?**

The 8% rebate is expected to cost about $1.2 billion per year (approximately $4 billion from 2017-2020). Other smaller incremental costs include that LDCs and other providers will likely incur some costs with updating their systems~~;~~, however, as the

LDCs recently delivered the OCEB set up costs should not be substantial, and increased administrative costs or borrowing costs for the IESO.

The cost of the ICI and RRRP program expansions will be shared across the electricity rate base, and are estimated to cost approximately $0.60/month (RRRP) and $0.74/month (ICI) for the average residential customer. The total new costs to the rate base for each program expansion are $82 million and $116.4 million, respectively (pending Cabinet approval of the additional support for the RRRP through this proposal).

## Cabinet Office Analysis

Following the ~~Speech from the Throne and the introduction~~ passage of the ORECA ~~in~~, 2016 ~~in~~on October 19, 2016 ~~September~~, Ontarians are expecting to see electricity rate relief as of January 1, ~~in January~~ 2017. This proposal provides the mechanisms to implement this commitment. For the rate relief to be implementation by January 1, there is a need to move forward with the regulation changes as soon as possible (e.g. so that bill issuers can prepare Customer Information Systems for setting new RRRP rates and calculate associated benefits, so that LDCs have time to prepare for the expected increase in the ICI program, all in advance of the January implementation). The following regulations and regulatory amendments are being proposed:

1. General Regulation

The proposed General Regulation under the *Ontario Rebate for Electricity Consumers ~~Rebate~~ Act, 2016* will put in place a framework very similar to the framework developed to deliver the Ontario Clean Energy Benefit. The regulation provides instruction to LDCs on how the rebate is to be calculated (e.g., rebate is calculated before taxes; clarifies how the rebate is applied to those receiving Ontario Electricity Support Program assistance).

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The proposed General Regulation also provides an outline on how the payments flow through to customers. Through the proposed General Regulation, a parallel process will be created to ensure that Independent Power Authorities and have the opportunity to participate and have their customers receive the provincial rebate. There were six communities that did not enroll to receive the OCEB. These communities would be eligible for the 8% rebate, but would need to go through the enrollment process.

2. Rural or Remote Electricity Rate Protection (RRRP) Expansion – Regulation

The RRRP framework was put in place to ensure that all Ontario residents pay similar prices for electricity distribution, regardless of their geographic location. The Ministry of Energy is seeking to increase the amount of rate protection available for eligible rural or remote electricity customers. Under the RRRP regulation the amount of rate protection available to Hydro One's R2 customers (residential customers who are classified as low density) is capped at a fixed amount of $127 million – which amounts to a monthly

subsidy of $31.50. The RRRP program is paid for by all electricity customers across the province, and costs the average residential consumer approximately $1/month.

In September 2016, Cabinet approved an additional $110 million in RRRP program funding that was intended to provide an increased benefit of approximately $29/month for all eligible Hydro One R2~~RRRP~~ customers. The additional monthly cost of this proposal for an average residential consumer was estimated to be $0.60.

**Variance from cabinet direction:** The Ministry of Energy is proposing to increase rate protection for eligible customers by an additional $6.4M, based on a revised estimate of eligible customers provided by Hydro One. The additional $6.4M will not increase the monthly cost for an average residential consumer.

As part of the Price Mitigation initiatives, Cabinet directed that the funding for R2 customers be adjusted annually to reflect any increases on their electricity bills. The proposed amendments to the regulation will add an escalating factor to the new base rate protection amount. Starting in 2018, and every year after, the total amount of rate protection available to Hydro One's R2 customers would be increased by a percentage, as calculated by the Ontario Energy Board~~.~~. This percentage would be based on the simple average, as calculated by the OEB, of the change in base distribution rates of all distributors from the previous year

3. Industrial Conservation Initiative Expansion (ICI)

The ICI is intended to incent a greater number of Ontario businesses to lower their electricity costs by shifting energy demand away from peak demand periods. Reducing peak demand increases the reliability of the power grid, reduces greenhouse gas (GHG) emissions and helps to defer the need to procure more resources. In 2010, when Ontario introduced ICI, the program was available to customers with a peak demand greater than 5 MW and in 2013 was subsequently expanded to allow eligible customers in certain sectors with a peak demand for electricity above 3 MW and less than or equal to 5 MW to opt in to the program.

The Ministry of Energy is proposing to expand eligibility under ICI to include all electricity consumers and market participants with an average monthly peak demand greater than one MW and to remove sector restrictions so that smaller (1-5MW?) institutional and commercial businesses would also be eligible. This would expand the ICI to include more than 1000 new customers. Non-ICI participants will likely see an increase on their bills but the extent of the impact is dependent on the uptake of the expanded ICI program.

4. Amending O. Reg. 495/10 (General) made under the Ontario Clean Energy Benefit Act, 2010

In addition to enacting the provisions for the 8% rebate, Bill 13 also included amendments to the Ontario Clean Energy Benefit Act, 2010 that provided the necessary

**Commented [KJ1]:** This calculation is based on the total cost of the RRRP program - $174 million, not $127 million as implied in the text.

OEB "This RRRP rate is underpinned by a RRRP amount to be provided to eligible customers in 2015 of $174 million. Also, the IESO's 2015 demand forecast is 136 TWh. The resulting RRRP rate is therefore 0.13 cents (rounded) per kilowatt-hour."

**Commented [MC2]:** ENERGY to fact check

**Commented [KJ3]:** RRRP is funded by ratepayers. Might be better to change to:

The impact of this $6.4 million increase is minimal and has no material impact on the estimated cost of approximately $0.60 per month for an average consumer using 750 kWh per month.

(From Energy's LRC Submission Appendix C)

authority to prescribe end dates for retroactive claims, eliminating further crown liability for reimbursements after the prescribed date. Proposed amendments will establish February 1, 2017 as the cut-off date for customers with an eligible account to claim unpaid OCEB amounts.

Although this proposal is not expected to affect the majority of OCEB customers (as the Ministry of Finance has concluded that there were minimal errors in the application of the program), the potential size of the liability related to retroactive payments is highly uncertain due to data limitations. ENERGY's rough estimate for this liability is $10 million.

**Commented [MC4]:** ENERGY to provide a sense of magnitude – how much was paid out under OCEB during the life of the program?

5. Amending O. Reg. 161/99 (Definitions and Exemptions) made under the Ontario Energy Board Act, 1998.

This proposed amendment is required to help ensure that the 8% rebate is passed on to individual units in multi-unit complexes.

**Commented [MC5]:** ENERGY to clarify - to what degree of certainty? To individually metered units or to all individual units?

6. Amending O. Reg. 275/04 (Information on Invoices to Certain Classes of Consumer of Electricity) made under the Ontario Energy Board Act, 1998

This amendment allows for the rebate legislation and any regulations under it to alter the presentation of invoices. This proposal is necessary for the invoice to present the 8% rebate as a separate line item.

There is also one related Minister's Regulation on invoicing requirements (to provide clear direction to energy vendors) that is moving forward in parallel with this package.

**Linkages:**

Ontario's Climate Change Action Plan (CCAP)

The CCAP, released in summer 2016, reiterated the 2016 Budget commitment and stated that Ontario intends to invest in initiatives that both reduce greenhouse gas (GHG) emissions and ensure that the net impact of cap and trade would not result in an overall increase in electricity costs for commercial and industrial consumers, and that there would be a modest benefit of up to $2 per month, on average, to residential consumers.

At the time, it was estimated that redirecting cap and trade auction proceeds to lower the cost of electricity would reduce up to 3,000,000 tonnes of greenhouse gas (GHG) emissions by 2020.

Electricity Rate Mitigation Initiatives:

The OCEB was a five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. ~~OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST).~~ The Province also put in place the energy portion of the Ontario Energy and Property Tax Credit, as well as the Northern Ontario Energy Credit at that time to provide on-going targeted relief, in addition to the

**Commented [MK6]:** OCEB was created in response to the expected 46% increase in residential electricity prices over the life of the program (see LTEP 2010).

The HST was never a stated reason for the creation of OCEB.

general sales tax credit. ~~Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base.~~ OCEB expired on December 31, 2015.

~~The~~As part of the transition to the end of the OCEB, ~~T~~the government also recently ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and put in place the low-income targeted Ontario Electricity Support Program (OESP).

**Delivery:**

For the 8% rebate, LDCs have indicated they will likely be operational by January 1 2017. However, the legislation gives LDCs until July 1 2017 to begin delivering the 8% rebate and associated messaging. If LDCs are not operational on January 1 2017, customers would receive any back-owed rebate in a lump sum once the LDC is able to deliver the rebate.

A dedicated information portal will be created by ENERGY for oversight and tracking of the rebate (similar to what was created under the Clean Energy Benefit program).

Pending approval of the increased amount of rate protection through the RRRP, the OEB will be required to set the RRRP rate. This rate is typically set by the OEB in December and then Hydro One would implement the changes. This would be complete by January 1 2017.

**Commented [MC7]:** ENERGY to confirm

The ICI expansion would be implemented by the IESO and LDCs by XXX

**Commented [MC8]:** ENERGY to provide.

**Stakeholder Consultations:**

Regulatory Registry

- On September 28, the Ministry of Energy posted a proposal for comment on the Regulatory Registry to provide stakeholders with the opportunity to comment on the electricity mitigation initiative.
- The posting included the proposed changes to the RRRP, ICI and new regulations needed to support the 8% rebate.
- **[placeholder – summary of RR feedback]**

LDC Working Group

- In October 2016 The Ministry hosted an LDC Working Group with nearly 40 LDCs representatives where feedback was provided to the ministry to consider in the development of the regulatory package. This included feedback on the billing system limitations that was incorporated into proposed bill presentment requirements.

**Commented [MC9]:** What was the specific change?

Standing Committee of Justice – Public Hearings for Bill 13

- On October 3, a number of organizations as well as individual citizens made presentations to the standing committee on Justice regarding Bill 13, including requesting additional rate relief, support for the rate relief package, and support for provisions that would limit disconnection of customers.

**Risks**

Commented [MC10]: ENERGY to note any additional risks

- The 8% rebate would be structured and delivered in a similar fashion to the former OCEB. There is a risk that the government could be criticized for replacing the OCEB with a smaller rate relief package, just one year after the OCEB ended.
    - The new rebate would have a wider base, and would be uncapped, compared to the OCEB, which was capped at 3,000 kWh per month (and per residential unit in a bulk-metered, multi-residential building).

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- The rebate was earlier estimated as part of the fiscal plan to cost $1 billion on an annualized fiscal basis, and this estimate has since increased to $1.2 billion. ENERGY has also indicated that the rebate is expected to cost approximately $4 billion from 2017-2020. It was indicated that revised estimates would be part of Energy's PRRT submission.
- For the rate-based portions of the proposal (i.e., the expansion of ICI and RRRP) the result is an increase in costs for ratepayers not included in those programs (i.e., primarily residential, small business and farms). Shifting costs to some electricity consumers to lower rates for others carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.

Commented [MC11]: ENERGY to comment

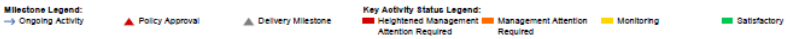
Commented [KJ12]: Legal should review this language. It is likely too strong given recent com law opinions.

- Under the proposal, some eligible consumers (e.g., multi-unit residential buildings) may receive multiple benefits (8% rebate and proceeds recycling), while others would be eligible for only one type of benefit.
- The Electricity Distributor Association raised concerns related to the costs of supporting the proposed increased RRRP, as the RRRP is paid for by a charge across all LDCs

Commented [MC13]: ENERGY to provide – response to the concern/mitigation measures

## APPENDIX A: Multi-Year Action Plan (Electricity Rate Mitigation)

*Below is an extract taken from the MYAP which demonstrates the overall strategic plan for the initiative that this policy submission supports. This excerpt represents the approved plan to date, and may not reflect the specific policy and delivery timelines identified in the Cabinet Minute above.*




**MYAP Slice 2016-11-06**

| KEY ACTIVITIES | YEAR 1 (2014-2015) | YEAR 2 (2015-2016) | YEAR 3 (2016-2017) | YEAR 4 (2017-2018) | YEAR 5 (2018-2019) | GOVERNANCE AND RISKS |
|---|---|---|---|---|---|---|
| 15.21 \| Electricity Rate Mitigation<br><br>Pillar: Managing Ontario's Energy Resources | | CCAP Update | Price Mitig Leg introduced<br>Electricity Price Mitigation | Price Mitig implemented | | Lead: ENERGY<br>Risk Categories:<br>Last updated: 24-10-16 |

**From:** Ronald Kwan
**To:** Francisco Chinchon; John Kim
**Subject:** RE: Latest price mitigation deck
**Date:** Thursday, January 12, 2017 1:36:28 PM

---

Hi Francisco,

Are you available to discuss?

Ron

---

**From:** Francisco Chinchon
**Sent:** January-12-17 13:31
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Latest price mitigation deck

Hi Ron, John,

Just got a call from Helen G. at OPCD. They received the latest draft of Energy's price mitigation deck and they would want to discuss the concept of a potential amortization of the GA (or the concept included in the deck) as there might be reporting/accounting issues. She is happy to discuss once you have reviewed the deck…

Thanks,

Francisco

| | |
|---|---|
| **From:** | Francisco Chinchon |
| **To:** | Ronald Kwan; John Kim |
| **Subject:** | RE: Latest price mitigation deck |
| **Date:** | Thursday, January 12, 2017 1:37:10 PM |

Sure but I don't have the deck.

---

**From:** Ronald Kwan
**Sent:** Thursday, January 12, 2017 1:36 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Latest price mitigation deck

Hi Francisco,

Are you available to discuss?

Ron

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**From:** Francisco Chinchon
**Sent:** January-12-17 13:31
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Latest price mitigation deck

Hi Ron, John,

Just got a call from Helen G. at OPCD. They received the latest draft of Energy's price mitigation deck and they would want to discuss the concept of a potential amortization of the GA (or the concept included in the deck) as there might be reporting/accounting issues. She is happy to discuss once you have reviewed the deck…

Thanks,

Francisco

**From:** Shajee Kathirgamanathan
**To:** John Kim
**Subject:** RE: MO Bi-Weekly
**Date:** Friday, November 25, 2016 5:32:32 PM

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Hi John,

I was thinking of elaborating on these points:

**ISSUE**

What are the upcoming policy files, issues, milestones and decision points with respect to the Ontario Electricity Financial Corporation (OEFC) and electricity sector policy with fiscal implications?

**CONTEXT**

Ontario Electricity Financial Corporation

- OPG Lending
- DRC ending

Electricity Policy Matters

- OREC and other Price Mitigation
- Darlington Refurb
- Hydro One Rate application
- OPG Rates
- OPG Business Plan
- LTEP 2017
- Updating ONFA reference plan (SIFB?)

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Friday, November 25, 2016 12:41 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** FW: MO Bi-Weekly

Fyi, on the 1-2 pager.

---

**From:** Ronald Kwan
**Sent:** Friday, November 25, 2016 12:25 PM
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Francisco Chinchon

<Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Mara Bakic <Mara.Bakic@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: MO Bi-Weekly

On the policy one-pager (with upcoming milestones and/or decision points and a quick refresher on any pertinent acronyms related to the file) I took it as 1-2 pages overall for electricity-related issues coming up over the next several months, so maybe a short section, with a few bullets each to describe the issue, how it relates to mandate/priorities, decision points/ approvals required and milestones/timing, for each of the items the branches have to bring forward.

Would that work?

Thanks,
Ron

---

**From:** Tomasz Bugajski
**Sent:** November-25-16 11:21
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Mara Bakic <Mara.Bakic@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** MO Bi-Weekly

Hi Everyone,

The MO bi-weekly is scheduled for 3pm on Monday, so please submit your content to Gavin by first thing Monday morning. Also, Marianne specifically requested to discuss the policy one pagers at the bi-weekly, so please consider including any material you might have for this.

Thanks,
Tomasz

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

**From:** Gavin He
**To:** Ronald Kwan
**Cc:** Emily Kerr; John Kim; Francisco Chinchon
**Subject:** RE: MO Bi-weekly agenda
**Date:** Monday, January 23, 2017 11:51:27 AM
**Attachments:** Annotated Agenda MO Jan 23 2017_v2.docx

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Hi Ron,

Please find attached the updated MO agenda which incorporated your requests as well.

Scott Nelms also reviewed the agenda (previous version) and just added a topic – Hydro One secondary offering for discussion.

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, January 20, 2017 5:36 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: MO Bi-weekly agenda

Hi Gavin,

Some suggestions. And we should likely break this up into two separate products going forward, between the electricity & AO topics vs the rest.

Ron

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**From:** Gavin He
**Sent:** January-20-17 11:03
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
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**Subject:** MO Bi-weekly agenda

Hi all,

Ron will be having his next MO bi-weekly meeting on Monday, January 23rd, 2017. To help him prepare for the meeting, could you please provide me with your annotated agenda by **EOD Thursday, January 19th, 2017**?

I have attached the previous agenda for your reference.

Please let me know if you have any questions.

Thanks,
Gavin He

**ANNOTATED AGENDA**
**MO UPDATE: January 23, 2017**

## ELECTRICITY & ASSET OPTIMISATION RELATED ISSUES

### 1. Global Adjustment Lawsuit

- On January 19, 2017, the Supreme Court of Canada dismissed OEFC's application seeking leave to appeal the Ontario Court of Appeal decision on OEFC's compliance with the payment provisions of 12 Power Purchase Agreements.
    - On April 19, 2016 the Ontario Court of Appeal dismissed OEFC's appeal of a March 12, 2015 lower court decision.
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- While OEFC's position has consistently been that it has administered these power purchase agreements in a manner that it believes has been correct, OEFC has been complying with the decision and orders of the lower courts, and no further avenues of appeal are available.
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    - As well, for electricity delivered from February 2015 onwards, the applicant NUGs have been paid at rates determined in accordance with the Ontario Superior Court decision. Therefore, the Supreme Court decision requires no further changes to the manner in which OEFC determines the payments to the applicant NUGs.

- There are several NUGs not involved in the lawsuit which have PPAs that contain similar terms and price provisions as those that were under consideration by the courts. As OEFC's application for leave to appeal was unsuccessful, OEFC may also have to address payments under these PPAs.
    - ~~Some additional payments would also be required due to an Ancillary Agreement OEFC entered into with an applicant NUG.~~

- As OEFC recovers the full cost of contracts through the Global Adjustment, there is no impact expected on the stranded debt. This recovery is done through the monthly settlement process of the Independent Electricity System Operator (IESO).

**Commented [RK1]:** Can you remind me about what this entails.

**Commented [EK2R1]:** This referred to the agreement with Iroquois Falls to make a payment in lieu of the facility providing additional generation as a result of its steam host closing.

- ~~In January 2013, notices of application commencing legal proceedings were served on OEFC in relation to 12 NUG contracts that have rate escalation based on a Total Market Cost (TMC) index.~~

    - ~~TMC is defined in NUG contracts to be the cost of electricity delivered on a 100 per cent load firm basis to a wholesale market participant loan customer. TMC includes Hourly Ontario Energy Price (HOEP), Wholesale Market Service Charges, Transmission Service Charges, the Debt Retirement Charge and the Global Adjustment.~~
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- CEFD staff have been working with MOF Legal on the drafting of a regulation under the Trillium Trust Act to credit the Trillium Trust with the net proceeds from the secondary offering of Hydro One shares.

- As part of this regulation, staff are proposing to include language that would allow the Province to credit, over time, the Trillium Trust with the net revenue gains related to the Hydro One shares purchased by the Power Workers' Union (PWU) and Society of Energy Professionals (the "Society") as part of the IPO using Provincial loans, as well as the Hydro One shares purchased by OPG as part of the secondary offering.

- Staff are working closely with MOF Legal and Legislative Counsel to draft proposed~~establish~~ language for the regulation that will allow for on-going, future crediting of the Trillium Trust as the gains related to the sale of shares to the union trusts and OPG are realized, as opposed to introducing a new regulation to credit the Trust each year, as preferred by Legislative Counsel.

**3. Hydro One Brampton**

- The sale of Hydro One Brampton to a new merged company ("Alectra", scheduled to be effective as at February 1, 2017) comprised of Powerstream, Enersource, and Horizon Utilities (typically referred to as "MergeCo") is tracking to close at the end of February.

- CEFD s~~S~~taff are working with EIGS staff, Torys and Hydro One Brampton on the final steps required to facilitate the transaction.

    - The key steps include the following:

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**Commented [GH4R3]:** Leg. Counsel prefers we introduced a new reg. every year but we are still discussing with them a different option.

- -At the Provincial Holdco level, swapping Hydro One Brampton debt for equity to sell the company debt free as per the agreement with MergeCo.
- -and tThe payment of a dividend to the Province prior to the sale to bring the enterprise value close to the agreed purchase price of $607 M.
- Note that the "enterprise value" for the transaction is not the net fiscal benefit to the Province, as the book value, the value of the retained debt, and costs of the transaction have to be taken into account.

- **[NOT PUBLIC]** Based on a revised financial outlook provided by Hydro One Brampton, the sale would provide an estimated ~$160 M fiscal benefit to the Province (~$80 M gain on sale and ~$80 M in PILs). **[TBC]**
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**4. Debt-Financing Global Adjustment**

The Ministry of Energy (ENERGY) has provided a presentation on an electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.

The options generally involve reducing current cost pass-through to consumers and deferring part of the costs forinto longer-term recovery from future consumers.

~~The presentation analyzes the system cost and ratepayer impacts of the options, but does not address~~Ministry of Energy is starting to discuss with an external accounting firm and OPCD the accounting issues and treatment, which would affect the fiscal impact~~/accounting treatment~~.

Energy's slides do not provide more details on~~, or~~ implementation considerations.

- It should be noted that under any of these options the relief period is quite limited when compare to the period under where future ratepayers will have to pay the cost of the deferral. Based on some of the illustrative charts, the impact of the relief would not last beyond 2022 and 2024, and the higher cost caused by the deferral would hit electricity bills until 2042 at the least.
- In the latest iteration of the proposal, Energy has proposed a moderate GA financing with delayed increase in payments:
    - In 2017, the starting GA payment will be lowered by $1.1 billion
    - Ratepayer payments will increase at 3% each year – up to a maximum of $2 billion above the true cost of GA
    - The proposal will involve borrowing up to $23 billion, and will be expected to pay back over a 25 and 30 year financing period.
- Preliminary discussions between ~~us~~CEFD and OPCD staff suggest that there are material challenges / fiscal and reporting risks associated with this proposal.

- OPCD staff have been contacted directly by Energy and they have met, along with KPMG and the IESO on accounting considerations.
- New "asset" needs to be created and needs to meet required accounting requirements, including who will hold the asset (Province, IESO, or LDCs) and the source of the financing.
    - Consultation with the OFA will be required to determine the appropriate vehicle for additional borrowing
    - Additional provincial borrowing could pressure on the Province's credit rating.
    - This may create a new "stranded debt" in the electricity sector.
- There might be some legal issues associated with this proposal:
    - Currently, it's unknown if any other legislation would require amendment.
    - The GA regime currently does not take any incurring of discretionary financing or interest costs into consideration of the true costs.
- Meeting held on January 20 – attended by IESO, KPMG, Energy, OPCD and CEFD:
    - In what was described as the RPP (Regulated Price Plan) model, the discussion focused on the current practice of the IESO of not accounting for the "market books" (versus operating books).
        - CFO of IESO noted that it does not account for its debt under the market books in its financial statements – a revelation to some participants, including OPCD staff, in the meeting.
        - CEFD staff are of the understanding that IESO's borrowing under its credit facility with the OFA is considered the "market books" type activities. [IESO also borrows from the OEFC through a loan and a short-term credit facility, which are recorded under its financial statements, likely qualifying as "operating books".]
    - The RPP model discussed would legislative changes at a minimum. Whether the current use of "market books" passes the scrutiny of accounting standards, PSAB or in the absence of PSAB coverage, IFRS, is open to discussion. OPCD are having discussions with KPMG and IESO counterparts on January 23 [today].
    - Prudence would require that the accounting implications are fully scoped out prior to moving forward on analyzing the proposal.
        - The current market books arrangement may not pass the accounting scrutiny/review.

**5. Hydro One / Secondary Offering Update**

**~~5.~~6. Outlook Forecast/OPG Business Plan**

- CEFD received the draft OPG 2017-19 Business Plan from the Ministry of Energy and is ~~has~~ drafting~~ed~~ a list of proposed questions to OPG.

**~~6.~~7. LTEP Consultations and the ALGP**

- In fall 2016, Ministry of Energy conducted consultations regarding Ontario's Long-Term Energy Plan (LTEP).
    - Energy last updated the LTEP in 2013 and expects to release a revised LTEP in 2017.
- As part of the consultation and engagement process, Energy held information sessions across the province, including sessions in Indigenous communities.
- Energy staff have noted that there were comments at these sessions on the Aboriginal Loan Guarantee Program (ALGP) and new and emerging financing gaps in relation to Indigenous communities investing in energy projects.
- Energy staff have not provided details on these comments, but have requested a discussion on this and to explore options to address some of the issues.

## 8. Constance Lake First Nation

- Constance Lake First Nation (Constance Lake) have brought forward a grievance to the Ministry of Energy (Energy) and Ministry of Indigenous Relations and Reconciliation (MIRR), claiming that the First Nation was not properly consulted by the original developer of the Nagagami hydro project, which is located in the traditional territory of Constance Lake, and only agreed to participate under duress.
    - Constance Lake First Nation, along with Brookfield, are owners of the Nagagami hydro project. Nagagami has a non-utility generator (NUG) contract with Ontario Electricity Financial Corporation (OEFC).
    - Nagagami is a 15 MW hydro facility that has been in-service since 1996.
- In June 2016, Constance Lake entered into a Framework Agreement with Energy and MIRR which includes as a purpose addressing the ongoing operation of the facility and how Constance Lake may become a more active participant in its operation, and derive benefits from the continued operation of the facility.
    - The Nagagami project has performed poorly and has not provided significant returns to Constance Lake.
    - Due to the facility's poor performance, the project has accumulated approximately $50 million in debt owed to OEFC.
- Energy staff have inquired about options that could be available under the NUG contract that could provide benefits to Constance Lake, if it was determined that the First Nation's grievance needed to be settled.
    - Staff for OEFC have noted to Energy staff that it cannot make general adjustments to the PPA related to settling a grievance without direction from the Minister. Staff for OEFC have also noted that OEFC does have a process

by which NUGs that are not financially viable under their existing contract may make a submission requesting changes to the PPA.

**ANNOTATED AGENDA**
**MO UPDATE: January 23, 2017**

## OTHER ISSUES

### ~~7.~~9. FAA Section 28 Sharing Protocol

- Minister of Finance approved the protocol on ~~-~~January 9
- President of Treasury Board approval is still pending
- Sharing protocol will be shared with all DMs via a joint memo from DM MoF and DM TBS
- An OFA/MOF/TBS working group is reviewing options for modernizing s.28 of the FAA, for possible inclusion in ~~the~~a 2017 ~~Budget~~Spring bill.
- Regulation has been drafted for college class exemption and is being reviewed by MAESD. The regulation would exempt transactions above certain percentage thresholds from requiring s. 28 approval. Exempt transactions would still be subject to ministry oversight (to be spelled out in a binding policy directive prepared by MAESD).
- Regulation for OLG/LCBO class exemption to be drafted by RAOD in early 2017 along with a financial directive.

### ~~8.~~10. Ontario Climate Change Solutions Deployment Corporation (OCCSDC)

- OFA staff to meet with MOECC representatives on Jan 23rd to discuss how key roles and responsibilities could be shared by the OCCSDC and the OFA. Key information on the OFA/agency relationship will be included in MOECC's report back to TB on the final regulation setting up this agency as well as the accountability framework and some details on programs offerings.
- The purpose of the agency is to accelerate the deployment of greenhouse gas reducing technologies, through services, offering grants and rebates and using financing tools to ensure Ontario residents and businesses can access low-interest financing for these technologies.

### ~~9.~~11. Highway 427 Expansion AFP Project – S. 28 approval

- OFA has received Project Agreement drafts from IO Legal to start section 28 approval process
- MTO has yet to provide formal request along with other supporting documents
- Kick-off meeting with OFA, MTO, IO and MOF Legal to be scheduled for next week.
- Commercial close is scheduled for February 28 while financial close is scheduled for March 3.

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**~~10.~~12. MAESD as Guarantor for UOIT's $220M Debenture**

- MAESD is contemplating replacing Durham College as guarantor of UOIT's debenture.
- MAESD staff ~~The ministry~~ agree~~s~~ with the college that the guarantor covenants are too restrictive for the college to manage its capital needs.
- MAESD staff will brief their senior management about whether to proceed to TB with submission.
- CFB staff have informed MAESD staff what steps would be required in order for MAESD to take on the guarantor role so that senior management at MAESD can make an informed decision.
- It would not be appropriate for MAESD to simply take on the guarantor role for Durham College, as the covenants written in the case of the college as guarantor would not be appropriate in the case of the Province, e.g., restrictions on disposition of assets and cross-default provisions.
- ~~OFA briefing note has been shared with DMO and TBS.~~
- ~~OFA could not estimate the cost of re-writing the debenture issue (vs. seeking approval of debenture holders to re-purpose certain buildings). MAESD to look into the cost of issuing the debenture in 2004.~~
- ~~MAESD will brief their senior management about whether to proceed to TB with submission.~~

**~~11.~~13. OCWA**

- OCWA is seeking approval for an investing by-law to allow OCWA to make short-term investments of surplus funds, for the period of 2017 to 2018.
    - Only funds not currently required for OCWA's immediate operating or capital needs would be invested, and would be done so with the assistance of the OFA.
- OFA staff have reviewed the by-law, as well as an associated statement of investment policies and procedures, and recommend that the Minister of Finance approve the by-law.
- This by-law must be approved by both the Minister of the Environment and Climate Change and the Minister of Finance before it can take effect. The Minister of the Environment and Climate Change has approved the by-law.

| | |
|---|---|
| **From:** | Gavin He |
| **To:** | Emily Kerr; Francisco Chinchon; John Kim |
| **Subject:** | RE: MO Bi-weekly agenda |
| **Date:** | Friday, January 20, 2017 5:52:28 PM |
| **Attachments:** | Annotated Agenda MO Jan 23 2017_Markup.docx |

Hi John,

Sorry left you out. It seems Ron wants to include LTEP consultation as a discussion item as well, so sending this to you to review too.

Regards,
Gavin He

---

**From:** Gavin He
**Sent:** Friday, January 20, 2017 5:43 PM
**To:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Subject:** FW: MO Bi-weekly agenda

Hi Emily/Francisco,

Ron has a couple questions on NUG and Trillium Trust. Please see attached for his comments.

Could you please provide me with your updates before noon on Monday, January 23rd?

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, January 20, 2017 5:36 PM
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**ANNOTATED AGENDA**
**MO UPDATE: January 23, 2017**

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## 7. Constance Lake First Nation

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**ANNOTATED AGENDA**
**MO UPDATE: January 23, 2017**

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- Sharing protocol will be shared with all DMs via a joint memo from DM MoF and DM TBS
- An OFA/MOF/TBS working group is reviewing options for modernizing s.28 of the FAA, for possible inclusion in ~~the~~a 2017 ~~Budget~~Spring bill.
- Regulation has been drafted for college class exemption and is being reviewed by MAESD. The regulation would exempt transactions above certain percentage thresholds from requiring s. 28 approval. Exempt transactions would still be subject to ministry oversight (to be spelled out in a binding policy directive prepared by MAESD).
- Regulation for OLG/LCBO class exemption to be drafted by RAOD in early 2017 along with a financial directive.

### ~~7.~~9. Ontario Climate Change Solutions Deployment Corporation (OCCSDC)

- OFA staff to meet with MOECC representatives on Jan 23rd to discuss how key roles and responsibilities could be shared by the OCCSDC and the OFA. Key information on the OFA/agency relationship will be included in MOECC's report back to TB on the final regulation setting up this agency as well as the accountability framework and some details on programs offerings.
- The purpose of the agency is to accelerate the deployment of greenhouse gas reducing technologies, through services, offering grants and rebates and using financing tools to ensure Ontario residents and businesses can access low-interest financing for these technologies.

### ~~8.~~10. Highway 427 Expansion AFP Project – S. 28 approval

- OFA has received Project Agreement drafts from IO Legal to start section 28 approval process
- MTO has yet to provide formal request along with other supporting documents
- Kick-off meeting with OFA, MTO, IO and MOF Legal to be scheduled for next week.
- Commercial close is scheduled for February 28 while financial close is scheduled for March 3.

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## ~~9.~~11. MAESD as Guarantor for UOIT's $220M Debenture

- MAESD is contemplating replacing Durham College as guarantor of UOIT's debenture.
- MAESD staff ~~The ministry~~ agree~~s~~ with the college that the guarantor covenants are too restrictive for the college to manage its capital needs.
- MAESD staff will brief their senior management about whether to proceed to TB with submission.
- CFB staff have informed MAESD staff what steps would be required in order for MAESD to take on the guarantor role so that senior management at MAESD can make an informed decision.
- It would not be appropriate for MAESD to simply take on the guarantor role for Durham College, as the covenants written in the case of the college as guarantor would not be appropriate in the case of the Province, e.g., restrictions on disposition of assets and cross-default provisions.
- ~~OFA briefing note has been shared with DMO and TBS.~~
- ~~OFA could not estimate the cost of re-writing the debenture issue (vs. seeking approval of debenture holders to re-purpose certain buildings). MAESD to look into the cost of issuing the debenture in 2004.~~
- ~~MAESD will brief their senior management about whether to proceed to TB with submission.~~

## ~~10.~~12. OCWA

- OCWA is seeking approval for an investing by-law to allow OCWA to make short-term investments of surplus funds, for the period of 2017 to 2018.
    - Only funds not currently required for OCWA's immediate operating or capital needs would be invested, and would be done so with the assistance of the OFA.
- OFA staff have reviewed the by-law, as well as an associated statement of investment policies and procedures, and recommend that the Minister of Finance approve the by-law.
- This by-law must be approved by both the Minister of the Environment and Climate Change and the Minister of Finance before it can take effect. The Minister of the Environment and Climate Change has approved the by-law.

**From:** Gavin He
**To:** John Kim
**Subject:** RE: MO Bi-weekly agenda
**Date:** Thursday, January 19, 2017 12:10:18 PM
**Attachments:** Annotated Agenda MO Jan 23 2017_EFB_v1.docx

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Hi John,

Please find attached the draft agenda for your review. Please let me know if this works.

Thanks,
Gavin He

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**From:** John Kim
**Sent:** Thursday, January 19, 2017 9:55 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: MO Bi-weekly agenda

Would you mind drafting an item based on the GA? I just want to say something to the effect that government needs to know the downside….

---

**From:** Gavin He
**Sent:** Thursday, January 19, 2017 9:49 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Mara Bakic <Mara.Bakic@ofina.on.ca>
**Subject:** RE: MO Bi-weekly agenda

Hi all,

Just a friendly reminder that the MO bi-weekly agenda is due today. If you haven't provided me with your agenda, could you please provide it to me by the end of the day today?

Thanks,
Gavin He

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**From:** Gavin He
**Sent:** Tuesday, January 17, 2017 10:41 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Mara Bakic <Mara.Bakic@ofina.on.ca>
**Subject:** MO Bi-weekly agenda

Hi all,

Ron will be having his next MO bi-weekly meeting on Monday, January 23 , 2017. To help him prepare for the meeting, could you please provide me with your annotated agenda by **EOD Thursday, January 19th, 2017**?

I have attached the previous agenda for your reference.

Please let me know if you have any questions.

Thanks,
Gavin He

**ANNOTATED AGENDA**
**MO UPDATE: January 23, 2017**

## 1. Net-Metering: Debt Retirement Charge (DRC) Regulation Update

Ministry of Energy has proposed amendments to the 2005 Net Metering Regulation (O. Reg. 541/05) in the Ontario Energy Board Act, 1998, (OEBA) which includes removing the 500 kilowatts (kW) maximum output capacity restriction to expand the eligibility to larger customers.

- This proposal requires corresponding change to the definition of net metered generation facility in O. Reg 493/01 related to the DRC, a regulation under the Electricity Act, 1998.
    - As a DRC regulation, this proposed amendment is under the purview of the Minister of Finance.
- This change is expected to have a small fiscal impact ($25K or less, based on Energy's estimates) for the 2017-18 fiscal year only. (Budget 2016 projected about $625 million in DRC revenues.)
    - CEFD has provided the ADM-approved MB20 Business Case and the draft LRC approval form to CQSD for the TB delegation.
        - For non-material financial implications, i.e., $5 million or 1% of the ministry's total voted appropriation (whichever is less), *Delegations of Authority under the Treasury Board Act, 1991, Protocols and Processes*, May 2006 allows for Ministries to directly proceed to LRC following a letter from the Minister to the Chair of TB/MBC.
- CEFD staff worked with TPD and MOF Legal staff to seek stakeholder feedback of proposed regulation change through a posting on the regulatory registry: http://www.ontariocanada.com/registry/view.do?postingId=23283&language=en
    - Following DMO contact with CO, the posting period was set to 30 days and will be complete early in January, to ensure LRC approval for January 31, 2017.
    - The posting was closed on January 6, 2017 and no feedback was received.
- Both Energy and Finance are tracking to LRC on January 31 and two options are currently being considered: A joint or separate LRC package(s) for the January 31 meeting.
    - ***DECISION REQUIRED:*** *Will Energy and Finance maintain separate LRC packages, allowing for an independent sign off process, or submit a single package.*
    - Energy staff have expressed the view that separate submissions going together would be more expeditious for internal approvals processes.

- CEFD drafted an LRC approval form, to be provided to the CO advisor this week.

Commented [GH1]: Update after today's briefing.

## 2. Debt-Financing Global Adjustment

The Ministry of Energy (ENERGY) has provided a presentation on an electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.

The options generally involve reducing current costs and deferring part of the costs into long-term. The presentation analyzes the system cost and ratepayer impacts of the options, but does not address the fiscal impact/accounting treatment, or implementation.

- It should be noted that under any of these options the relief period is quite limited when compare to the period under where future ratepayers will have to pay the cost of the deferral. Based on some of the illustrative charts, the impact of the relief would not last beyond 2022 and 2024, and the higher cost caused by the deferral would hit electricity bills until 2042 at the least.
- Preliminary discussions between us and OPCD staff suggest that there are material fiscal and reporting risk associated with this proposal.

## 3. Outlook Forecast/OPG Business Plan

- CEFD received the draft OPG 2017-19 Business Plan from the Ministry of Energy and will provide a list of proposed questions to OPG.

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Gavin He |
| **Cc:** | Emily Kerr; John Kim; Francisco Chinchon |
| **Subject:** | RE: MO Bi-weekly agenda |
| **Date:** | Monday, January 23, 2017 2:29:10 PM |
| **Attachments:** | Annotated Agenda MO Jan 23 2017_v3.docx<br>Annotated Agenda MO Jan 23 2017_v2_Markup.docx |

Hi All,

I tried to shorten it a little, and re-arranged.

Ron

---

**From:** Gavin He
**Sent:** January-23-17 11:51
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Subject:** RE: MO Bi-weekly agenda

Hi Ron,

Please find attached the updated MO agenda which incorporated your requests as well.

Scott Nelms also reviewed the agenda (previous version) and just added a topic – Hydro One secondary offering for discussion.

Thanks,
Gavin He

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**From:** Ronald Kwan
**Sent:** Friday, January 20, 2017 5:36 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: MO Bi-weekly agenda

Hi Gavin,

Some suggestions. And we should likely break this up into two separate products going forward, between the electricity & AO topics vs the rest.

Ron

---

**From:** Gavin He

**Sent:** January-20-17 11:03
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: MO Bi-weekly agenda

Hi Ron,

Please find attached the updated MO bi-weekly agenda for your review.

Regards,
Gavin He

---

**From:** Gavin He
**Sent:** Thursday, January 19, 2017 6:28 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** MO Bi-weekly agenda

Hi Ron,

Please find attached the proposed MO bi-weekly agenda for your review.

Thanks,
Gavin He

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**From:** Gavin He
**Sent:** Tuesday, January 17, 2017 10:41 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Mara Bakic <Mara.Bakic@ofina.on.ca>
**Subject:** MO Bi-weekly agenda

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Thanks,
Gavin He

**ANNOTATED AGENDA**
**MO UPDATE: January 23, 2017**

## ELECTRICITY & ASSET OPTIMISATION RELATED ISSUES

### 1. Electricity Price Mitigation: Debt-Financing Global Adjustment

The Ministry of Energy (ENERGY) has provided a presentation on an electricity price mitigation options, including an option to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.

The options generally involve reducing current cost pass-through to consumers and deferring part of the costs for longer-term future recovery from consumers.

Energy's slides do not provide more details on implementation considerations.

- Based on some of Energy's illustrative charts, the relief would last to about 2022 / 2024, and the higher cost caused by the deferral would hit electricity bills of future ratepayers until 2042 or 2047.
- Preliminary discussions between CEFD and OPCD staff suggest that there are material challenges / fiscal and reporting risks associated with this proposal.
- OPCD staff have been contacted directly by Energy and they have met, along with KPMG and the IESO on accounting considerations.
- Additional provincial borrowing could put pressure on the Province's credit rating.
- Ministry of Energy has initiated an accounting analysis workstream and a legal workstream to put together potential legislative (including regulations) amendments that might be needed, including to the OEG regulatory framework.
- Meeting held on January 20 – attended by IESO, KPMG, Energy, OPCD and CEFD:
    - There was a brief discussion of the historical OEFC structure, noting that OEFC is consolidated into Public Accounts, and that OEFC has a bottom-line impact on the Province, so it is not a model to achieve the fiscal objective for the GA option.
    - Energy is also looking to the Regulated Price Plan as a potential model, writ large, for the GA option.
        - The discussion focused on the current practice of the IESO of not accounting for the "market books" (versus operating books).
        - CFO of IESO noted that it records its Global Adjustment activities, including draws on the line-of-credit with the OFA, under the market books, not on in its operating financial statements.
        - The RPP model discussed would require legislative changes.
        - Whether the current use of "market books" passes the scrutiny of accounting standards, PSAB or otherwise, is subject to further investigation. OPCD are having discussions with KPMG and IESO

counterparts on January 23 [today]. OPCD did raise the caveat that the AG may have its own view.

- Energy also briefly discussed the LDC option; however, it was considered to be problematic for LDC balance sheets.
    - It would also be complicated and time-consuming if it were to be implemented, and LDCs would likely not respond favourably.

## 2. Hydro One / Secondary Offering Update

## 3. Trillium Trust

- CEFD staff have been working with MOF Legal on the drafting of a regulation under the Trillium Trust Act to credit the Trillium Trust with the net proceeds from the secondary offering of Hydro One shares.

- As part of this regulation, staff are proposing to include language that would allow the Province to credit, over time, the Trillium Trust with the net revenue gains related to the Hydro One shares purchased by the Power Workers' Union (PWU) and Society of Energy Professionals (the "Society") as part of the IPO using Provincial loans, as well as the Hydro One shares purchased by OPG as part of the secondary offering.

- Staff are working closely with MOF Legal and Legislative Counsel to draft potential language for the regulation that would allow for on-going, future crediting of the Trillium Trust as the gains related to the sale of shares to the union trusts and OPG are realized, as opposed to introducing a new regulation to credit the Trust, e.g., each year. Legislative Counsel has indicated a preference for separate regulations.

## 4. Hydro One Brampton

- The sale of Hydro One Brampton to a new merged company ("Alectra", scheduled to be effective as at February 1, 2017) comprised of Powerstream, Enersource, and Horizon Utilities (typically referred to as "MergeCo") is tracking to close at the end of February.

- CEFD staff are working with EIGS staff, Torys and Hydro One Brampton on the final steps required to facilitate the transaction.

    - The key steps include the following:
        - At the Provincial Holdco level, swapping Hydro One Brampton debt for equity to sell the company debt free as per the agreement with MergeCo.
        - The payment of a dividend to the Province prior to the sale to bring the enterprise value close to the agreed purchase price of $607 M.

        - Note that the “enterprise value” for the transaction is not the net fiscal benefit to the Province, as the book value, the value of the retained debt, and costs of the transaction have to be taken into account.

- **[NOT PUBLIC]** Based on a revised financial outlook provided by Hydro One Brampton, the sale would provide an estimated ~$160 M fiscal benefit to the Province (~$80 M gain on sale and ~$80 M in PILs). **[TBC]**

    - This is subject to change as Hydro One Brampton refines its information. Staff have also connected with OPCD to finalize the accounting treatment under a sale.

## 5. Outlook Forecast/OPG Business Plan

- CEFD received the draft OPG 2017-19 Business Plan from the Ministry of Energy and is drafting a list of proposed questions to OPG.

## 6. LTEP Consultations and the ALGP

- As part of the LTEP consultation and engagement process, Energy held information sessions across the province, including sessions in Indigenous communities.

- Energy staff have noted that there were comments at these sessions on the Aboriginal Loan Guarantee Program (ALGP) and new and emerging financing gaps in relation to Indigenous communities investing in energy projects.

- Energy staff have not provided details on these comments, but have requested a discussion on this and to explore options to address some of the issues.

## 7. Constance Lake First Nation

- Constance Lake First Nation (Constance Lake) have brought forward a grievance to the Ministry of Energy (Energy) and Ministry of Indigenous Relations and Reconciliation (MIRR), claiming that the First Nation was not properly consulted by the original developer of the Nagagami hydro project, which is located in the traditional territory of Constance Lake, and only agreed to participate under duress.
    - Constance Lake First Nation, along with Brookfield, are owners of the Nagagami hydro project. Nagagami has a non-utility generator (NUG) contract with Ontario Electricity Financial Corporation (OEFC).
    - Nagagami is a 15 MW hydro facility that has been in-service since 1996.

- In June 2016, Constance Lake entered into a Framework Agreement with Energy and MIRR, which includes as a purpose addressing the ongoing operation of the facility and how Constance Lake may become a more active participant in its operation, and derive benefits from the continued operation of the facility.

- The Nagagami project has performed poorly and has not provided significant returns to Constance Lake.
- Due to the facility's poor performance, the project has accumulated approximately $50 million in debt owed to OEFC.

- Energy staff have inquired about options that could be available under the NUG contract that could provide benefits to Constance Lake, if it was determined that the First Nation's grievance needed to be settled.
  - Staff for OEFC have noted to Energy staff that OEFC would not make general adjustments to the PPA related to settling a grievance without direction from the Minister of Finance.
  - Staff for OEFC have also noted that OEFC does have a process by which NUGs that are not financially viable under their existing contract may make a submission requesting changes to the PPA.

## 8. Global Adjustment Lawsuit

- On January 19, 2017, the Supreme Court of Canada dismissed OEFC's application seeking leave to appeal the Ontario Court of Appeal decision on OEFC's compliance with the payment provisions of 12 Power Purchase Agreements.
  - On April 19, 2016 the Ontario Court of Appeal dismissed OEFC's appeal of a March 12, 2015 lower court decision.
  - On March 12, 2015 the Ontario Superior Court of Justice determined that OEFC has incorrectly calculated payment provisions of 12 Power Purchase Agreements.

- While OEFC's position has consistently been that it has administered these power purchase agreements in a manner that it believes has been correct, OEFC has been complying with the decision and orders of the lower courts, and no further avenues of appeal are available.
  - OEFC made retroactive payments of approximately $180 million in the fall of 2016 to the applicant non-utility generators (NUGs) for electricity delivered during the period from January 2011 to January 2015 that predates the Ontario Superior Court decision.
  - As well, for electricity delivered from February 2015 onwards, the applicant NUGs have been paid at rates determined in accordance with the Ontario Superior Court decision. Therefore, the Supreme Court decision requires no further changes to the manner in which OEFC determines the payments to the applicant NUGs.

- There are several NUGs not involved in the lawsuit which have PPAs that contain similar terms and price provisions as those that were under consideration by the courts. As OEFC's application for leave to appeal was unsuccessful, OEFC may also have to address payments under these PPAs.
  - As OEFC recovers the full cost of contracts through the Global Adjustment, there is no impact expected on the stranded debt. This recovery is done through the monthly settlement process of the IESO.

**ANNOTATED AGENDA**
**MO UPDATE: January 23, 2017**

## OTHER ISSUES

### 9. FAA Section 28 Sharing Protocol

- Minister of Finance approved the protocol on January 9
- President of Treasury Board approval is still pending
- Sharing protocol will be shared with all DMs via a joint memo from DM MoF and DM TBS
- An OFA/MOF/TBS working group is reviewing options for modernizing s.28 of the FAA, for possible inclusion in a 2017 Spring bill.
- Regulation has been drafted for college class exemption and is being reviewed by MAESD. The regulation would exempt transactions above certain percentage thresholds from requiring s. 28 approval. Exempt transactions would still be subject to ministry oversight (to be spelled out in a binding policy directive prepared by MAESD).
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- OFA staff to meet with MOECC representatives on Jan 23rd to discuss how key roles and responsibilities could be shared by the OCCSDC and the OFA. Key information on the OFA/agency relationship will be included in MOECC's report back to TB on the final regulation setting up this agency as well as the accountability framework and some details on programs offerings.
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### 12. MAESD as Guarantor for UOIT's $220M Debenture

- MAESD is contemplating replacing Durham College as guarantor of UOIT's debenture.

- MAESD staff agree with the college that the guarantor covenants are too restrictive for the college to manage its capital needs.
- MAESD staff will brief their senior management about whether to proceed to TB with submission.
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- This by-law must be approved by both the Minister of the Environment and Climate Change and the Minister of Finance before it can take effect. The Minister of the Environment and Climate Change has approved the by-law.

**ANNOTATED AGENDA**
**MO UPDATE: January 23, 2017**

## ELECTRICITY & ASSET OPTIMISATION RELATED ISSUES

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~~In the latest iteration of the proposal, Energy has proposed a moderate GA financing with delayed increase in payments:~~

- ~~In 2017, the starting GA payment will be lowered by $1.1 billion~~
- ~~Ratepayer payments will increase at 3% each year – up to a maximum of $2 billion above the true cost of GA~~
- ~~The proposal will involve borrowing up to $23 billion, and will be expected to pay back over a 25 and 30 year financing period.~~

- Preliminary discussions between ~~us~~CEFD and OPCD staff suggest that there are material challenges / fiscal and reporting risks associated with this proposal.
- OPCD staff have been contacted directly by Energy and they have met, along with KPMG and the IESO on accounting considerations.
  - ~~New "asset" needs to be created and needs to meet required accounting requirements, including who will hold the asset (Province, IESO, or LDCs) and the source of the financing.~~
  - ~~Consultation with the OFA will be required to determine the appropriate vehicle for additional borrowing~~
- Additional provincial borrowing could put pressure on the Province's credit rating.
  - ~~This may create a new "stranded debt" in the electricity sector.~~

~~Ministry of Energy has initiated an accounting analysis workstream and a legal workstream to put together potential legislative (including regulations) amendments~~

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that might be needed, including to the OEG regulatory framework. ~~There might be some legal issues associated with this proposal:~~

- ~~Currently, it's unknown if any other legislation would require amendment.~~
- ~~The GA regime currently does not take any incurring of discretionary financing or interest costs into consideration of the true costs.~~
- Meeting held on January 20 – attended by IESO, KPMG, Energy, OPCD and CEFD:
  - There was a brief discussion of the historical OEFC structure, noting that OEFC is consolidated into Public Accounts, and that OEFC has a bottom-line impact on the Province, so it is not a model to achieve the fiscal objective for the GA option.
  - Energy is also looking to the Regulated Price Plan as a potential model, writ large, for the GA option.
    - ~~In what was described as the RPP (Regulated Price Plan) model, t~~The discussion focused on the current practice of the IESO of not accounting for the "market books" (versus operating books).
    - CFO of IESO noted that it ~~does not account for~~records its ~~debt~~Global Adjustment activities, including draws on the line-of-credit with the OFA, under the market books, not on in its operating financial statements~~ – a revelation to some participants, including OPCD staff, in the meeting~~.
    - ~~CEFD staff are of the understanding that IESO's borrowing under its credit facility with the OFA is considered the "market books" type activities. [IESO also borrows from the OEFC through a loan and a short-term credit facility, which are recorded under its financial statements, likely qualifying as "operating books".]~~
    - The RPP model discussed would require legislative changes~~ at a minimum~~.
    - Whether the current use of "market books" passes the scrutiny of accounting standards, PSAB or ~~in the absence of PSAB coverage, IFRS~~otherwise, is ~~open~~ subject to further investigation~~discussion~~. OPCD are having discussions with KPMG and IESO counterparts on January 23 [today]. OPCD did raise the caveat that the AG may have its own view.
  - Energy also briefly discussed the LDC option; however, it was considered to be problematic for LDC balance sheets.
    - It would also be complicated and time-consuming if it were to be implemented, and LDCs would likely not respond favourably.
  - ~~Prudence would require that the accounting implications are fully scoped out prior to moving forward on analyzing the proposal.~~
    - ~~The current market books arrangement may not pass the accounting scrutiny/review.~~

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- CEFD s~~S~~taff are working with EIGS staff, Torys and Hydro One Brampton on the final steps required to facilitate the transaction.

    - The key steps include the following:
        - ~~-~~At the Provincial Holdco level, swapping Hydro One Brampton debt for equity to sell the company debt free as per the agreement with MergeCo.
        - ~~and t~~The payment of a dividend to the Province prior to the sale to bring the enterprise value close to the agreed purchase price of $607 M.
        - Note that the "enterprise value" for the transaction is not the net fiscal benefit to the Province, as the book value, the value of the retained debt, and costs of the transaction have to be taken into account.

- **[NOT PUBLIC]** Based on a revised financial outlook provided by Hydro One Brampton, the sale would provide an estimated ~$160 M fiscal benefit to the Province (~$80 M gain on sale and ~$80 M in PILs). **[TBC]**

    - This is subject to change as Hydro One Brampton refines its information. Staff have also connected with OPCD to finalize the accounting treatment under a sale.

~~**1. Hydro One / Secondary Offering Update**~~

**5. Outlook Forecast/OPG Business Plan**

- CEFD received the draft OPG 2017-19 Business Plan from the Ministry of Energy and is ~~has~~ drafting~~ed~~ a list of proposed questions to OPG.

**6. LTEP Consultations and the ALGP**

~~In fall 2016, Ministry of Energy conducted consultations regarding Ontario's Long-Term Energy Plan (LTEP).~~

~~Energy last updated the LTEP in 2013 and expects to release a revised LTEP in 2017.~~

- As part of the LTEP consultation and engagement process, Energy held information sessions across the province, including sessions in Indigenous communities.

- Energy staff have noted that there were comments at these sessions on the Aboriginal Loan Guarantee Program (ALGP) and new and emerging financing gaps in relation to Indigenous communities investing in energy projects.

- Energy staff have not provided details on these comments, but have requested a discussion on this and to explore options to address some of the issues.

**7. Constance Lake First Nation**

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- Constance Lake First Nation (Constance Lake) have brought forward a grievance to the Ministry of Energy (Energy) and Ministry of Indigenous Relations and Reconciliation (MIRR), claiming that the First Nation was not properly consulted by the original developer of the Nagagami hydro project, which is located in the traditional territory of Constance Lake, and only agreed to participate under duress.

    - Constance Lake First Nation, along with Brookfield, are owners of the Nagagami hydro project. Nagagami has a non-utility generator (NUG) contract with Ontario Electricity Financial Corporation (OEFC).
    - Nagagami is a 15 MW hydro facility that has been in-service since 1996.

- In June 2016, Constance Lake entered into a Framework Agreement with Energy and MIRR, which includes as a purpose addressing the ongoing operation of the facility and how Constance Lake may become a more active participant in its operation, and derive benefits from the continued operation of the facility.

    - The Nagagami project has performed poorly and has not provided significant returns to Constance Lake.
    - Due to the facility's poor performance, the project has accumulated approximately $50 million in debt owed to OEFC.

- Energy staff have inquired about options that could be available under the NUG contract that could provide benefits to Constance Lake, if it was determined that the First Nation's grievance needed to be settled.

    - Staff for OEFC have noted to Energy staff that ~~it~~OEFC ~~can~~would not make general adjustments to the PPA related to settling a grievance without direction from the Minister of Finance.
    - Staff for OEFC have also noted that OEFC does have a process by which NUGs that are not financially viable under their existing contract may make a submission requesting changes to the PPA.

**~~7.~~8. Global Adjustment L~~l~~awsuit**

- On January 19, 2017, the Supreme Court of Canada dismissed OEFC's application seeking leave to appeal the Ontario Court of Appeal decision on OEFC's compliance with the payment provisions of 12 Power Purchase Agreements.

    - On April 19, 2016 the Ontario Court of Appeal dismissed OEFC's appeal of a March 12, 2015 lower court decision.
    - On March 12, 2015 the Ontario Superior Court of Justice determined that OEFC has incorrectly calculated payment provisions of 12 Power Purchase Agreements.

- While OEFC's position has consistently been that it has administered these power purchase agreements in a manner that it believes has been correct, OEFC has been complying with the decision and orders of the lower courts, and no further avenues of appeal are available.

    - ~~Since there already had been the March 12, 2015, Ontario Superior Court judgment against~~ OEFC~~, it had been required to~~ ma~~k~~de retroactive payments of approximately $180 million in the fall of 2016 to the applicant non-utility generators (NUGs) for electricity delivered during the period from January 2011 to January 2015 that predates the Ontario Superior Court decision.
    - As well, for electricity delivered from February 2015 onwards, the applicant NUGs have been paid at rates determined in accordance with the Ontario Superior Court decision. Therefore, the Supreme Court decision requires no further changes to the manner in which OEFC determines the payments to the applicant NUGs.

- There are several NUGs not involved in the lawsuit which have PPAs that contain similar terms and price provisions as those that were under consideration by the courts. As OEFC's application for leave to appeal was unsuccessful, OEFC may also have to address payments under these PPAs.

  As OEFC recovers the full cost of contracts through the Global Adjustment, there is no impact expected on the stranded debt. This recovery is done through the monthly settlement process of the ~~Independent Electricity System Operator (~~IESO~~).~~

~~Some additional payments would also be required due to an Ancillary Agreement OEFC entered into with an applicant NUG.~~

  - 

~~- As OEFC recovers the full cost of contracts through the Global Adjustment, there is no impact expected on the stranded debt. This recovery is done through the monthly settlement process of the Independent Electricity System Operator (IESO).~~

~~- In January 2013, notices of application commencing legal proceedings were served on OEFC in relation to 12 NUG contracts that have rate escalation based on a Total Market Cost (TMC) index.~~

  - ~~TMC is defined in NUG contracts to be the cost of electricity delivered on a 100 per cent load firm basis to a wholesale market participant loan customer. TMC includes Hourly Ontario Energy Price (HOEP), Wholesale Market Service Charges, Transmission Service Charges, the Debt Retirement Charge and the Global Adjustment.~~
  - ~~A regulation change effective January 1, 2011, changed the allocation of the Global Adjustment between large industrial and other electricity consumers.~~
  - ~~As a result of the change in the GA allocation, the TMC index is lower, which reduced the contract price escalation for NUG power purchase agreements (PPAs) using this index.~~

**ANNOTATED AGENDA**
**MO UPDATE: January 23, 2017**

**OTHER ISSUES**

### ~~8.~~9. FAA Section 28 Sharing Protocol

- Minister of Finance approved the protocol on ~~-~~January 9
- President of Treasury Board approval is still pending
- Sharing protocol will be shared with all DMs via a joint memo from DM MoF and DM TBS
- An OFA/MOF/TBS working group is reviewing options for modernizing s.28 of the FAA, for possible inclusion in ~~the~~a 2017 ~~Budget~~Spring bill.

**Commented [RK1]:** Can you remind me about what this entails.

**Commented [EK2R1]:** This referred to the agreement with Iroquois Falls to make a payment in lieu of the facility providing additional generation as a result of its steam host closing.

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- Regulation has been drafted for college class exemption and is being reviewed by MAESD. The regulation would exempt transactions above certain percentage thresholds from requiring s. 28 approval. Exempt transactions would still be subject to ministry oversight (to be spelled out in a binding policy directive prepared by MAESD).
- Regulation for OLG/LCBO class exemption to be drafted by RAOD in early 2017 along with a financial directive.

### ~~9.~~10. Ontario Climate Change Solutions Deployment Corporation (OCCSDC)

- OFA staff to meet with MOECC representatives on Jan 23rd to discuss how key roles and responsibilities could be shared by the OCCSDC and the OFA. Key information on the OFA/agency relationship will be included in MOECC's report back to TB on the final regulation setting up this agency as well as the accountability framework and some details on programs offerings.
- The purpose of the agency is to accelerate the deployment of greenhouse gas reducing technologies, through services, offering grants and rebates and using financing tools to ensure Ontario residents and businesses can access low-interest financing for these technologies.

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- OFA has received Project Agreement drafts from IO Legal to start section 28 approval process
- MTO has yet to provide formal request along with other supporting documents
- Kick-off meeting with OFA, MTO, IO and MOF Legal to be scheduled for next week.
- Commercial close is scheduled for February 28 while financial close is scheduled for March 3.

### ~~11.~~12. MAESD as Guarantor for UOIT's $220M Debenture

- MAESD is contemplating replacing Durham College as guarantor of UOIT's debenture.
- MAESD staff ~~The ministry~~ agree~~s~~ with the college that the guarantor covenants are too restrictive for the college to manage its capital needs.
- MAESD staff will brief their senior management about whether to proceed to TB with submission.
- CFB staff have informed MAESD staff what steps would be required in order for MAESD to take on the guarantor role so that senior management at MAESD can make an informed decision.
- It would not be appropriate for MAESD to simply take on the guarantor role for Durham College, as the covenants written in the case of the college as guarantor would not be appropriate in the case of the Province, e.g., restrictions on disposition of assets and cross-default provisions.
- ~~OFA briefing note has been shared with DMO and TBS.~~

~~• OFA could not estimate the cost of re-writing the debenture issue (vs. seeking approval of debenture holders to re-purpose certain buildings). MAESD to look into the cost of issuing the debenture in 2004.~~

~~• MAESD will brief their senior management about whether to proceed to TB with submission.~~

## ~~12.~~13. OCWA

- OCWA is seeking approval for an investing by-law to allow OCWA to make short-term investments of surplus funds, for the period of 2017 to 2018.
    - Only funds not currently required for OCWA's immediate operating or capital needs would be invested, and would be done so with the assistance of the OFA.
- OFA staff have reviewed the by-law, as well as an associated statement of investment policies and procedures, and recommend that the Minister of Finance approve the by-law.
- This by-law must be approved by both the Minister of the Environment and Climate Change and the Minister of Finance before it can take effect. The Minister of the Environment and Climate Change has approved the by-law.

| | |
|---|---|
| **From:** | Gavin He |
| **To:** | John Kim |
| **Subject:** | RE: Meeting with the MO |
| **Date:** | Monday, January 23, 2017 11:07:26 AM |
| **Attachments:** | Annotated Agenda MO Jan 23 2017_Markup_Energy_EFB.docx |

Sorry, forgot to attach the agenda.

Regards,
Gavin He

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**From:** Gavin He
**Sent:** Monday, January 23, 2017 11:06 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Meeting with the MO

Hi John,

I expanded the GA financing section a bit in the agenda. It seems only one option was being discussed on Friday's deck?

Please take a look and let me know if that works.

Thanks,
Gavin He

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**From:** Ronald Kwan
**Sent:** Monday, January 23, 2017 9:59 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Meeting with the MO

Hi John,

Would you add to the annotated agenda a discussion on the GA mitigation implementation options that Energy is looking at and the fiscal / accounting and legal issues as well as the potential LDC issues.

Thanks,
Ron

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**From:** Kennedy, Nancy (MOF) [mailto:Nancy.Kennedy@ontario.ca]
**Sent:** January-23-17 09:56

**To:** Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>
**Subject:** Meeting with the MO

Hi

I'll be unable to make this weekly meeting because I am up at OLG. I'll touch base with you after. I imagine the main topic for discussion is explaining what we are doing to explore options on mitigation, per the email exchange this weekend. I'd walk her through the LDC issue.

Best,
Nancy

**ANNOTATED AGENDA**
**MO UPDATE: January 23, 2017**

## ELECTRICITY & ASSET OPTIMISATION RELATED ISSUES

### 1. Global Adjustment Lawsuit

- On January 19, 2017, the Supreme Court of Canada dismissed OEFC's application seeking leave to appeal the Ontario Court of Appeal decision on OEFC's compliance with the payment provisions of 12 Power Purchase Agreements.
    - On April 19, 2016 the Ontario Court of Appeal dismissed OEFC's appeal of a March 12, 2015 lower court decision.
    - On March 12, 2015 the Ontario Superior Court of Justice determined that OEFC has incorrectly calculated payment provisions of 12 Power Purchase Agreements.

- While OEFC's position has consistently been that it has administered these power purchase agreements in a manner that it believes has been correct, OEFC has been complying with the decision and orders of the lower courts, and no further avenues of appeal are available.
    - ~~Since there already had been the March 12, 2015, Ontario Superior Court judgment against~~ OEFC~~, it had been required to~~ ma~~k~~de retroactive payments of approximately $180 million in the fall of 2016 to the applicant non-utility generators (NUGs) for electricity delivered during the period from January 2011 to January 2015 that predates the Ontario Superior Court decision.
    - As well, for electricity delivered from February 2015 onwards, the applicant NUGs have been paid at rates determined in accordance with the Ontario Superior Court decision. Therefore, the Supreme Court decision requires no further changes to the manner in which OEFC determines the payments to the applicant NUGs.

- There are several NUGs not involved in the lawsuit which have PPAs that contain similar terms and price provisions as those that were under consideration by the courts. As OEFC's application for leave to appeal was unsuccessful, OEFC may also have to address payments under these PPAs.
    - ~~Some additional payments would also be required due to an Ancillary Agreement OEFC entered into with an applicant NUG.~~

**Commented [RK1]:** Can you remind me about what this entails.

- As OEFC recovers the full cost of contracts through the Global Adjustment, there is no impact expected on the stranded debt. This recovery is done through the monthly settlement process of the Independent Electricity System Operator (IESO).

- ~~In January 2013, notices of application commencing legal proceedings were served on OEFC in relation to 12 NUG contracts that have rate escalation based on a Total Market Cost (TMC) index.~~

    - ~~TMC is defined in NUG contracts to be the cost of electricity delivered on a 100 per cent load firm basis to a wholesale market participant loan customer. TMC includes Hourly Ontario Energy Price (HOEP), Wholesale Market Service Charges, Transmission Service Charges, the Debt Retirement Charge and the Global Adjustment.~~
    - ~~A regulation change effective January 1, 2011, changed the allocation of the Global Adjustment between large industrial and other electricity consumers.~~
    - ~~As a result of the change in the GA allocation, the TMC index is lower, which reduced the contract price escalation for NUG power purchase agreements (PPAs) using this index.~~

## 2. Trillium Trust

- CEFD staff have been working with MOF Legal on the drafting of a regulation under the Trillium Trust Act to credit the Trillium Trust with the net proceeds from the secondary offering of Hydro One shares.

- As part of this regulation, staff are proposing to include language that would allow the Province to credit, over time, the Trillium Trust with the net revenue gains related to the Hydro One shares purchased by the Power Workers' Union (PWU) and Society of Energy Professionals (the "Society") as part of the IPO using Provincial loans, as well as the Hydro One shares purchased by OPG as part of the secondary offering.

- Staff are working closely with MOF Legal and Legislative Counsel to draft proposed~~establish~~ language for the regulation that will allow for on-going, future crediting of the Trillium Trust as the gains related to the sale of shares to the union trusts and OPG are realized, as opposed to introducing a new regulation to credit the Trust each year, as preferred by Legislative Counsel.

**Commented [RK2]:** Placement is subject to misinterpretation.

Do you mean that Leg Counsel prefers to do annual regs, given the placement of the clause, or that Leg. Counsel prefers enabling wording. If so, the clause should be moved.

**Commented [GH3R2]:** Leg. Counsel prefers we introduced a new reg. every year but we are still discussing with them a different option.

## 3. Hydro One Brampton

- The sale of Hydro One Brampton to a new merged company ("Alectra", scheduled to be effective as at February 1, 2017) comprised of Powerstream, Enersource, and Horizon Utilities (typically referred to as "MergeCo") is tracking to close at the end of February.

- CEFD s~~S~~taff are working with EIGS staff, Torys and Hydro One Brampton on the final steps required to facilitate the transaction.

    - The key steps include the following:

- -At the Provincial Holdco level, swapping Hydro One Brampton debt for equity to sell the company debt free as per the agreement with MergeCo.
- ~~and t~~The payment of a dividend to the Province prior to the sale to bring the enterprise value close to the agreed purchase price of $607 M.
- Note that the "enterprise value" for the transaction is not the net fiscal benefit to the Province, as the book value, the value of the retained debt, and costs of the transaction have to be taken into account.

- **[NOT PUBLIC]** Based on a revised financial outlook provided by Hydro One Brampton, the sale would provide an estimated ~$160 M fiscal benefit to the Province (~$80 M gain on sale and ~$80 M in PILs). **[TBC]**
    - This is subject to change as Hydro One Brampton refines its information. Staff have also connected with OPCD to finalize the accounting treatment under a sale.

**4. Debt-Financing Global Adjustment**

The Ministry of Energy (ENERGY) has provided a presentation on an electricity price mitigation option~~s~~ to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.

The options generally involve reducing current cost pass-through to consumers and deferring part of the costs for~~into~~ longer-term recovery from future consumers.

~~The presentation analyzes the system cost and ratepayer impacts of the options, but does not address~~Ministry of Energy is starting to discuss with an external accounting firm and OPCD the accounting issues and treatment, which would affect the fiscal impact~~/accounting treatment~~.

Energy's slides do not provide more details on~~, or~~ implementation considerations.

- It should be noted that under any of these options the relief period is quite limited when compare to the period under where future ratepayers will have to pay the cost of the deferral. Based on some of the illustrative charts, the impact of the relief would not last beyond 2022 and 2024, and the higher cost caused by the deferral would hit electricity bills until 2042 at the least.
- Energy has proposed a moderate GA financing with delayed increase in payments:
    - In 2017, the starting GA payment will be lowered by $1.1 billion
    - Ratepayer payments will increase at 3% each year – up to a maximum of $2 billion above the true cost of GA
    - The proposal will involve borrowing up to $23 billion, and will be expected to pay back over a 25 and 30 year financing period.
- Preliminary discussions between ~~us~~CEFD and OPCD staff suggest that there are material challenges / fiscal and reporting risks associated with this proposal.
- OPCD staff have been contacted directly by Energy and they have met, along with KPMG and the IESO on accounting considerations.

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- New “asset” needs to be created and needs to meet required accounting requirements, including who will hold the asset (Province, IESO, or LDCs) and the source of the financing.
    - Consultation with the OFA will be required to determine the appropriate vehicle for additional borrowing
    - Additional provincial borrowing could pressure on the Province’s credit rating.
    - This may create a new “stranded debt” in the electricity sector.
- There might be some legal issues associated with this proposal:
    - Currently, it’s unknown if any other legislation would require amendment.
    - The GA regime currently does not take any incurring of discretionary financing or interest costs into consideration of the true costs.
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## 5. Hydro One / Secondary Offering Update

## ~~5.~~6. Outlook Forecast/OPG Business Plan

- CEFD received the draft OPG 2017-19 Business Plan from the Ministry of Energy and is ~~has~~ draft~~inged~~ a list of proposed questions to OPG.

## 7. LTEP Consultations and the ALGP

## 8. Constance Lake First Nation

**ANNOTATED AGENDA**
**MO UPDATE: January 23, 2017**

## OTHER ISSUES

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- It would not be appropriate for MAESD to simply take on the guarantor role for Durham College, as the covenants written in the case of the college as guarantor would not be appropriate in the case of the Province, e.g., restrictions on disposition of assets and cross-default provisions.
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- ~~OFA could not estimate the cost of re-writing the debenture issue (vs. seeking approval of debenture holders to re-purpose certain buildings). MAESD to look into the cost of issuing the debenture in 2004.~~
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- This by-law must be approved by both the Minister of the Environment and Climate Change and the Minister of Finance before it can take effect. The Minister of the Environment and Climate Change has approved the by-law.

| | |
|---|---|
| **From:** | Gavin He |
| **To:** | Kenneth Russell |
| **Cc:** | John Kim |
| **Subject:** | RE: MoE - OFA MOU for OREC |
| **Date:** | Friday, December 09, 2016 6:50:15 PM |
| **Attachments:** | MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v4.docx |

Hi Ken,

Please find attached the updated MOU with proposed edits from our ADM. Could you please take a look and let us know if you are okay with the edits.

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Friday, December 09, 2016 3:44 PM
**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Thanks Ken.

Gavin, could you send this on to Ron for his review?

John.

---

**From:** Kenneth Russell
**Sent:** Friday, December 09, 2016 3:18 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Gavin

The revised language for section3. (b) is fine.

Ken

---

**From:** Gavin He
**Sent:** Friday, December 09, 2016 9:38 AM
**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Hi Ken,

In addition to the question below, Energy updated the language in the MOU Section 3. (b) to be:

"The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time."

Can you please let us know if you are okay with the revised language?

Thanks,
Gavin He

---

**From:** Gavin He
**Sent:** Thursday, December 08, 2016 6:43 PM
**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Hi Ken,

Quick question in the attached MOU. In bullet #2, "reimbursements" was defined, and then in #3, "reimbursements" was re-defined as "payments". Can we not just use the term "payments" across the whole document? Could you please let us know what your thoughts are on this?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Wednesday, December 07, 2016 11:20 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: MoE - OFA MOU for OREC

Do you mind taking a look? I want to move this to Ron this afternoon….

Thanks,

John.

---

**From:** Salman Qadir
**Sent:** Wednesday, December 07, 2016 8:20 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Fwd: MoE - OFA MOU for OREC

Hi John,

See Kens comment in the attached. He has a good point in the sense as to what sort of "are in agreement" looks like, especially since we seen that Energys PRRT didn't really mention the OFA as playing a role in the forecasting.

Salman

Begin forwarded message:

> **From:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
> **Date:** December 6, 2016 at 3:28:07 PM EST
> **To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
> **Cc:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>
> **Subject: RE: MoE - OFA MOU for OREC**
>
> Salman
>
> My comments on your notes to the draft MOU are attached. I am not in a position to comment on the description of the program structure in the draft MOU.
>
> Ken
>
> ---
>
> **From:** Salman Qadir
> **Sent:** Monday, December 05, 2016 10:46 AM
> **To:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>; Kenneth Russell <Kenneth.Russell@ofina.on.ca>
> **Cc:** John Kim <John.Kim@ofina.on.ca>
> **Subject:** MoE - OFA MOU for OREC
>
> Hi Caroline/Ken,
>
> We have received a marked up version of the MOU between the OFA and MoE related to the OREC regulation. I did a quick blackline and there were actually other changes that were not highlighted and was advisable to check with you whether you see any issues/comments. The changes seem to revolve around the definitions of the program etc.
>
> V3_clean = what we had last sent over
> DAP Nov 25 = the latest markup we received
> Track changes to v3_clean - quick blackline to show additional changes not shown in the markup received.

Hoping you can take a quick look.

Thank you,
Salman

**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the ~~[~~*Ontario Rebate for Electricity Consumers Act, 2016*~~] – NTD, pending the legislature considering the Bill], including~~ and the regulations thereunder (the "Act"), certain consumers will be entitled to receive ~~a credit, known as the~~ financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers ("" or "OREC"), against", in respect of the cost of electricity consumed by them ~~during the period~~ commencing January 1, 2017;

2. ~~Funds in respect of the~~ Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to ~~most~~specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act~~, its regulations and the Market Rules~~;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the OREC Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f) of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

**1. Payment Authorization**

(i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

(ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

(iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

**2. Payment Process**

~~a) The Ministry is registered with the IESO as an IESO Program Participant.~~

a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

~~c)~~b) The Ministry will take all necessary steps to provide the OFA with access to the ~~Ministry's~~ IESO ~~account and will arrange for~~Portal so that the OFA ~~to~~will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

~~d)~~c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

~~e)~~d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

~~f)~~e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

**3. Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ~~ensure that~~provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of ~~has full access to~~ such of those records as the Ministry may request from time to time.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

~~e)~~

**4. OREC Cost Forecasting**

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies, retailers, and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to ~~complete and accurate~~ data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process~~.~~.

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

~~d)a) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.~~

d) ~~e)~~ The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement ~~of~~on the forecasts.

e) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for the appropriated amount or for a change in the appropriated amount for OREC.

**5. Limited Role of the OFA**

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**Commented [SQ22]:** The only change outlined in the latest version.

**Commented [KR3]:** Does the OFA agree that there should be a provision contemplating agreement on the forecasts? Would it be sufficient to simply reqire tht senior management be briefed?

**Commented [RK4R3]:** How about dealing with it by switching the order and slightly amending the new "e)"?

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:
email:

c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy
880 Bay Street, 5th Floor
Attention:
email:

**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

**From:** Gavin He
**To:** John Kim
**Subject:** RE: MoE - OFA MOU for OREC
**Date:** Thursday, December 08, 2016 9:01:32 AM
**Attachments:** MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v2.docx

---

Hi John,

I reserved some of the edits. We can go over this in person.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Wednesday, December 07, 2016 7:11 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Let's pick this up tomorrow….Salman's track changes are essentially what Energy made without blacklining….

Maybe not make additional changes from Ken Russell's version but see if there are any strategic reasons why we need to not agree to this version.

John.

---

**From:** Gavin He
**Sent:** Wednesday, December 07, 2016 12:14 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Hi John,

I have reviewed the MOU and included my provided edits in the attached version. I also saved a copy under below folder:
\\ofina.on.ca\ofadfs\Users\CEF\Hydro 2016\Electricity Prices\Mitigation -- Energy\MOU - OFA-MOE

Please let me know if you have any questions.

Thanks,
Gavin He

---

**From:** John Kim

**Sent:** Wednesday, December 07, 2016 11:20 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: MoE - OFA MOU for OREC

Do you mind taking a look? I want to move this to Ron this afternoon….

Thanks,

John.

---

**From:** Salman Qadir
**Sent:** Wednesday, December 07, 2016 8:20 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Fwd: MoE - OFA MOU for OREC

Hi John,

See Kens comment in the attached. He has a good point in the sense as to what sort of "are in agreement" looks like, especially since we seen that Energys PRRT didn't really mention the OFA as playing a role in the forecasting.

Salman

Begin forwarded message:

> **From:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
> **Date:** December 6, 2016 at 3:28:07 PM EST
> **To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
> **Cc:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>
> **Subject: RE: MoE - OFA MOU for OREC**
>
> Salman
>
> My comments on your notes to the draft MOU are attached. I am not in a position to comment on the description of the program structure in the draft MOU.
>
> Ken
>
> ---
>
> **From:** Salman Qadir
> **Sent:** Monday, December 05, 2016 10:46 AM
> **To:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>; Kenneth Russell <Kenneth.Russell@ofina.on.ca>
> **Cc:** John Kim <John.Kim@ofina.on.ca>
> **Subject:** MoE - OFA MOU for OREC

Hi Caroline/Ken,

We have received a marked up version of the MOU between the OFA and MoE related to the OREC regulation. I did a quick blackline and there were actually other changes that were not highlighted and was advisable to check with you whether you see any issues/comments. The changes seem to revolve around the definitions of the program etc.

V3_clean = what we had last sent over
DAP Nov 25 = the latest markup we received
Track changes to v3_clean - quick blackline to show additional changes not shown in the markup received.

Hoping you can take a quick look.

Thank you,
Salman

**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the [*Ontario Rebate for Electricity Consumers Act, 2016* (the "Act")] ~~– NTD, pending the legislature considering the Bill], including~~ and the regulations thereunder ~~(~~the ~~"~~Act~~")~~, certain electricity consumers will be entitled to receive ~~a credit, known as the~~ financial assistance, which is called the "Ontario Rebate for Electricity Consumers" or "OREC" in this Memorandum of Understanding ("MOU") ~~called the "Ontario Rebate for Electricity Consumers ("" or "OREC"), against"~~, in respect of the cost of electricity consumed by them ~~during the period~~ commencing January 1, 2017;

2. ~~Funds in respect of the~~ Reimbursement for OREC provided to electricity consumers and persons receiving invoices from unit sub-meter providers ("~~Reimbursement~~Payments") will flow to ~~most~~specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act~~, its regulations and the Market Rules~~;

Commented [GH2]: Not sure what this means. Are they different kind of electricity consumers?

Commented [GH3]: I changed this term to "Payments" to avoid double definition. In #3 it seems that "reimbursement" was re-defined as "Payments".

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the ~~OREC~~Reimbursement ~~(the "~~Payments~~")~~ out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f) of the *Ministry of Energy Act, 2011* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the

Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

1. **Payment Authorization**

   (i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

   (ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

   (iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

      i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

      ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

2. **Payment Process**

   ~~a) The Ministry is registered with the IESO as an IESO Program Participant.~~

   a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

   ~~c)~~b) The Ministry will take all necessary steps to provide the OFA with access to the ~~Ministry's~~ IESO ~~account and will arrange for~~Portal so that the OFA ~~to~~will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

   ~~d)~~c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

   ~~e)~~d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

   ~~f)~~e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

3. **Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ensure that the Ministry has full access to such records.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

~~e)~~

**4. OREC Cost Forecasting**

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies, retailers, and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to ~~complete and accurate~~related data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process~~.~~

c) The OFA will collaborate with ~~and~~ the Ministry ~~will collaborate~~ to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.

e) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement ~~of~~on the forecasts.

**5. Limited Role of the OFA**

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for any differences between the forecast and actual costs of OREC, auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**Commented [SQ24]:** What would this access look like? Are they expecting us to set up up an external site with all of our files/modeling as well?

Just need to clarify expectations.

**Commented [KR5]:** I would not expect this ti be anything other than physical access. You may wish to clarify this point.

**Commented [GH6]:** I am not sure what this sentence means or trying to say.

**Commented [GH7]:** According to section 5 below, the OFA is only assisting in cost forecasting.

**Commented [GH8]:** Question – then who is responsible for this?

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**Commented [SQ29]:** The only change outlined in the latest version.

**Commented [KR10]:** Does the OFA agree that there should be a provision contemplating agreement on the forecasts? Would it be sufficient to simply reqire tht senior management be briefed?

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**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

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c) As of the date of this MOU the Ministry's contact person is:

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email:

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d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:

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email:

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Hand Delivery:
Ministry of Energy
880 Bay Street, 5th Floor
Attention:
email:

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**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

**From:** John Kim
**To:** Gavin He
**Subject:** RE: MoE - OFA MOU for OREC
**Date:** Wednesday, December 07, 2016 7:11:05 PM

---

Let's pick this up tomorrow….Salman's track changes are essentially what Energy made without blacklining….

Maybe not make additional changes from Ken Russell's version but see if there are any strategic reasons why we need to not agree to this version.

John.

---

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**Sent:** Wednesday, December 07, 2016 12:14 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

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I have reviewed the MOU and included my provided edits in the attached version. I also saved a copy under below folder:
\\ofina.on.ca\ofadfs\Users\CEF\Hydro 2016\Electricity Prices\Mitigation -- Energy\MOU - OFA-MOE

Please let me know if you have any questions.

Thanks,
Gavin He

---

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**Sent:** Wednesday, December 07, 2016 11:20 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: MoE - OFA MOU for OREC

Do you mind taking a look? I want to move this to Ron this afternoon….

Thanks,

John.

---

**From:** Salman Qadir
**Sent:** Wednesday, December 07, 2016 8:20 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Fwd: MoE - OFA MOU for OREC

Hi John,

See Kens comment in the attached. He has a good point in the sense as to what sort of "are in agreement" looks like, especially since we seen that Energys PRRT didn't really mention the OFA as playing a role in the forecasting.

Salman

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> **Date:** December 6, 2016 at 3:28:07 PM EST
> **To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
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>
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> **To:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>; Kenneth Russell <Kenneth.Russell@ofina.on.ca>
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Thank you,
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**From:** Gavin He
**To:** John Kim
**Subject:** RE: MoE - OFA MOU for OREC
**Date:** Wednesday, December 07, 2016 12:13:32 PM
**Attachments:** MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v1.docx

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**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the [*Ontario Rebate for Electricity Consumers Act, 2016* (the "Act")] ~~– NTD, pending the legislature considering the Bill], including~~ and the regulations thereunder ~~(~~the ~~"~~Act~~")~~, certain electricity consumers will be entitled to receive ~~a credit, known as the~~ financial assistance, which is called the "Ontario Rebate for Electricity Consumers" or "OREC" in this Memorandum of Understanding ("MOU") ~~called the "Ontario Rebate for Electricity Consumers ("" or "OREC"), against"~~, in respect of the cost of electricity consumed by them ~~during the period~~ commencing January 1, 2017;

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6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f) of the *Ministry of Energy Act, 2011* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the

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**Therefore:**

The Ministry and the OFA agree as follows:

**1. Payment Authorization**

(i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

(ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

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~~a) The Ministry is registered with the IESO as an IESO Program Participant.~~

a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

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~~d)~~c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices, within XX business days upon receiving the invoices.

~~e)~~d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

~~f)~~e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

**3. Reporting Requirements and Records**

**Commented [GH4]:** Do we need to define in how many business days?

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ensure that the Ministry has full access to such records.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

~~e)~~

**4. OREC Cost Forecasting**

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies, retailers, and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to ~~complete and accurate~~related data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process~~.~~.

c) The OFA will collaborate with ~~and~~ the Ministry ~~will collaborate~~ to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.

e) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement ~~of~~on the forecasts.

**5. Limited Role of the OFA**

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for any differences between the forecast and actual costs of OREC, auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

**Commented [GH5]:** Will there be a general mailbox? The contact person might change from time to time.

**Commented [SQ26]:** What would this access look like? Are they expecting us to set up up an external site with all of our files/modeling as well?

Just need to clarify expectations.

**Commented [KR7]:** I would not expect this ti be anything other than physical access. You may wish to clarify this point.

**Commented [GH8]:** I am not sure what this sentence means or trying to say.

**Commented [GH9]:** According to section 5 below, the OFA is only assisting in cost forecasting.

**Commented [GH10]:** Question – then who is responsible for this?

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**Commented [SQ211]:** The only change outlined in the latest version.

**Commented [KR12]:** Does the OFA agree that there should be a provision contemplating agreement on the forecasts? Would it be sufficient to simply reqire tht senior management be briefed?

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**6. Review and Termination**

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

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d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:

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email:

c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy
880 Bay Street, 5th Floor
Attention:
email:

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**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

| | |
|---|---|
| **From:** | Gavin He |
| **To:** | John Kim |
| **Subject:** | RE: MoE - OFA MOU for OREC |
| **Date:** | Wednesday, December 07, 2016 11:21:57 AM |

Hi John,

Sure, I will take a look.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Wednesday, December 07, 2016 11:20 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: MoE - OFA MOU for OREC

Do you mind taking a look? I want to move this to Ron this afternoon….

Thanks,

John.

---

**From:** Salman Qadir
**Sent:** Wednesday, December 07, 2016 8:20 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Fwd: MoE - OFA MOU for OREC

Hi John,

See Kens comment in the attached. He has a good point in the sense as to what sort of "are in agreement" looks like, especially since we seen that Energys PRRT didn't really mention the OFA as playing a role in the forecasting.

Salman

Begin forwarded message:

> **From:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
> **Date:** December 6, 2016 at 3:28:07 PM EST
> **To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
> **Cc:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>
> **Subject: RE: MoE - OFA MOU for OREC**

Salman

My comments on your notes to the draft MOU are attached. I am not in a position to comment on the description of the program structure in the draft MOU.

Ken

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**From:** Salman Qadir
**Sent:** Monday, December 05, 2016 10:46 AM
**To:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>; Kenneth Russell <Kenneth.Russell@ofina.on.ca>
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Hi Caroline/Ken,

We have received a marked up version of the MOU between the OFA and MoE related to the OREC regulation. I did a quick blackline and there were actually other changes that were not highlighted and was advisable to check with you whether you see any issues/comments. The changes seem to revolve around the definitions of the program etc.

V3_clean = what we had last sent over
DAP Nov 25 = the latest markup we received
Track changes to v3_clean - quick blackline to show additional changes not shown in the markup received.

Hoping you can take a quick look.

Thank you,
Salman

**From:** John Kim
**To:** Gavin He
**Subject:** RE: MoE - OFA MOU for OREC
**Date:** Friday, December 09, 2016 4:39:55 PM

For sure. I do think though that there's strategic interest in having that bullet in….for our benefit but not sure if Ron'd agree.

John.

---

**From:** Gavin He
**Sent:** Friday, December 09, 2016 4:33 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Hi John,

It seems Ken already made a comment on that bullet point. Are you okay with the attached version going to Ron to review?

Thanks,
Gavin He

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**From:** John Kim
**Sent:** Friday, December 09, 2016 4:00 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
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Ok, thanks. On the second major change, I think there's strategic value in that but Ron will need to take a look.

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**From:** Gavin He
**Sent:** Friday, December 09, 2016 3:47 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Hi John,

Sure, will do.

Also, Ken got back to me on my question on "Reimbursements" and "Payments" and they should stay the way it was. So I will reserve the edits and send it to Ron to review.

Thanks,
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**From:** John Kim
**Sent:** Friday, December 09, 2016 3:44 PM
**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Thanks Ken.

Gavin, could you send this on to Ron for his review?

John.

---

**From:** Kenneth Russell
**Sent:** Friday, December 09, 2016 3:18 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Gavin

The revised language for section3. (b) is fine.

Ken

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Hi Ken,

In addition to the question below, Energy updated the language in the MOU Section 3. (b) to be:

"The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time."

Can you please let us know if you are okay with the revised language?

Thanks,

Gavin He

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**From:** Gavin He
**Sent:** Thursday, December 08, 2016 6:43 PM
**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Hi Ken,

Quick question in the attached MOU. In bullet #2, “reimbursements” was defined, and then in #3, “reimbursements” was re-defined as “payments”. Can we not just use the term “payments” across the whole document? Could you please let us know what your thoughts are on this?

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| **Subject:** | RE: MoE - OFA MOU for OREC |
| **Date:** | Friday, December 09, 2016 4:33:08 PM |
| **Attachments:** | MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v3.docx |

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**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the ~~[~~*Ontario Rebate for Electricity Consumers Act, 2016*~~] – NTD, pending the legislature considering the Bill], including~~ and the regulations thereunder (the "Act"), certain consumers will be entitled to receive ~~a credit, known as the~~ financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers ("~~" or "~~OREC"), against~~", in respect of~~ the cost of electricity consumed by them ~~during the period~~ commencing January 1, 2017;

2. ~~Funds in respect of the~~ Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("Reimbursement") will flow to ~~most~~specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act~~, its regulations and the Market Rules~~;

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the OREC Reimbursement (the "Payments") out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f) of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

1. **Payment Authorization**

   (i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

   (ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

   (iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

      i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

      ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

2. **Payment Process**

   ~~a) The Ministry is registered with the IESO as an IESO Program Participant.~~

   a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

   ~~c)~~b) The Ministry will take all necessary steps to provide the OFA with access to the ~~Ministry's~~ IESO ~~account and will arrange for~~Portal so that the OFA ~~to~~will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

   ~~d)~~c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

   ~~e)~~d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

   ~~f)~~e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

3. **Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ~~ensure that~~provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of ~~has full access to~~ such of those records as the Ministry may request from time to time.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

~~e)~~

**4. OREC Cost Forecasting**

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies, retailers, and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to ~~complete and accurate~~ data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process~~.~~.

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**Commented [SQ22]:** The only change outlined in the latest version.

**Commented [KR3]:** Does the OFA agree that there should be a provision contemplating agreement on the forecasts? Would it be sufficient to simply reqire tht senior management be briefed?

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a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

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a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.

Attention:
email:

c) In the case of the Ministry, the addresses for notice are:
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880 Bay Street, 5th Floor
Attention:
email:

**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Gavin He |
| **Subject:** | RE: MoE - OFA MOU for OREC |
| **Date:** | Friday, December 09, 2016 4:00:30 PM |

Ok, thanks. On the second major change, I think there's strategic value in that but Ron will need to take a look.

---

**From:** Gavin He
**Sent:** Friday, December 09, 2016 3:47 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Hi John,

Sure, will do.

Also, Ken got back to me on my question on "Reimbursements" and "Payments" and they should stay the way it was. So I will reserve the edits and send it to Ron to review.

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Friday, December 09, 2016 3:44 PM
**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Thanks Ken.

Gavin, could you send this on to Ron for his review?

John.

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**From:** Kenneth Russell
**Sent:** Friday, December 09, 2016 3:18 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Gavin

The revised language for section3. (b) is fine.

Ken

---

**From:** Gavin He
**Sent:** Friday, December 09, 2016 9:38 AM
**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
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Hi Ken,

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Can you please let us know if you are okay with the revised language?

Thanks,
Gavin He

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**From:** Gavin He
**Sent:** Thursday, December 08, 2016 6:43 PM
**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

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Gavin He

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**From:** John Kim
**Sent:** Wednesday, December 07, 2016 11:20 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: MoE - OFA MOU for OREC

Do you mind taking a look? I want to move this to Ron this afternoon….

Thanks,

John.

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**From:** Salman Qadir
**Sent:** Wednesday, December 07, 2016 8:20 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Fwd: MoE - OFA MOU for OREC

Hi John,

See Kens comment in the attached. He has a good point in the sense as to what sort of "are in agreement" looks like, especially since we seen that Energys PRRT didn't really mention the OFA as playing a role in the forecasting.

Salman

Begin forwarded message:

> **From:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
> **Date:** December 6, 2016 at 3:28:07 PM EST
> **To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
> **Cc:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>
> **Subject: RE: MoE - OFA MOU for OREC**
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> **From:** Salman Qadir
> **Sent:** Monday, December 05, 2016 10:46 AM
> **To:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>; Kenneth Russell <Kenneth.Russell@ofina.on.ca>
> **Cc:** John Kim <John.Kim@ofina.on.ca>
> **Subject:** MoE - OFA MOU for OREC
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**From:** Gavin He
**To:** John Kim
**Subject:** RE: MoE - OFA MOU for OREC
**Date:** Friday, December 09, 2016 3:47:03 PM

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**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

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**Sent:** Wednesday, December 07, 2016 11:20 AM
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**Subject:** FW: MoE - OFA MOU for OREC

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Thanks,

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**Sent:** Wednesday, December 07, 2016 8:20 AM
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**Subject:** Fwd: MoE - OFA MOU for OREC

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> **Cc:** John Kim <John.Kim@ofina.on.ca>
> **Subject:** MoE - OFA MOU for OREC
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**From:** John Kim
**To:** Kenneth Russell; Gavin He
**Subject:** RE: MoE - OFA MOU for OREC
**Date:** Friday, December 09, 2016 3:43:40 PM

---

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John.

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**From:** Kenneth Russell
**Sent:** Friday, December 09, 2016 3:18 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
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**Subject:** MoE - OFA MOU for OREC

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**From:** Kenneth Russell
**To:** Gavin He
**Cc:** John Kim
**Subject:** RE: MoE - OFA MOU for OREC
**Date:** Friday, December 09, 2016 3:17:42 PM

---

Gavin

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Ken

---

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**Sent:** Friday, December 09, 2016 9:38 AM
**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
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**Subject:** FW: MoE - OFA MOU for OREC

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**Sent:** Wednesday, December 07, 2016 8:20 AM
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**From:** Gavin He
**To:** Kenneth Russell
**Cc:** John Kim
**Subject:** RE: MoE - OFA MOU for OREC
**Date:** Friday, December 09, 2016 9:37:52 AM

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In addition to the question below, Energy updated the language in the MOU Section 3. (b) to be:

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| **From:** | Gavin He |
| **To:** | Kenneth Russell |
| **Cc:** | John Kim |
| **Subject:** | RE: MoE - OFA MOU for OREC |
| **Date:** | Thursday, December 08, 2016 6:42:38 PM |
| **Attachments:** | MOU - MoE OFA- DAP Nov 25 - track changes to v3_clean(OFA Legal)_EFB_v2.docx |

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**Memorandum of Understanding**
**Relating to the**
**Ontario Rebate for Electricity Consumers**

**Dated:** **, 2016**

Commented [RH1]: TBD

**Between:**

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy ("**Ministry**")

**And:**

**Ontario Financing Authority**
an agency of the Province of Ontario (the "**OFA**")

**Whereas:**

1. Pursuant to the ~~[~~*Ontario Rebate for Electricity Consumers Act, 2016*~~] – NTD, pending the legislature considering the Bill], including~~ and the regulations thereunder (the "Act"), certain consumers will be entitled to receive ~~a credit, known as the~~ financial assistance, in this Memorandum of Understanding ("MOU") called the "Ontario Rebate for Electricity Consumers ("~~" or "~~OREC"), against~~", in respect of~~ the cost of electricity consumed by them ~~during the period~~ commencing January 1, 2017;

2. ~~Funds in respect of the~~ Reimbursement for OREC provided to consumers and persons receiving invoices from unit sub-meter providers ("~~Reimbursement~~Payments") will flow to ~~most~~specified electricity distributors, retailers and unit sub-metering providers ("Payment Recipients") through the Independent Electricity System Operator ("IESO") in accordance with the Act~~, its regulations and the Market Rules~~;

Commented [GH2]: Not sure what this means. Are they different kind of electricity consumers?

Commented [GH3]: I changed this term to "Payments" to avoid double definition. In #3 it seems that "reimbursement" was re-defined as "Payments".

3. Under the Act, the Ministry will be required to pay amounts to the IESO on account of the ~~OREC~~Reimbursement ~~(the "~~Payments~~")~~ out of amounts appropriated by the Legislature for that purpose ("Appropriated Amount");

4. The Ministry considers it advisable for the OFA to make the Payments on behalf of the Ministry and the OFA has agreed to make the Payments on behalf of the Ministry;

5. The Ministry and the OFA have also agreed to work together on OREC cost forecasting;

6. The Ministry and the OFA wish to enter into this MOU pursuant to clause 7 (3)(f) of the *Ministry of Energy Act* and subsection 30 (1) of the *Capital Investment Plan Act, 1993* to confirm their agreement regarding the terms on which the OFA will make the Payments and on which the Ministry and the OFA will work together on OREC cost forecasting.

**Therefore:**

The Ministry and the OFA agree as follows:

1. **Payment Authorization**

   (i) The Ministry authorizes the OFA to make the Payments on behalf of the Ministry and the OFA agrees to make the Payments on behalf of the Ministry.

   (ii) The Ministy shall ensure that the certificate under section 11.4 of the *Financial Administration Act* required for each of the Payments is obtained.

   (iii) It is agreed by the Ministry and the OFA that the OFA is acting as agent, on behalf of the Ministry, for the purposes of

      i. Transacting with the Ontario Shared Services "IFIS" system in order to access funds appropriated for the Ministry in respect of the Act, and

      ii. Making the required Payments on behalf of the Ministry as further described in this MOU.

2. **Payment Process**

   ~~a) The Ministry is registered with the IESO as an IESO Program Participant.~~

   a) The Ministry has an account with the IESO under which the IESO will issue invoices to the Ministry for the Payments. The IESO will provide the Ministry with access to these invoices by giving the Ministry access to a secure IESO portal containing these invoices ("IESO Portal").

   ~~c)~~b) The Ministry will take all necessary steps to provide the OFA with access to the ~~Ministry's~~ IESO ~~account and will arrange for~~Portal so that the OFA ~~to~~will have access to each IESO invoice to the Ministry, at the same time the IESO issues the invoice to the Ministry.

   ~~d)~~c) The OFA will make the Payments on behalf of the Ministry, in the amount of the IESO invoices.

   ~~e)~~d) The Payments will be made in accordance with the IESO Market Rules and IESO Manuals for settlements and billing of market participants, as amended from time to time.

   ~~f)~~e) The Payments will be made from the Consolidated Revenue Fund and the amount of each Payment will be entered by the OFA into the Province's IFIS system under a pre-defined Ministry account immediately upon the completion of the Payment or shortly thereafter.

3. **Reporting Requirements and Records**

a) The OFA will deliver a notice by e-mail to the Ministry's contact person to confirm the completion of each Payment in the amount of the IESO invoice.

b) The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will ensure that the Ministry has full access to such records.

c) The requirements under this section shall survive any termination of the MOU.

d) The Public Accounts, Volume 3 reporting related to the Payments will be performed by the Ministry.

~~e)~~

**Commented [SQ24]:** What would this access look like? Are they expecting us to set up up an external site with all of our files/modeling as well?

Just need to clarify expectations.

**Commented [KR5]:** I would not expect this ti be anything other than physical access. You may wish to clarify this point.

## 4. OREC Cost Forecasting

a) The Ministry and the OFA will work together to prepare and review cost forecasts, estimates, and analysis related to the OREC.

b) The Ministry will provide to the Corporate and Electricity Finance Division of the OFA all IESO invoices and settlement statements relating to the OREC, and any reports by OREC transfer payment recipients (e.g. Local Distribution Companies, retailers, and unit sub-metering providers) to the IESO, that are received by the Ministry. This includes providing electronic portal access to ~~complete and accurate~~ data and reports by OREC transfer payment recipients expected to be provided through an electronic portal reporting process~~-~~.

c) The OFA and the Ministry will collaborate to prepare fiscal year cost estimates and monthly cashflow estimates for OREC.

d) The Ministry and the OFA acknowledge and agree that the actual costs of OREC may not be the same as the forecasted costs, and the OFA bears no liability for any differences between the forecast and actual costs of OREC, nor does the OFA have any responsibility for any application to Treasury Board for a change in the appropriated amount for OREC.

e) The OFA and the Ministry will ensure senior management in their respective organizations are briefed and updated on the OREC forecasting on a regular basis to ensure there is mutual understanding and agreement ~~of~~on the forecasts.

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**Commented [SQ26]:** The only change outlined in the latest version.

**Commented [KR7]:** Does the OFA agree that there should be a provision contemplating agreement on the forecasts? Would it be sufficient to simply reqire tht senior management be briefed?

## 5. Limited Role of the OFA

The OFA will only be responsible for making the Payments in accordance with section 2 and assisting in OREC cost forecasting in accordance with section 4. For greater clarity, the OFA will not be responsible for auditing or otherwise verifying the correctness of the IESO invoices, monitoring the IESO's application of the Payments, monitoring the balance from time to time of the Appropriated Amount, or ensuring the Appropriated Amount is sufficient.

## 6. Review and Termination

a) The Ministry and the OFA will review this MOU annually.

b) This MOU may be terminated by either party at any time, on 90 days notice.

c) Upon termination of this MOU, the OFA will cease to make any Payments.

d) The parties will cooperate to help to ensure a smooth transition of the payment function upon termination.

**7. No Service Charges**

The OFA will not charge the Ministry for the OFA's services or for its disbursements or other expenses incurred under this MOU.

**8. Contacts**

a) Each party shall designate a member of its staff to be a contact person for the purposes of administering this MOU.

b) As of the date of this MOU the OFA's contact person is:

Tel:
email:

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c) As of the date of this MOU the Ministry's contact person is:

Tel:
email:

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d) Either party may designate a different member of its staff as its contact person by providing notice to the other party in accordance with section 9.

**9. Notice**

a) Any notice under this MOU shall be in writing and shall be deemed given when delivered by hand or email, and addressed to the party's contact person.

b) In the case of the OFA, the addresses for notice are:
Hand Delivery:
Ontario Financing Authority
Suite 1400
1 Dundas St. W.
Attention:
email:

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c) In the case of the Ministry, the addresses for notice are:
Hand Delivery:
Ministry of Energy
880 Bay Street, 5th Floor
Attention:
email:

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**10. Execution**

The parties have executed this MOU, effective as of the date first above written.

**Her Majesty the Queen in right of Ontario**
as represented by the Minister of Energy

by:_____

name:

title:

**Ontario Financing Authority**

by:_____

name:

title:

| | |
|---|---|
| **From:** | Kenneth Russell |
| **To:** | Gavin He |
| **Cc:** | John Kim |
| **Subject:** | RE: MoE - OFA MOU for OREC |
| **Date:** | Friday, December 09, 2016 10:22:53 PM |

Gavin

I do not have any comments on the edits.

Ken

---

**From:** Gavin He
**Sent:** Friday, December 09, 2016 6:50 PM
**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Hi Ken,

Please find attached the updated MOU with proposed edits from our ADM. Could you please take a look and let us know if you are okay with the edits.

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Friday, December 09, 2016 3:44 PM
**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Thanks Ken.

Gavin, could you send this on to Ron for his review?

John.

---

**From:** Kenneth Russell
**Sent:** Friday, December 09, 2016 3:18 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Gavin

The revised language for section3. (b) is fine.

Ken

---

**From:** Gavin He
**Sent:** Friday, December 09, 2016 9:38 AM
**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Hi Ken,

In addition to the question below, Energy updated the language in the MOU Section 3. (b) to be:

"The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time."

Can you please let us know if you are okay with the revised language?

Thanks,
Gavin He

---

**From:** Gavin He
**Sent:** Thursday, December 08, 2016 6:43 PM
**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Hi Ken,

Quick question in the attached MOU. In bullet #2, "reimbursements" was defined, and then in #3, "reimbursements" was re-defined as "payments". Can we not just use the term "payments" across the whole document? Could you please let us know what your thoughts are on this?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Wednesday, December 07, 2016 11:20 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>

**Subject:** FW: MoE - OFA MOU for OREC

Do you mind taking a look? I want to move this to Ron this afternoon….

Thanks,

John.

---

**From:** Salman Qadir
**Sent:** Wednesday, December 07, 2016 8:20 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Fwd: MoE - OFA MOU for OREC

Hi John,

See Kens comment in the attached. He has a good point in the sense as to what sort of "are in agreement" looks like, especially since we seen that Energys PRRT didn't really mention the OFA as playing a role in the forecasting.

Salman

Begin forwarded message:

> **From:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
> **Date:** December 6, 2016 at 3:28:07 PM EST
> **To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
> **Cc:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>
> **Subject: RE: MoE - OFA MOU for OREC**
>
> Salman
>
> My comments on your notes to the draft MOU are attached. I am not in a position to comment on the description of the program structure in the draft MOU.
>
> Ken
>
> ---
>
> **From:** Salman Qadir
> **Sent:** Monday, December 05, 2016 10:46 AM
> **To:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>; Kenneth Russell <Kenneth.Russell@ofina.on.ca>
> **Cc:** John Kim <John.Kim@ofina.on.ca>
> **Subject:** MoE - OFA MOU for OREC
>
> Hi Caroline/Ken,

We have received a marked up version of the MOU between the OFA and MoE related to the OREC regulation. I did a quick blackline and there were actually other changes that were not highlighted and was advisable to check with you whether you see any issues/comments. The changes seem to revolve around the definitions of the program etc.

V3_clean = what we had last sent over
DAP Nov 25 = the latest markup we received
Track changes to v3_clean - quick blackline to show additional changes not shown in the markup received.

Hoping you can take a quick look.

Thank you,
Salman

**From:** John Kim
**To:** Ronald Kwan; Shajee Kathirgamanathan
**Cc:** Tomasz Bugajski
**Subject:** RE: New price mitigation products for review - use this email
**Date:** Saturday, September 10, 2016 11:50:28 AM

---

Hi,

All look fine to me. I've got very minor comments in two of the files with v2a or v3a versions.

Two comments. On RRRP, the drafts generally leave out "per year" in the cost figures and just mention $110million, for example. I take it that it's implied and deliberate so did not touch. It says in one of the above mentioned versions that ICI benefits by reducing bills by about a third. In 2016 Budget, we had about 25%.

Also, agree on the 330,000 R2. My suggestion would be to point out and suggest Energy to reword. In the final submission, it says about 329,000 R2 customers. While unlikely to be problematic, not sure if we want to take the liberty of saying "more than".

John.

---

**From:** Ronald Kwan
**Sent:** Saturday, September 10, 2016 11:10 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: New price mitigation products for review - use this email

Hi Shajee,

Thanks. I'll leave it to Energy on "Electricity" -- it does appear elsewhere, but the program short form of RRRP leaves out the "E", so it may be considered implied in the context.

Ron

On Sep 10, 2016, at 11:04 AM, Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca> wrote:

> Hi Ron,
>
> I'm fine with all edits, just two questions:
>
> - In the Key Facts - New Initiatives, my understanding is the program will still be called 'Remote or Rural Electricity Rate Protection (RRRP) program'. I noticed the that edit was rejected.

- For clarification, the RRRP as it currently stands (~175M) includes support for R2 customers (125-127M). This initiative raises the support for R2 customers by $110M.
    - Would you know who are the non-R2 RRRP customers?
    - I agree, with your comment in the September 15 NR near the end. This might have to be reworded.

Thanks,
Shajee

---

**From:** Ronald Kwan
**Sent:** Saturday, September 10, 2016 4:29 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: New price mitigation products for review - use this email

Hi Shajee,

Thanks. I accepted some and not all of the suggestions. Please see attached.

Ron

---

**From:** Shajee Kathirgamanathan
**Sent:** September-10-16 2:36 AM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** RE: New price mitigation products for review - use this email

Some mostly minor edits.

Note: I added RRRP to the existing programs Key Facts.

Thanks

---

**From:** Ronald Kwan
**Sent:** Friday, September 09, 2016 10:18 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** Fwd: New price mitigation products for review - use this email

Hi,

See attached for review.

Thanks,
Ron

Begin forwarded message:

> **From:** "Patel, Lesley (MOF)" <Lesley.Patel@ontario.ca>
> **Date:** September 9, 2016 at 9:57:50 PM EDT
> **To:** "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Lawson, Lynn (MOF)" <Lynn.Lawson@ontario.ca>, "Subrahmanyan, Sriram (MOF)" <Sriram.Subrahmanyan@ontario.ca>, "Waterston, Michael (MOF)" <Michael.Waterston@ontario.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>, "Lewis, Brian (MOF)" <Brian.Lewis@Ontario.ca>, "Lewis, Shannon (MOF)" <Shannon.Lewis@ontario.ca>
> **Cc:** "Lone, Dianne (MOF)" <Dianne.Lone@ontario.ca>, "DeSouza, Jenarra (MOF)" <Jenarra.DeSouza@ontario.ca>, "Langleben, Ann (MOF)" <Ann.Langleben@ontario.ca>, "Bugajski, Tomasz (OFA)" <Tomasz.Bugajski@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>, "Ize-Dukuze, Marilyn (MOF)" <Marilyn.Ize-Dukuze@ontario.ca>, "Young, Gwendolynne (MOF)" <Gwendolynne.Young@ontario.ca>, "Inglis, Liane (MOF)" <Liane.Inglis@ontario.ca>
> **Subject: RE: New price mitigation products for review - use this email**

Hi - please use this email thread where everyone is looped in to provide your feedback.

---

From: Patel, Lesley (MOF)
Sent: Friday, September 09, 2016 9:51 PM
To: Ronald Kwan; Ingram, Kelsey (MOF); Birks, Ryan (MOF); Lawson, Lynn (MOF); Subrahmanyan, Sriram (MOF); Waterston, Michael (MOF); Schuurman, Tim (MOF); Lewis, Brian (MOF); Lewis, Shannon (MOF)
Cc: Lone, Dianne (MOF); DeSouza, Jenarra (MOF); Langleben, Ann (MOF); Bugajski, Tomasz (OFA); McLean, David (MOF); Ize-Dukuze, Marilyn (MOF); Young, Gwendolynne (MOF); Inglis, Liane (MOF)
Subject: New price mitigation products for review

Hi everyone,

Please find attached new MOE products for review. I have tracked changes on the new September 15 news release that speaks to the introduction of the bill to ensure it was consistent with the language in last news release we just finalized. MOE has also added small farms to the users that benefit from this program in this new release - I have deleted that, but it may be worth considering if we want to add it. New components on the release include mention of additional programs and a new quote from Minister Thibeault that definitely should be reviewed.

Please send your edits/changes to these products as soon as possible as CO/PO still needs to review everything. A reminder to please keep changes consistent with the discussions we've been having throughout the day, if possible - I realize there is also some new material that may warrant further discussion.

Thanks,
Lesley

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Ronald Kwan |
| **Cc:** | Shajee Kathirgamanathan; Tomasz Bugajski |
| **Subject:** | RE: New price mitigation products for review - use this email |
| **Date:** | Saturday, September 10, 2016 11:14:41 AM |

---

They just went through the minutes with their DM but was mostly interrupted by a phone call I understand from AG.

---

**From:** Ronald Kwan
**Sent:** Saturday, September 10, 2016 11:11 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** Re: New price mitigation products for review - use this email

Thanks John. How did the pre-brief go?

Ron

On Sep 10, 2016, at 11:09 AM, John Kim <John.Kim@ofina.on.ca> wrote:

> I will scan and send shortly….as I just came in.
>
> I will also go through the entire set of the materials. Shouldn't take long.
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Saturday, September 10, 2016 11:04 AM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> **Subject:** Re: New price mitigation products for review - use this email
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> Hi John,
>
> BTW, do we have the final or latest version of the TB note?
>
> Ron
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> ---
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> **From:** John Kim
> **Sent:** September 10, 2016 9:29 AM
> **To:** Ronald Kwan
> **Cc:** Shajee Kathirgamanathan; Tomasz Bugajski
> **Subject:** Re: New price mitigation products for review - use this email

I am at an appointment but will have a look when I get home. The way I looked at the email from webmail last night I only saw one attachment for some reason.

On Sep 10, 2016, at 4:28 AM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi Shajee,
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> Thanks. I accepted some and not all of the suggestions. Please see attached.
>
> Ron
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> Note: I added RRRP to the existing programs Key Facts.
>
> Thanks
>
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> **Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> **Subject:** Fwd: New price mitigation products for review - use this email
>
> Hi,
>
> See attached for review.
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> Thanks,
> Ron
>
> Begin forwarded message:
>
> > **From:** "Patel, Lesley (MOF)" <Lesley.Patel@ontario.ca>
> > **Date:** September 9, 2016 at 9:57:50 PM EDT
> > **To:** "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Birks, Ryan (MOF)"

<Ryan.Birks@ontario.ca>, "Lawson, Lynn (MOF)" <Lynn.Lawson@ontario.ca>, "Subrahmanyan, Sriram (MOF)" <Sriram.Subrahmanyan@ontario.ca>, "Waterston, Michael (MOF)" <Michael.Waterston@ontario.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>, "Lewis, Brian (MOF)" <Brian.Lewis@Ontario.ca>, "Lewis, Shannon (MOF)" <Shannon.Lewis@ontario.ca>
**Cc:** "Lone, Dianne (MOF)" <Dianne.Lone@ontario.ca>, "DeSouza, Jenarra (MOF)" <Jenarra.DeSouza@ontario.ca>, "Langleben, Ann (MOF)" <Ann.Langleben@ontario.ca>, "Bugajski, Tomasz (OFA)" <Tomasz.Bugajski@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>, "Ize-Dukuze, Marilyn (MOF)" <Marilyn.Ize-Dukuze@ontario.ca>, "Young, Gwendolynne (MOF)" <Gwendolynne.Young@ontario.ca>, "Inglis, Liane (MOF)" <Liane.Inglis@ontario.ca>
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Cc: Lone, Dianne (MOF); DeSouza, Jenarra (MOF); Langleben, Ann (MOF); Bugajski, Tomasz (OFA); McLean, David (MOF); Ize-Dukuze, Marilyn (MOF); Young, Gwendolynne (MOF); Inglis, Liane (MOF)
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as possible as CO/PO still needs to review everything. A reminder to please keep changes consistent with the discussions we've been having throughout the day, if possible - I realize there is also some new material that may warrant further discussion.

Thanks,
Lesley

<20160909 Key Facts - Exsisting Programs - MO Edits 5 pm_Markup v3.doc>

<20160909 ICI Backgounder 6pm all edits CLEAN_Markup _v3.docx>

<20160909 September 15 NR - Price Mitigation 6 pm csb - CEFDv2.docx>

<20160909 Key Facts - New Initiatives- Sept 9 5pm version CLEAN_Markup_v3.doc>

<20160909 Key Facts - 3 Things You Need To Know - 5 pm CLEAN_Markup_v3.doc>

<20160909 Combined Rebate and RRRP Backgounder 5 pm CLEAN_Markup_v2.docx>

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Ronald Kwan |
| **Cc:** | Shajee Kathirgamanathan; Tomasz Bugajski |
| **Subject:** | RE: New price mitigation products for review - use this email |
| **Date:** | Saturday, September 10, 2016 11:09:52 AM |

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**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** Re: New price mitigation products for review - use this email

Hi John,

BTW, do we have the final or latest version of the TB note?

Ron

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**Subject:** RE: New price mitigation products for review - use this email

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**Subject:** Fwd: New price mitigation products for review - use this email

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Ron

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> **Cc:** "Lone, Dianne (MOF)" <Dianne.Lone@ontario.ca>, "DeSouza, Jenarra (MOF)" <Jenarra.DeSouza@ontario.ca>, "Langleben, Ann (MOF)" <Ann.Langleben@ontario.ca>, "Bugajski, Tomasz (OFA)" <Tomasz.Bugajski@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>, "Ize-Dukuze, Marilyn (MOF)" <Marilyn.Ize-Dukuze@ontario.ca>, "Young, Gwendolynne (MOF)" <Gwendolynne.Young@ontario.ca>, "Inglis, Liane (MOF)" <Liane.Inglis@ontario.ca>
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>
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> From: Patel, Lesley (MOF)

Sent: Friday, September 09, 2016 9:51 PM
To: Ronald Kwan; Ingram, Kelsey (MOF); Birks, Ryan (MOF); Lawson, Lynn (MOF); Subrahmanyan, Sriram (MOF); Waterston, Michael (MOF); Schuurman, Tim (MOF); Lewis, Brian (MOF); Lewis, Shannon (MOF)
Cc: Lone, Dianne (MOF); DeSouza, Jenarra (MOF); Langleben, Ann (MOF); Bugajski, Tomasz (OFA); McLean, David (MOF); Ize-Dukuze, Marilyn (MOF); Young, Gwendolynne (MOF); Inglis, Liane (MOF)
Subject: New price mitigation products for review

Hi everyone,

Please find attached new MOE products for review. I have tracked changes on the new September 15 news release that speaks to the introduction of the bill to ensure it was consistent with the language in last news release we just finalized. MOE has also added small farms to the users that benefit from this program in this new release - I have deleted that, but it may be worth considering if we want to add it. New components on the release include mention of additional programs and a new quote from Minister Thibeault that definitely should be reviewed.

Please send your edits/changes to these products as soon as possible as CO/PO still needs to review everything. A reminder to please keep changes consistent with the discussions we've been having throughout the day, if possible - I realize there is also some new material that may warrant further discussion.

Thanks,
Lesley

<20160909 Key Facts - Exsisting Programs - MO Edits 5 pm_Markup v3.doc>

<20160909 ICI Backgounder 6pm all edits CLEAN_Markup _v3.docx>

<20160909 September 15 NR - Price Mitigation 6 pm csb - CEFDv2.docx>

<20160909 Key Facts - New Initiatives- Sept 9 5pm version CLEAN_Markup_v3.doc>

<20160909 Key Facts - 3 Things You Need To Know - 5 pm CLEAN_Markup_v3.doc>

<20160909 Combined Rebate and RRRP Backgounder 5 pm CLEAN_Markup_v2.docx>

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Ronald Kwan; Shajee Kathirgamanathan |
| **Cc:** | Tomasz Bugajski |
| **Subject:** | RE: New price mitigation products for review - use this email |
| **Date:** | Saturday, September 10, 2016 12:26:13 PM |

Hi Ron,

Sure, that's a possibility. Not really a major point but in the Cab sub (p.19), it says that the benefit to ICI participants in the long-term could be "up to 34%", seemingly signalling that that's the top end estimate for the newly eligible participants.

It may end up being the new factchecked messaging for use going forward. :)

John.

---

**From:** Ronald Kwan
**Sent:** Saturday, September 10, 2016 12:15 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** RE: New price mitigation products for review - use this email

Hi,

Sorry for not watching the auto correct.

I meant to write "I could speculate that because the 1-3 MW customers pay more than the larger, excluding the impact of ICI, then the percentage reduction from ICI is potentially larger."

Ron

---

**From:** Shajee Kathirgamanathan
**Sent:** September-10-16 12:13 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** Re: New price mitigation products for review - use this email

My thinking was that the budget number was on average a reduction of 25% vs the reference here being 'up to' one third reduction.

Depending on the load shifting abilities of the consumer I don't think there's anything inconsistent with these statements.

Sent from my mobile device, please excuse any typos or brevity.

On Sep 10, 2016, at 12:03 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

Hi John,

Thanks. If energy has not provided their calculations, I could speculate that because the 1-3 MW customers at more now that the larger, excluding the impact of ICI, that the recent age reduction is potentially larger.

No rush, but Can EFB do an estimate?

Ron

On Sep 10, 2016, at 11:50 AM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi,
>
> All look fine to me. I've got very minor comments in two of the files with v2a or v3a versions.
>
> Two comments. On RRRP, the drafts generally leave out "per year" in the cost figures and just mention $110million, for example. I take it that it's implied and deliberate so did not touch. It says in one of the above mentioned versions that ICI benefits by reducing bills by about a third. In 2016 Budget, we had about 25%.
>
> Also, agree on the 330,000 R2. My suggestion would be to point out and suggest Energy to reword. In the final submission, it says about 329,000 R2 customers. While unlikely to be problematic, not sure if we want to take the liberty of saying "more than".
>
> John.

---

**From:** Ronald Kwan
**Sent:** Saturday, September 10, 2016 11:10 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: New price mitigation products for review - use this email

Hi Shajee,

Thanks. I'll leave it to Energy on "Electricity" -- it does appear elsewhere, but the program short form of RRRP leaves out the "E", so it may be considered implied in the context.

Ron

On Sep 10, 2016, at 11:04 AM, Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca> wrote:

Hi Ron,

I'm fine with all edits, just two questions:

- In the Key Facts - New Initiatives, my understanding is the program will still be called 'Remote or Rural Electricity Rate Protection (RRRP) program'. I noticed the that edit was rejected.

- For clarification, the RRRP as it currently stands (~175M) includes support for R2 customers (125-127M). This initiative raises the support for R2 customers by $110M.
  - Would you know who are the non-R2 RRRP customers?
  - I agree, with your comment in the September 15 NR near the end. This might have to be reworded.

Thanks,
Shajee

---

**From:** Ronald Kwan
**Sent:** Saturday, September 10, 2016 4:29 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: New price mitigation products for review - use this email

Hi Shajee,

Thanks. I accepted some and not all of the suggestions. Please see attached.

Ron

---

**From:** Shajee Kathirgamanathan
**Sent:** September-10-16 2:36 AM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>

**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** RE: New price mitigation products for review - use this email

Some mostly minor edits.

Note: I added RRRP to the existing programs Key Facts.

Thanks

---

**From:** Ronald Kwan
**Sent:** Friday, September 09, 2016 10:18 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** Fwd: New price mitigation products for review - use this email

Hi,

See attached for review.

Thanks,
Ron

Begin forwarded message:

> **From:** "Patel, Lesley (MOF)" <Lesley.Patel@ontario.ca>
> **Date:** September 9, 2016 at 9:57:50 PM EDT
> **To:** "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Lawson, Lynn (MOF)" <Lynn.Lawson@ontario.ca>, "Subrahmanyan, Sriram (MOF)" <Sriram.Subrahmanyan@ontario.ca>, "Waterston, Michael (MOF)" <Michael.Waterston@ontario.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>, "Lewis, Brian (MOF)" <Brian.Lewis@Ontario.ca>, "Lewis, Shannon (MOF)" <Shannon.Lewis@ontario.ca>
> **Cc:** "Lone, Dianne (MOF)" <Dianne.Lone@ontario.ca>, "DeSouza,

Jenarra (MOF)"
<Jenarra.DeSouza@ontario.ca>,
"Langleben, Ann (MOF)"
<Ann.Langleben@ontario.ca>, "Bugajski,
Tomasz (OFA)"
<Tomasz.Bugajski@ofina.on.ca>, "McLean,
David (MOF)"
<David.McLean@ontario.ca>, "Ize-Dukuze,
Marilyn (MOF)" <Marilyn.Ize-
Dukuze@ontario.ca>, "Young,
Gwendolynne (MOF)"
<Gwendolynne.Young@ontario.ca>,
"Inglis, Liane (MOF)"
<Liane.Inglis@ontario.ca>
**Subject: RE: New price mitigation products for review - use this email**

Hi - please use this email thread where everyone is looped in to provide your feedback.

---

From: Patel, Lesley (MOF)
Sent: Friday, September 09, 2016 9:51 PM
To: Ronald Kwan; Ingram, Kelsey (MOF); Birks, Ryan (MOF); Lawson, Lynn (MOF); Subrahmanyan, Sriram (MOF); Waterston, Michael (MOF); Schuurman, Tim (MOF); Lewis, Brian (MOF); Lewis, Shannon (MOF)
Cc: Lone, Dianne (MOF); DeSouza, Jenarra (MOF); Langleben, Ann (MOF); Bugajski, Tomasz (OFA); McLean, David (MOF); Ize-Dukuze, Marilyn (MOF); Young, Gwendolynne (MOF); Inglis, Liane (MOF)
Subject: New price mitigation products for review

Hi everyone,

Please find attached new MOE products for review. I have tracked changes on the new September 15 news release that speaks to the introduction of the bill to ensure it was consistent with the language in last news release we just finalized. MOE has also added small farms to the users that benefit from this program in this new release - I have deleted that, but it may be worth considering if we want to add it. New components on the release include mention of additional programs and a new quote from Minister Thibeault that definitely should be reviewed.

Please send your edits/changes to these products as soon as possible as CO/PO still needs to review everything. A reminder to please keep changes consistent with the discussions we've been having throughout the day, if

possible - I realize there is also some new material that may warrant further discussion.

Thanks,
Lesley

**From:** John Kim
**To:** Shajee Kathirgamanathan; Salman Qadir
**Subject:** RE: Next steps
**Date:** Wednesday, September 07, 2016 1:11:10 PM
**Attachments:** image001.png

Hi Shajee,

What I am thinking is getting a stock of all the tax-based price support program, of which NIER might be the only one, and start building a policy options deck on offsets for the big 1bn one. The C&T could definitely be another one.

Thanks,

John.

---

**From:** Shajee Kathirgamanathan
**Sent:** Wednesday, September 07, 2016 12:41 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: Next steps

I was thinking of elaborating on #1 and #4 from this table, below. (Granted for #4 we can mention the $270M vs $330M below). Is that what you're thinking:

| | Measure | Targeted Recipients | Impact (annually) | |
|---|---|---|---|---|
| | | | Fiscal | Rate Base |
| **1.** | 8% Rebate to Regulated Price Plan | Residential, small business, small farms and other small users | $1B | - |
| **2.** | Expanding ICI eligibility to customers above 1MW in all sectors | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors | - | $47M/ $82M* |
| **3.** | Updating Rural or Remote Rate Protection | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. | - | $110M |
| **4.** | Redirecting cap and trade proceeds recycling; provide fiscal offsets to the 8% rebate | Commercial and industrial electricity customers | -$60M** | - |

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Wednesday, September 07, 2016 11:48 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** FW: Next steps

Could you work on a summary deck, to brainstorm, on the size of the basket of price mitigation as noted below?

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** Wednesday, September 07, 2016 8:49 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Subject:** Fwd: Next steps

Hi,

See Tim's email. I would think about both AO and potential changes to the size of the basket of tax-base price mitigation.

Ron

Begin forwarded message:

**From:** "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
**Date:** September 7, 2016 at 8:39:29 AM EDT
**To:** "Hughes, Karen (TBS)" <Karen.Hughes@ontario.ca>, "Subrahmanyan, Sriram (MOF)" <Sriram.Subrahmanyan@ontario.ca>, "Duran-Schneider, Maria (TBS)" <Maria.Duran-Schneider@ontario.ca>, "Arruda, Artur (TBS)" <Artur.Arruda@ontario.ca>, "Lewis, Brian (MOF)" <Brian.Lewis@Ontario.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>
**Cc:** "Laughton, Patrick (TBS)" <Patrick.Laughton@ontario.ca>, "Arbabzadeh, Nina (TBS)" <Nina.Arbabzadeh@ontario.ca>, "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "McGrath, Tara (MOF)" <Tara.McGrath@ontario.ca>, "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>, "Jaikaran, Ronald (MOF)" <Ronald.Jaikaran@ontario.ca>
**Subject: Next steps**

Scott dropped by this morning and wanted to make sure we were already taking steps to build the next fiscal architecture deck that included options for closing the gap – of course, all pending the outcome of the FPC discussion this morning and other conversations taking place over the next day or so on the deck.

My folks have already started thinking about the structure of such a deck, but like all these things, it will require collaboration across our divisions.

The deck will essentially take the hand-off from today's deck by showing the gap, then outlining considerations for approaching it and options for consideration – and will need to have revenue, expense and other option.

This is potentially a conversation that will be needed at FPC next week.

*Tim Schuurman*
*Assistant Deputy Minister*
*Office of the Budget, Ministry of Finance*
*7 Queen's Park Cres.*
*Toronto ON M7A 1Z1*
*Tel: 416-327-0173*

Office of the Budget
MINISTRY of FINANCE

**From:** Shajee Kathirgamanathan
**To:** John Kim
**Subject:** RE: OCEB Data
**Date:** Tuesday, December 06, 2016 12:27:45 AM

---

Would it be this file:

S:\Users\CEF\Hydro 2016\OEFC\RbP\Mitigation\Calculations\Electricity Price Mitigation v8.xlsx

Thanks,
Shajee

---

**From:** John Kim
**Sent:** Monday, December 05, 2016 10:04 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** FW: OCEB Data

I can't seem to find the files we used to do sensitivities on OREC.....would you know where the files are? Not this necessarily but remember doing a lot of the sensitivities for OREC

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, August 25, 2016 10:25 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** OCEB Data

Hi John,

Per Ron's request:

| OCEB Periods | Number of Months | Average Monthly Consumption (GWh) | Total Consumption in the Period (GWh) |
|---|---|---|---|
| OCEB Pre Cap (Jan 2011 - Aug 2012, inclusive)* | 20 | 5,412 | **108,243** |
| OCEB Post Cap (Sept 2012 - Dec 2015, inclusive) | 40 | 5,689 | **227,543** |

*Note: OCEB data not provided for the entire pre-cap period. Extrapolated 12 month OCEB data to the entire 20 month pre-cap period.

File attached, also found here:
S:\Users\CEF\Hydro 2016\OEFC\RbP\Mitigation\Calculations\OCEB Data.xlsx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Senior Advisor
Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

**From:** John Kim
**To:** Shajee Kathirgamanathan
**Subject:** RE: OCEB Data
**Date:** Tuesday, December 06, 2016 7:39:37 AM

Thanks….I saw it and didn't recognize it.

John.

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, December 06, 2016 12:28 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: OCEB Data

Would it be this file:

S:\Users\CEF\Hydro 2016\OEFC\RbP\Mitigation\Calculations\Electricity Price Mitigation v8.xlsx

Thanks,
Shajee

---

**From:** John Kim
**Sent:** Monday, December 05, 2016 10:04 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** FW: OCEB Data

I can't seem to find the files we used to do sensitivities on OREC…..would you know where the files are? Not this necessarily but remember doing a lot of the sensitivities for OREC

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, August 25, 2016 10:25 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** OCEB Data

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File attached, also found here:
S:\Users\CEF\Hydro 2016\OEFC\RbP\Mitigation\Calculations\OCEB Data.xlsx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Senior Advisor
Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | Darren Scanlan; Emily Kerr |
| **Cc:** | John Kim; Karim Javeri |
| **Subject:** | RE: OESP |
| **Date:** | Tuesday, January 03, 2017 9:45:26 AM |

Thanks Darren,

Just CC'ing Karim, as I believe Emily is away. SPFB generally handles OESP.

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Darren Scanlan
**Sent:** Tuesday, January 03, 2017 9:07 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** FW: OESP

Hi Shajee (in John's absence) and Emily,

Please see below. I believe that both of your branches have been involved in the OESP in some capacity and in the recent discussions on potential rate mitigation initiatives. Would one of you be in a position to get back to Michael Beare (in Brett's absence)? Happy to reply on the proper point of contact if you'd prefer.

Thanks,
Darren

---

**From:** Smith, Brett (ENERGY) [mailto:Brett.Smith@ontario.ca]
**Sent:** Thursday, December 29, 2016 4:11 PM
**To:** Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Michael Beare (ENERGY) <Michael.Beare@ontario.ca>; Zade, Ryan (ENERGY) <Ryan.Zade@ontario.ca>
**Subject:** OESP

Darren,

Your name was provided by a colleague at the Ministry of Finance as a potential point of contact regarding some potential changes to an electricity rebate program.

You may know that the PO is looking at ways to shift costs out of the electricity rate base. I would like to touch base with the OFA on one option in particular – the Ontario Electricity Support Program.

We have begun a discussion with MCSS to better understand if there are opportunities to align with existing low-income support programs. However, it's important to also consider other tax-based methods to deliver this program (e.g. Ontario Trillium Benefit).

I will be away next week, but hope there's a chance to connect early in the week of January 9th. Michael Beare is the file lead and will be available to answer questions prior to meeting.

Regards,
Brett

**Brett Smith**
Manager, Distribution and Grid Modernization
Strategic, Network and Agency Policy Division
Ministry of Energy

77 Grenville Street, 6th Floor
Toronto, ON M7A 2C1
Work: 416-327-7178
Cell: 647-629-2681
brett.smith@ontario.ca
LinkedIn Profile[ca.linkedin.com]

**From:** Ronald Kwan
**To:** Nadine Petsche (MOF)
**Cc:** Bharat Patel (MOF); Ken Kandeepan; John Kim
**Subject:** RE: OFA-IESO loan
**Date:** Friday, January 20, 2017 7:00:25 PM

---

Hi Nadine,

I`d rather not speak for the IESO on its market books vs its operating statements. It did seem that it recorded the RPP amounts, including the amounts related to the draws on the OFA credit facility to finance short-term variances, on the market books, not its operating statements.

Perhaps John could recap more, but reaching out to Kim and her staff would be best.

Ron

---

**From:** Petsche, Nadine (TBS) [mailto:Nadine.Petsche@ontario.ca]
**Sent:** January-20-17 18:52
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Bharat Patel (MOF) <Bharat.Patel3@ontario.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: OFA-IESO loan

Thanks Ronald. Is there something that explains more about the two sets of books? I joined the call late and I'm trying to piece together the comments that were being made on the call. Kim indicated that only debt related to the IESO's operating costs is reflected on the f/s. Additional insight into the two sets of books and how the debt referenced below factors in would be most appreciated.
Thanks in advance.
N

---

**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** January-20-17 6:12 PM
**To:** Petsche, Nadine (TBS)
**Cc:** Patel, Bharat (TBS); Kandeepan, Ken (OFA); Kim, John (OFA)
**Subject:** RE: OFA-IESO loan

Hi Nadine,

Leaving to Ken to respond on how this is recorded in the OFA, but for your benefit, a few bits of background:

- The IESO has an up to $975 million credit facility in place with the OFA. This credit facility is part of a series that was originally put in place for the Ontario Power Authority, and helps support its obligations under the regulated price plan.
- It is provided on a revolving basis, with each draw maturing within one, two or three month(s).
- The interest rate charged on any balance of the credit facility is equal to the Province's cost of borrowing for a similar term, plus 25 basis points.

- In the last five years, the IESO has had an outstanding amount as high as $280 million in February 2013 under this credit facility.
- Recent IESO draws have included approximately $95 million under the facility on August 19, 2016, which was repaid on September 19, 2016, approximately $46 million on September 19, 2016, repaid on October 19, 2016 and $15.4 million on October 19, 2016, repaid November 30, 2016 (TBC). This is based on a BN from last fall, when a new credit facility was being approved to replace the expiring one. Staff can likely provide information on more recent activity.

This information is for your background information and I hope that it helps provide some context. It may not be in the public domain, so not sure about sharing it more widely.

Ron

---

**From:** Petsche, Nadine (TBS) [mailto:Nadine.Petsche@ontario.ca]
**Sent:** January-20-17 17:37
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Bharat Patel (MOF) <Bharat.Patel3@ontario.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Psinas <John.Psinas@ofina.on.ca>
**Subject:** FW: OFA-IESO loan

Ronald,
Since you were on today's call, I thought it might be helpful to loop you in on this request as well. N

---

**From:** Patel, Bharat (TBS)
**Sent:** January-20-17 5:13 PM
**To:** Kandeepan, Ken (OFA); John Psinas
**Cc:** Petsche, Nadine (TBS); Veinot, Cindy (TBS)
**Subject:** FW: OFA-IESO loan

Ken/John,

Not sure if you are the right person to ask, but can you please help to get the answer for $100M RRP program support that OFA provides to IESO? We are interested in how this loan is recorded (i.e. on the books vs. market)? if on the books where? And if market how it works?

Thanks,
Bharat

---

**From:** Veinot, Cindy (TBS)
**Sent:** January-20-17 5:05 PM
**To:** Patel, Bharat (TBS)
**Cc:** Petsche, Nadine (TBS)
**Subject:** FW: OFA-IESO loan

See below – can you see how OFA has this amount recorded – its apparently on the market books.

---

**From:** Kim Marshall [mailto:Kim.Marshall@ieso.ca]
**Sent:** January-20-17 3:36 PM
**To:** Veinot, Cindy (TBS)
**Subject:** RE: OFA-IESO loan

market

**Kimberly Marshall** | VP, Corporate Services & CFO
Independent Electricity System Operator (IESO) | T: (416) 969-6232 | C: (416) 545-7202
120 Adelaide Street West, Suite 1600, Toronto, ON M5H 1T1
Web: www.ieso.ca[ieso.ca] | Twitter: IESO_Tweets[twitter.com] | LinkedIn: IESO[linkedin.com]

***Corporate Services collaborates with you to deliver solutions and expertise that enable the IESO to achieve its goals.***

Conservation: www.saveONenergy.ca[saveONenergy.ca] | Twitter: saveONenergyOnt[twitter.com] | LinkedIn: saveONenergy[linkedin.com]

---

**From:** Veinot, Cindy (TBS) [mailto:Cindy.Veinot@ontario.ca]
**Sent:** January 20, 2017 3:35 PM
**To:** Kim Marshall
**Subject:** RE: OFA-IESO loan

*** EXTERNAL email. Please be cautious and evaluate before you click on links, open attachments, or provide credentials. ***

Thanks – is this loan recorded on the accounting books (vs. the market books?)

Cindy

---

**From:** Kim Marshall [mailto:Kim.Marshall@ieso.ca]
**Sent:** January-20-17 3:32 PM
**To:** Veinot, Cindy (TBS)
**Subject:** OFA-IESO loan

Cindy, the IESO currently has a monthly payable to the OFA. Right now it is in the 100million range support the rpp program. Not sure how that is currently treated by the OFA. thanks

**Kimberly Marshall** | VP, Corporate Services & CFO
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| | |
|---|---|
| **From:** | Petsche, Nadine (TBS) |
| **To:** | Ronald Kwan |
| **Cc:** | Bharat Patel (MOF); Ken Kandeepan; John Kim |
| **Subject:** | RE: OFA-IESO loan |
| **Date:** | Friday, January 20, 2017 6:52:18 PM |

Thanks Ronald. Is there something that explains more about the two sets of books? I joined the call late and I'm trying to piece together the comments that were being made on the call. Kim indicated that only debt related to the IESO's operating costs is reflected on the f/s. Additional insight into the two sets of books and how the debt referenced below factors in would be most appreciated. Thanks in advance.
N

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**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** January-20-17 6:12 PM
**To:** Petsche, Nadine (TBS)
**Cc:** Patel, Bharat (TBS); Kandeepan, Ken (OFA); Kim, John (OFA)
**Subject:** RE: OFA-IESO loan

Hi Nadine,

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This information is for your background information and I hope that it helps provide some context. It may not be in the public domain, so not sure about sharing it more widely.

Ron

---

**From:** Petsche, Nadine (TBS) [mailto:Nadine.Petsche@ontario.ca]

**Sent:** January-20-17 17:37
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Bharat Patel (MOF) <Bharat.Patel3@ontario.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Psinas <John.Psinas@ofina.on.ca>
**Subject:** FW: OFA-IESO loan

Ronald,
Since you were on today's call, I thought it might be helpful to loop you in on this request as well. N

---

**From:** Patel, Bharat (TBS)
**Sent:** January-20-17 5:13 PM
**To:** Kandeepan, Ken (OFA); John Psinas
**Cc:** Petsche, Nadine (TBS); Veinot, Cindy (TBS)
**Subject:** FW: OFA-IESO loan

Ken/John,

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Thanks,
Bharat

---

**From:** Veinot, Cindy (TBS)
**Sent:** January-20-17 5:05 PM
**To:** Patel, Bharat (TBS)
**Cc:** Petsche, Nadine (TBS)
**Subject:** FW: OFA-IESO loan

See below – can you see how OFA has this amount recorded – its apparently on the market books.

---

**From:** Kim Marshall [mailto:Kim.Marshall@ieso.ca]
**Sent:** January-20-17 3:36 PM
**To:** Veinot, Cindy (TBS)
**Subject:** RE: OFA-IESO loan

market

**Kimberly Marshall** | VP, Corporate Services & CFO
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**From:** Veinot, Cindy (TBS) [mailto:Cindy.Veinot@ontario.ca]
**Sent:** January 20, 2017 3:35 PM
**To:** Kim Marshall
**Subject:** RE: OFA-IESO loan

*** EXTERNAL email. Please be cautious and evaluate before you click on links, open attachments, or provide credentials. ***

Thanks – is this loan recorded on the accounting books (vs. the market books?)

Cindy

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**From:** Kim Marshall [mailto:Kim.Marshall@ieso.ca]
**Sent:** January-20-17 3:32 PM
**To:** Veinot, Cindy (TBS)
**Subject:** OFA-IESO loan

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**From:** Ronald Kwan
**To:** Nadine Petsche (MOF)
**Cc:** Bharat Patel (MOF); Ken Kandeepan; John Kim
**Subject:** RE: OFA-IESO loan
**Date:** Friday, January 20, 2017 6:11:37 PM

---

Hi Nadine,

Leaving to Ken to respond on how this is recorded in the OFA, but for your benefit, a few bits of background:

- The IESO has an up to $975 million credit facility in place with the OFA. This credit facility is part of a series that was originally put in place for the Ontario Power Authority, and helps support its obligations under the regulated price plan.
- It is provided on a revolving basis, with each draw maturing within one, two or three month(s).
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Ron

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**From:** Petsche, Nadine (TBS) [mailto:Nadine.Petsche@ontario.ca]
**Sent:** January-20-17 17:37
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Bharat Patel (MOF) <Bharat.Patel3@ontario.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Psinas <John.Psinas@ofina.on.ca>
**Subject:** FW: OFA-IESO loan

Ronald,
Since you were on today's call, I thought it might be helpful to loop you in on this request as well. N

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**From:** Patel, Bharat (TBS)
**Sent:** January-20-17 5:13 PM
**To:** Kandeepan, Ken (OFA); John Psinas

**Cc:** Petsche, Nadine (TBS); Veinot, Cindy (TBS)
**Subject:** FW: OFA-IESO loan

Ken/John,

Not sure if you are the right person to ask, but can you please help to get the answer for $100M RRP program support that OFA provides to IESO? We are interested in how this loan is recorded (i.e. on the books vs. market)? if on the books where? And if market how it works?

Thanks,
Bharat

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**From:** Veinot, Cindy (TBS)
**Sent:** January-20-17 5:05 PM
**To:** Patel, Bharat (TBS)
**Cc:** Petsche, Nadine (TBS)
**Subject:** FW: OFA-IESO loan

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**From:** Kim Marshall [mailto:Kim.Marshall@ieso.ca]
**Sent:** January-20-17 3:36 PM
**To:** Veinot, Cindy (TBS)
**Subject:** RE: OFA-IESO loan

market

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**From:** Veinot, Cindy (TBS) [mailto:Cindy.Veinot@ontario.ca]
**Sent:** January 20, 2017 3:35 PM
**To:** Kim Marshall
**Subject:** RE: OFA-IESO loan

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Thanks – is this loan recorded on the accounting books (vs. the market books?)

Cindy

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| **From:** | Petsche, Nadine (TBS) |
| **To:** | Ronald Kwan |
| **Cc:** | Bharat Patel (MOF); Ken Kandeepan; John Kim |
| **Subject:** | RE: OFA-IESO loan |
| **Date:** | Friday, January 20, 2017 7:01:15 PM |

Thanks Ronald. N

---

**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** January-20-17 7:00 PM
**To:** Petsche, Nadine (TBS)
**Cc:** Patel, Bharat (TBS); Kandeepan, Ken (OFA); Kim, John (OFA)
**Subject:** RE: OFA-IESO loan

Hi Nadine,

I`d rather not speak for the IESO on its market books vs its operating statements. It did seem that it recorded the RPP amounts, including the amounts related to the draws on the OFA credit facility to finance short-term variances, on the market books, not its operating statements.

Perhaps John could recap more, but reaching out to Kim and her staff would be best.

Ron

---

**From:** Petsche, Nadine (TBS) [mailto:Nadine.Petsche@ontario.ca]
**Sent:** January-20-17 18:52
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Bharat Patel (MOF) <Bharat.Patel3@ontario.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: OFA-IESO loan

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**Sent:** January-20-17 6:12 PM
**To:** Petsche, Nadine (TBS)
**Cc:** Patel, Bharat (TBS); Kandeepan, Ken (OFA); Kim, John (OFA)
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**Sent:** January-20-17 17:37
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Bharat Patel (MOF) <Bharat.Patel3@ontario.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Psinas <John.Psinas@ofina.on.ca>
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**Cc:** Petsche, Nadine (TBS)
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**To:** Veinot, Cindy (TBS)
**Subject:** RE: OFA-IESO loan

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**From:** John Kim
**To:** Gavin He
**Subject:** RE: PLEASE REVIEW: MO Bi-Weekly
**Date:** Saturday, November 26, 2016 10:25:13 PM
**Attachments:** MO Bi-Weekly November 28a.docx

---

Hi Gavin,

I need to check one more thing on Monday but take a look to see if this is okay.

On MO weekly, I don't usually engage EFB staff. Only when I am really pressed and when seeking ideas.

Thanks,

John.

---

**From:** Gavin He
**Sent:** Saturday, November 26, 2016 11:24 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** PLEASE REVIEW: MO Bi-Weekly

Hi Team,

I have updated the MO Bi-weekly based on what we provided on November 15th. I am not sure if there's any update on IESO credit facility, Salman could you please verify?

I made some updates to the DRC regulation based on the updates we had this week. Please take a look and let me know if there's anything I missed.

With regards to the policy one-pager, I am not sure if we have any update for that?

Please note that we need to provide the updates back to Ron on Monday morning.

For your convenience, below is the update for DRC:

## 1. Debt Retirement Charge (DRC) Regulation Update:

- Ministry of Energy has proposed amendments to the 2005 Net Metering Regulation (O. Reg. 541/05) in the Ontario Energy Board Act, 1998, which includes removing the 500 kilowatts (kW) maximum output capacity restriction to expand the eligibility to larger customers. The intention of that proposal is to enable larger customers to right-size renewable energy systems to their load.
    - Based on the most recent information, Energy is tracking to LRC on

December 13th, 2016.

- This proposal will require some changes in the Electricity Act, 1998 as well, specifically O. Reg 493/01 related to the DRC.
- This change may create fiscal impact since it will reduce DRC revenues. However, according to the impact analysis provided by Energy, the fiscal impact is very little to no impact, given the proposed change will not be implemented until July 1, 2017, and DRC is ending on April 1, 2018 (9 months overlap).
    - o According to Energy, the negative impact on DRC revenue will be up to $100,000 in the worst case scenario.
    - o TB/MBC approval is required prior to the LRC approval, although the fiscal impact is small.
- The suggested change may require a regulatory registry process, CEFD staff and MOF Legal are checking if an exemption can be granted.

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, November 25, 2016 1:37 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Mara Bakic <Mara.Bakic@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: MO Bi-Weekly

Hi,

Also, for clarity, for the bi-weekly annotated agenda, it should cover all the items proposed to be done before year-end, while the material for the one-pager would be on items in the new year.

Thanks,
Ron

---

**From:** Ronald Kwan
**Sent:** November-25-16 12:25
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Mara Bakic <Mara.Bakic@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: MO Bi-Weekly

On the policy one-pager (with upcoming milestones and/or decision points and a quick refresher on

any pertinent acronyms related to the file) I took it as 1-2 pages overall for electricity-related issues coming up over the next several months, so maybe a short section, with a few bullets each to describe the issue, how it relates to mandate/priorities, decision points/ approvals required and milestones/timing, for each of the items the branches have to bring forward.

Would that work?

Thanks,
Ron

---

**From:** Tomasz Bugajski
**Sent:** November-25-16 11:21
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Mara Bakic <Mara.Bakic@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** MO Bi-Weekly

Hi Everyone,

The MO bi-weekly is scheduled for 3pm on Monday, so please submit your content to Gavin by first thing Monday morning. Also, Marianne specifically requested to discuss the policy one pagers at the bi-weekly, so please consider including any material you might have for this.

Thanks,
Tomasz

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

**ANNOTATED AGENDA**
**MO UPDATE: November 28, 2016**

## 1. IESO $975M Line of Credit Extension Minister's Directive Package

- CEFD staff have put together a Minister's Directive package following t~~T~~he Independent Electricity System Operator's (IESO) has request~~ed~~ for a three-year extension to December 31, 2019, of the $975 million revolving credit facility provided by the Province through the Ontario Financing Authority (OFA).
  - To accommodate this request, ~~the OFA requires~~ a new Lending Directive from the Minister of Finance before the end of November (ideally on Monday, November 28)~~in the near term~~.
  - The Minister's directive is required before OFA can proceed to finalize and enter into an amending credit agreement – all prior to the December 31, 2016 expiration date of the current agreement.
- Maintaining the $975 million credit limit will allow the IESO to provide liquidity into the electricity market to support various initiatives including the Regulated Price Plan (RPP), the Rural or Remote Electricity Rate Protection (RRRP), the new Ontario Electricity Support Program (OESP), the various conservation programs and overall market liquidity.
- The existing credit facility agreement, which expires on December 31, 2016, was last amended in December 2014 following the amalgamation of the Ontario Power Authority (OPA) and the IESO where the new "IESO" assumed all rights and obligations under the existing OFA-OPA $975 million credit agreement.

## 2. Debt Retirement Charge (DRC) Regulation Update:

- Ministry of Energy has proposed amendments to the 2005 Net Metering Regulation (O. Reg. 541/05) in the Ontario Energy Board Act, 1998, which includes removing the 500 kilowatts (kW) maximum output capacity restriction to expand the eligibility to larger customers. The intention of that proposal is to enable larger customers to right-size renewable energy systems to their load.
  - Based on the most recent information, Energy is tracking to LRC on ~~November 28~~December 13th, 2016.
- ~~CEFD staff was informed during a call with Energy counterparts last week that t~~This proposal will~~/may~~ require ~~some~~ corresponding change~~s in the Electricity Act, 1998 as well, specifically~~ to the definition of net metering generation facility in O. Reg 493/01 related to the DRC, a regulation under the Electricity Act, 1998. ~~Energy is suggesting to remove the 500 kilowatts (kW) maximum output capacity restriction under the "net metered generation facility" definition to make both regulations consistent.~~
  This change ~~may create~~ is expected to have a small fiscal impact, up to $100,000, ~~since it will reduce~~in reduced DRC revenues. ~~However, according to the impact analysis provided by Energy, the fiscal impact is very little to no impact, given the proposed change will not be implemented until July 1, 2017, and DRC is ending on April 1, 2018 (9 months overlap).~~
- ~~According to Energy, the negative impact on DRC revenue will be up to $100,000 in the worst case scenario.~~

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- TB/MBC approval is required prior to the LRC approval~~, although the fiscal impact is small~~, and TBS staff are liaising with CO on the logistic for the December 6, 2016 TB date.
- TBS staff stressed that due to the timeline, a strong rationale regarding the timeline as well as MO (MOF) to MO (TBS) outreach would likely be required.

- The suggested change may require a regulatory registry process, CEFD staff ~~are verifying this with MOF Legal to establish for next steps. In addition, we are working with Energy to get further clarification on the requirements and alternatives.~~and MOF Legal are checking if an exemption can be granted [if pursuing the December 13 LRC date].

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**From:** Ronald Kwan
**To:** Emily Kerr; Francisco Chinchon; John Kim; Darren Scanlan
**Cc:** Gavin He
**Subject:** RE: Potential Rate Mitigation
**Date:** Thursday, December 08, 2016 5:13:19 AM

---

Thanks Emily.

Ron

-----Original Message-----
From: Emily Kerr
Sent: December-07-16 11:01 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: RE: Potential Rate Mitigation

Hi,

Other than the addition of the fiscal slide the deck isn't significantly different from the previous version. There are a couple of additional slides in the appendix showing a jurisdictional comparison of industrial electricity prices (33) and industrial prices in Ontario by sector (34). On slide 24 (ending DRC for class B) the additional "0" in the DRC rate is still missing.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Wednesday, December 07, 2016 10:27 PM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: FW: Potential Rate Mitigation

Hi,

Comments?

Ron

-----Original Message-----
From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
Sent: December-07-16 7:10 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Elizabeth Mendes (MOF) <Elizabeth.Mendes@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
Subject: Fw: Potential Rate Mitigation

FYI - tomorrow's deck.

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: McLean, David (MOF) <David.McLean@ontario.ca>
Sent: Wednesday, December 7, 2016 6:56 PM
To: Pearce, Christopher (MOF); Young, Gwendolynne (MOF); Ize-Dukuze, Marilyn (MOF); Clarke-Darshanand,

Jamille (MOF)
Subject: Fw: Potential Rate Mitigation

For MPC tomorrow

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
Sent: Wednesday, December 7, 2016 6:55 PM
To: Kwamena, Boafoa (CAB); McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB)
Subject: FW: Potential Rate Mitigation

FYI

From: Imbrogno, Serge (ENERGY)
Sent: December-07-16 6:51 PM
To: Orsini, Steve (CAB); Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: RE: Potential Rate Mitigation

HI,
Here's the latest version of the deck. We tried to incorporate comments from MOF / TBS. This version is with my MO for review but it will likely be the version we will use at Major Projects tomorrow. Keley can share with your EAs.
Serge

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon; John Kim; Emily Kerr; Darren Scanlan |
| **Cc:** | Gavin He |
| **Subject:** | RE: Potential Rate Mitigation |
| **Date:** | Tuesday, December 06, 2016 2:52:01 PM |
| **Attachments:** | Price-Mitigation - CEFD Slides-Dec6-2016_v2.pptx |

Hi,

Attached is the latest draft.

Ron

---

**From:** Ronald Kwan
**Sent:** December-06-16 13:40
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi,

As discussed, a work-in-progress. Input welcome.

Ron

---

**From:** Ronald Kwan
**Sent:** December-05-16 20:14
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** Fwd: Potential Rate Mitigation

Hi,

Lets meet in the morning to discuss.

We'll need a product for EOD. Could be an annotated slide deck, as well as a markup. Suggestion on any other formats?

Ron

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Date:** December 5, 2016 at 8:02:36 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)"

<Tim.Schuurman@ontario.ca>
**Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>
**Subject: Fw: Potential Rate Mitigation**

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Subject: FW: Potential Rate Mitigation

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If there are questions, I'm happy to discuss.

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Keley

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Serge

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# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost.
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 bn in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time).
  - These existing mitigation costs are not presented in Energy's deck.
  - Also not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

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# General Comments on Energy's Deck (cont.)

- Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded, with an estimated impact of about $0.4 billion initially, and rising over time.
  - This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base.
  - Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes the about 30% price increase (from $85/MWH to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently (at a cost shift of about $900 million per year in 2016).
  - As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $xxx million).

- Departure Tax: As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.
  - This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
  - Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

- Other fiscal cost risks:
  - Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
  - Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
  - Lowering of the debt interest paid by OPG (about $xx – yy million/yr),

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

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# Context: Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* * Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

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# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
  - These targeted, low-income measures were introduced after the HST was introduced.
  - The OESP provides a larger, targeted and on-bill relief to qualifying consumers.

- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
  - As with the prior OCEB cap, provides a rough incentive for conservation and correlation to larger homes. A higher cap in winter may help with space-heating issue.
  - May be challenging to implement.

- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | The government removed the DRC from residential electricity users' bills as of January 1, 2016. This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline: Taxpayer-funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

DRAFT

# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

**From:** Salman Qadir
**To:** Shajee Kathirgamanathan; John Kim
**Cc:** Adam Prokop; Gavin He
**Subject:** RE: Potential Rate Mitigation
**Date:** Tuesday, December 06, 2016 2:45:05 PM
**Attachments:** OPG Fiscal Impact Benefit.xlsx

---

Hi John,

See attached. The fiscal impact benefit could range up to $38 million in 2018 and goes even higher, in a 50/50 weight. Or $50 million in 2018 and high as $72 million in 2021 with 100% weight in long.

Z:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016\Calculations

Based on OPG BP borrowing requirements, assuming 100% is borrowed and kept outstanding for the forecast.

They seem to be estimating the number based on total outstanding:
From deck:

- *Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.*

Salman

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, December 06, 2016 2:24 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

I added the slide representing the new fiscal impacts. Really rough, but wanted to get this out asap.

Please see last slide in the deck:
\\ofina.on.ca\ofadfs\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016\Price-Mitigation - CEFD Slides-Dec6-2016 - EFBv1.pptx

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

**From:** John Kim
**Sent:** Tuesday, December 06, 2016 1:40 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Potential Rate Mitigation

Fyi.

---

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**Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>
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Serge

| OPG BP | $ millions | | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|
| General and Corporate Requirements | | | 400 | 1500 | 850 |
| **Scenario 1 - 50/50** | | | | | |
| Short | | 50% | 200 | 750 | 425 |
| 10-year spread | | 1.35% | $ 2.70 | $ 10.13 | $ 5.74 |
| Long | | 50% | 200 | 750 | 425 |
| 30-year spread | | 1.795% | $ 3.59 | $ 10.13 | $ 5.74 |
| | Total | | $ 6.29 | $ 20.25 | $ 11.48 |
| | Cumulative | | $ 6.29 | $ 26.54 | $ 38.02 |
| **Scenario 2 - 0/100** | | | | | |
| Short | | 0% | 0 | 0 | 0 |
| 10-year spread | | 1.35% | $ - | $ - | $ - |
| Long | | 100% | 400 | 1500 | 850 |
| 30-year spread | | 1.795% | $ 7.18 | $ 26.93 | $ 15.26 |
| | Total | | $ 7.18 | $ 26.93 | $ 15.26 |
| | Cumulative | | $ 7.18 | $ 34.11 | $ 49.36 |

| | 2019 | 2020 | 2021 |
|---|---|---|---|
| | 600 | 550 | 100 |
| | 300 | 275 | 50 |
| $ | 4.05 | $ 3.71 | $ 0.68 |
| | 300 | 275 | 50 |
| $ | 4.05 | $ 3.71 | $ 0.68 |
| $ | 8.10 | $ 7.43 | $ 1.35 |
| $ | 46.12 | $ 53.54 | $ 54.89 |

| | | | |
|---|---|---|---|
| | 0 | 0 | 0 |
| $ | - | $ - | $ - |
| | 600 | 550 | 100 |
| $ | 10.77 | $ 9.87 | $ 1.80 |
| $ | 10.77 | $ 9.87 | $ 1.80 |
| $ | 60.13 | $ 70.01 | $ 71.80 |

| | |
|---|---|
| **From:** | Francisco Chinchon |
| **To:** | Salman Qadir |
| **Cc:** | John Kim; Shajee Kathirgamanathan; Darren Scanlan |
| **Subject:** | RE: Potential Rate Mitigation |
| **Date:** | Tuesday, December 06, 2016 2:40:01 PM |
| **Attachments:** | Price-Mitigation - CEFD Slides-Dec6-2016_SIFB_markup.pptx |

Hi,

I was working on a markup from the version Ron sent me earlier and what was in Energy's deck. See attached.

Francisco

---

**From:** Salman Qadir
**Sent:** Tuesday, December 06, 2016 2:37 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** FW: Potential Rate Mitigation

Hi Francisco,

See slide 11 of the attached that Shajee has prepared. We will look to use include this in the Price Mitigation Proposals slide deck instead of the Slide #7 that you may have seen.

Let us know if you have any comments. John is consolidating his and your comments at the moment.

Salman

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**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, December 06, 2016 2:24 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
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Serge

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# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

# General Comments on Energy's Deck

- The Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill.
  - The proposals would have a significant fiscal cost (about $1.5 billion per year).
- There is already significant amounts of existing electricity price mitigation that has a fiscal impact (averaging over $1.5 billion per year over the past five years, and estimated to increase to about $2 bn in 17-18 (see following slide for estimated costs over time, and likely increasing over time).
  - That is not presented in Energy's deck and would take the total contributions from the tax base to about $3.5 billion per year.
  - Also not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.
- Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded, with an estimated impact of about $0.4 billion initially, and rising over time.
  - This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base.
  - Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

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# General Comments on Energy's Deck (cont.)

- Industrial Conservation Initiative (ICI): Energy also presents as a residential mitigation measure the cancellation of the ICI.
  - Although Energy is not initially proposing the program to be ~~it~~ continue as taxpayer funded, but notes the about 30% price increase for the large Class A customers benefiting from ICI currently (at a cost shift of about $900 million per year) would see an increase of about $20 per MWh.
  - This cost is for 2016, prior to the planned expansion of the ICI, which could further increase the fiscal exposure.
- Departure Tax:
- Other fiscal cost risks include amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr), and a lowering of the debt interest paid by OPG.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.
  - In the past the government applied caps (OCEB) to programs in an effort to focused assistance to those that need it the most or to better align with conservation policy.

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# Context: Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* * Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

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# Proposed Taxpayer Funded Electricity Price Mitigation

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,200* | 1,200* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | 330 | 330 | 330 |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **TOTAL** | **1,195** | **2,105** | **2145** | **2156** | **2156** |
| 1. Electricity Market Renewal Initiative | | TBD | TBD | TBD | TBD |
| 2. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 2. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 3. Fund ICI through Tax Base | | 900 | 900 | 900 | 900 |
| **TOTAL** | **1195** | **3,421** | **3,482** | **3,507** | **3,521** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.5 billion by 2020-21. That is a 67% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)

- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.

- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

- The government could explore options to income test programs funded from the tax base to allow a better focus on those in need.

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | The government removed the DRC from residential electricity users' bills as of January 1, 2016. This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline: Taxpayer-funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

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# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Salman Qadir; Shajee Kathirgamanathan |
| **Cc:** | Adam Prokop; Gavin He |
| **Subject:** | RE: Potential Rate Mitigation |
| **Date:** | Tuesday, December 06, 2016 2:26:44 PM |

Could we share with Francisco the version as I will be tied up for 20 min.

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> **Date:** December 5, 2016 at 8:02:36 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
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Serge

**From:** Salman Qadir
**To:** Shajee Kathirgamanathan; John Kim
**Cc:** Adam Prokop; Gavin He
**Subject:** RE: Potential Rate Mitigation
**Date:** Tuesday, December 06, 2016 2:25:28 PM

---

This is much better.

John: think we can incorporate this table instead of the current slide #7.

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, December 06, 2016 2:24 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
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**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

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DRAFT

# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

# General Comments on Energy's Deck

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  - This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base.
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- Industrial Conservation Initiative (ICI): Energy also presents as a residential mitigation measure the cancellation of the ICI.
  - Energy is not initially proposing it continue as taxpayer funded, but notes the about 30% price increase for the large Class A customers benefiting from ICI currently (at a cost shift of about $900 million per year).
  - This cost is for 2016, prior to the planned expansion of the ICI, which could further increase the fiscal exposure.
- Departure Tax:
- Other fiscal cost risks include amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr), and a lowering of the debt interest paid by OPG.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

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# Context: Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* * Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | The government removed the DRC from residential electricity users' bills as of January 1, 2016. This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline: Taxpayer-funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

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# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

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# Effect of Additional Proposed Taxpayer Funded Electricity Price Mitigation

| Proposal | Fiscal Costs ($M) | *Residential* Ratepayer Savings |
|---|---|---|
| **EXISTING MEASURES** | | |
| OREC | 1,100 | $11/month |
| NIERP | 120 | n/a* |
| NOEC | 25 | n/a* |
| OEPTC[3] | 460 | n/a* |
| **TOTAL Costs from Existing Measures** | **1,705** | **11** |
| | | |
| **PROPOSED MEASURES** | | |
| **Proposal 2:** Fund Electricity Support Programs Through the Tax-Base (OESP, RRRP, First Nations Delivery Rate) | 421 (yr 2017-18)** | $2.45/month |
| **Proposal 3:** Eliminate the Industrial Conservation Initiative funding from ratebase, and shift to tax base | 900 | $4/month |
| **Proposal 7:** Reduced cost of OPG Borrowing | 30-35 | $0.18/month |
| **Proposal 8:** End DRC Early for Commercial/Small Industrial Class B Electricity Consumers, or DRC reduced to $3.5/MWh | 189-378 (yr 2017-18)*** | n/a* |
| **TOTAL Costs/Savings from Proposed Measures** | 1,584 – 1,778 | $6.63/month |
| **TOTAL Costs/Savings from All Taxpayer funded Measures** | **3,289 – 3,483** | **$17.63/month** |

* Costs were not borne by the ratebase.
** Assumes 75%/25% split between 2017 and 2018 costs
*** DRC is removed from all electricity bill by April 1, 2018

| | |
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  - This cost is for 2016, prior to the planned expansion of the ICI, which could further increase the fiscal exposure.
- Departure Tax:
- Other fiscal cost risks include amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr), and a lowering of the debt interest paid by OPG.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

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# Context: Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* * Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | The government removed the DRC from residential electricity users' bills as of January 1, 2016. This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline: Taxpayer-funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

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# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Emily Kerr |
| **Cc:** | Gavin He |
| **Subject:** | RE: Potential Rate Mitigation |
| **Date:** | Tuesday, December 06, 2016 8:00:41 AM |

---

Thanks Emily.

---

**From:** Emily Kerr
**Sent:** Monday, December 05, 2016 10:15 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi,

From the first attached spreadsheet, Class B consumption in 2015 was 114 TWh. From the second attached spreadsheet, residential consumption in 2015 was 52 TWh.

So, Class B less residential was 62 TWh. This amount would include small business and farm customers in the RPP.

---

**From:** John Kim
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**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Thanks…..wondering about the DRC impact. :P

---

**From:** Emily Kerr
**Sent:** Monday, December 05, 2016 9:46 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Potential Rate Mitigation

I don't have the information directly, but I will look and see if I can figure it out from other info.

On Dec 5, 2016, at 9:38 PM, John Kim <John.Kim@ofina.on.ca> wrote:

> Sorry, I meant excluding residential….
>
> ---
>
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> **Sent:** Monday, December 05, 2016 9:35 PM
> **To:** Gavin He <Gavin.He@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>

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Hi Emily,

Would you know the composition of Class B consumption from the total? Just wondering if you have that readily available….

Thanks,

John.

---

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**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** Fwd: Potential Rate Mitigation

Hi John/Emily,

Just forwarding the following up communications on this with you.

Regards,
Gavin He

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** December 5, 2016 at 21:18:37 EST
> **To:** Gadi Mayman <Gadi.Mayman@ofina.on.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, "Tim Schuurman (MOF)" <Tim.Schuurman@ontario.ca>, "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, Christina Zhang <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "David McLean (MOF)" <David.McLean@ontario.ca>
> **Subject: Re: Potential Rate Mitigation**
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> Hi Gadi,
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> If you recall, we did that table a couple weeks ago on existing fiscally funded mitigation programs. We can suggest adding that in. And, as for the GGRA, I think one of the challenges is it was supposed to be for incremental measures to reduce GHGs (not replacing funding for existing measures. But, that said, that was notion I noodled on too, but it would require at least a change in positioning, convincing the Minister of MOECC, as the arbiter of such and/or change the legislation.

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> > >
> > > From: Katona, Keley (ENERGY)

Sent: December 5, 2016 7:44 PM

To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Potential Rate Mitigation

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If there are questions, I'm happy to discuss.

Thanks,

Keley

From: Imbrogno, Serge (ENERGY)

Sent: December-05-16 7:41 PM

To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)

Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Potential Rate Mitigation

Hi,

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mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

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<Price Mitigation Proposals_Dec5-16_v11.pptx>

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| **To:** | John Kim |
| **Cc:** | Gavin He |
| **Subject:** | RE: Potential Rate Mitigation |
| **Date:** | Monday, December 05, 2016 10:15:21 PM |
| **Attachments:** | OEB data GA 2016.xlsx<br>DATA-2-Demand-Outlook-20160901.xlsx |

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<Price Mitigation Proposals_Dec5-16_v11.pptx>

| Month | Total AQEW | Class A AQEW | CLASS B AQEW | Embedded GEN | Excluded Consumption | TOTAL CLASS B Load for Allocation |
|---|---|---|---|---|---|---|
| Jan | 12,104,121 | 2,325,765 | 9,778,356 | 473,005 | 12,357 | 10,239,004 |
| Feb | 11,249,947 | 2,234,225 | 9,015,722 | 478,447 | 16,513 | 9,477,657 |
| Mar | 11,098,465 | 2,336,834 | 8,761,631 | 529,570 | 14,734 | 9,276,467 |
| Apr | 10,271,558 | 2,316,791 | 7,954,766 | 660,273 | 12,790 | 8,602,249 |
| May | 10,312,358 | 2,311,716 | 8,000,642 | 664,109 | 10,868 | 8,653,883 |
| June | 10,906,462 | 2,308,144 | 8,598,318 | 612,019 | 9,386 | 9,200,951 |
| July | 12,247,167 | 2,283,798 | 9,963,369 | 545,844 | 14,093 | 10,495,121 |
| Aug | 12,826,850 | 2,375,381 | 10,451,469 | 524,559 | 13,723 | 10,962,305 |
| Sept | | | | | | |
| Oct | | | | | | |
| Nov | | | | | | |
| Dec | | | | | | |
| Total | 91,016,928 | 18,492,656 | 72,524,273 | 4,487,827 | 104,463 | 76,907,636 |

| | | | |
|---|---|---|---|
| **Total Global Adjustment $** | **Class A GA$** | **Clas B GA$** | **Peak Demand Factor** |
| $1,070,643,210 | $130,771,124 | $939,872,086 | 0.12214258 |
| $1,063,698,605 | $129,922,892 | $933,775,713 | 0.12214258 |
| $1,120,138,944 | $136,816,661 | $983,322,284 | 0.12214258 |
| $1,090,660,721 | $133,216,114 | $957,444,606 | 0.12214258 |
| $1,060,759,407 | $129,563,891 | $931,195,516 | 0.12214258 |
| $995,308,314 | $121,569,525 | $873,738,789 | 0.12214258 |
| $981,770,430 | $111,884,227 | $869,886,203 | 0.11396170 |
| $878,644,674 | $100,131,841 | $778,512,833 | 0.11396170 |
| | | | |
| | | | |
| | | | |
| | | | |
| $8,261,624,305 | $993,876,275 | $7,267,748,030 | |

August 2016 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 12,826,850 |
| |
| 2,375,381 |
| |
| 10,451,469 |
| |
| 524,559 |
| |
| 13,723 |
| |
| 10,962,305 |

| | |
|---|---|
| $ | 878,644,674 |
| | |
| $ | 100,131,841 |
| $ | 778,512,833 |
| | |
| | 0.11396170 |

July 2016 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 12,247,167 |
| |
| 2,283,798 |
| |
| 9,963,369 |
| |
| 545,844 |
| |
| 14,093 |
| |
| 10,495,121 |

| | |
|---|---|
| $ | 981,770,430 |
| | |
| $ | 111,884,227 |
| $ | 869,886,203 |
| | |
| | 0.11396170 |

June 2016 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,906,462 |
| |
| 2,308,144 |
| |
| 8,598,318 |
| |
| 612,019 |
| |
| 9,386 |
| |
| 9,200,951 |

| | |
|---|---|
| $ | 995,308,314 |
| | |
| $ | 121,569,525 |
| $ | 873,738,789 |
| | |
| | 0.12214258 |

May 2016 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,312,358 |
| |
| 2,311,716 |
| |
| 8,000,642 |
| |
| 664,109 |
| |
| 10,868 |
| |
| 8,653,883 |

| | |
|---|---|
| $ | 1,060,759,407 |
| | |
| $ | 129,563,891 |
| $ | 931,195,516 |
| | |
| | 0.12214258 |

April 2016 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,271,558 |
| |
| 2,316,791 |
| |
| 7,954,766 |
| |
| 660,273 |
| |
| 12,790 |
| |
| 8,602,249 |

| | |
|---|---|
| $ | 1,090,660,721 |
| | |
| $ | 133,216,114 |
| $ | 957,444,606 |
| | |
| | 0.12214258 |

March 2016 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,098,465 |
| |
| 2,336,834 |
| |
| 8,761,631 |
| |
| 529,570 |
| |
| 14,734 |
| |
| 9,276,467 |

| | |
|---|---|
| $ | 1,120,138,944 |
| | |
| $ | 136,816,661 |
| $ | 983,322,284 |
| | |
| | 0.12214258 |

February 2016 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,249,947 |
| |
| 2,234,225 |
| |
| 9,015,722 |
| |
| 478,447 |
| |
| 16,513 |
| |
| 9,477,657 |

| | |
|---|---|
| $ | 1,063,698,605 |
| | |
| $ | 129,922,892 |
| $ | 933,775,713 |
| | |
| | 0.12214258 |

January 2016 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 12,104,121 |
| |
| 2,325,765 |
| |
| 9,778,356 |
| |
| 473,005 |
| |
| 12,357 |
| |
| 10,239,004 |

| | |
|---|---|
| $ | 1,070,643,210 |
| | |
| $ | 130,771,124 |
| $ | 939,872,086 |
| | |
| | 0.12214258 |

| Month | Total AQEW | Class A AQEW | CLASS B AQEW | Embedded GEN | Excluded Consumption | TOTAL CLASS B Load for Allocation |
|---|---|---|---|---|---|---|
| Jan | 12,847,678 | 2,084,465 | 10,763,212 | 462,633 | 20,890 | 11,204,955 |
| Feb | 12,077,789 | 1,986,521 | 10,091,268 | 399,678 | 19,776 | 10,471,170 |
| Mar | 11,827,930 | 2,143,191 | 9,684,739 | 494,881 | 20,878 | 10,158,742 |
| Apr | 10,236,952 | 2,087,296 | 8,149,655 | 652,276 | 16,901 | 8,785,030 |
| May | 10,386,270 | 2,114,955 | 8,271,315 | 529,316 | 17,418 | 8,783,214 |
| June | 10,442,855 | 2,060,759 | 8,382,096 | 577,160 | 15,921 | 8,943,335 |
| July | 11,878,019 | 2,306,719 | 9,571,299 | 520,648 | 21,274 | 10,070,673 |
| Aug | 11,552,110 | 2,357,204 | 9,194,906 | 471,688 | 20,227 | 9,646,368 |
| Sept | 11,179,067 | 2,309,596 | 8,869,471 | 503,415 | 27,108 | 9,345,778 |
| Oct | 10,538,710 | 2,365,575 | 8,173,135 | 497,440 | 30,247 | 8,640,328 |
| Nov | 10,494,634 | 2,273,070 | 8,221,564 | 477,484 | 15,870 | 8,683,178 |
| Dec | 11,107,827 | 2,246,123 | 8,861,704 | 436,467 | 14,324 | 9,283,847 |
| Total | 134,569,840 | 26,335,475 | 108,234,365 | 6,023,088 | 240,834 | 114,016,619 |

| | | | |
|---|---|---|---|
| **Total Global Adjustment $** | **Class A GA$** | **Clas B GA$** | **Peak Demand Factor** |
| $628,116,244 | $60,215,476 | $567,900,769 | 0.09586677 |
| $458,754,390 | $43,979,302 | $414,775,088 | 0.09586677 |
| $706,816,671 | $67,760,231 | $639,056,440 | 0.09586677 |
| $928,654,671 | $89,027,124 | $839,627,548 | 0.09586677 |
| $939,140,737 | $90,032,389 | $849,108,348 | 0.09586677 |
| $943,069,508 | $90,409,028 | $852,660,481 | 0.09586677 |
| $904,090,409 | $110,267,613 | $793,822,797 | 0.12196525 |
| $879,181,661 | $107,385,516 | $771,796,144 | 0.12214258 |
| $713,396,336 | $87,136,069 | $626,260,267 | 0.12214258 |
| $742,600,148 | $90,703,098 | $651,897,050 | 0.12214258 |
| $1,119,279,840 | $136,711,727 | $982,568,113 | 0.12214258 |
| $999,585,710 | $122,091,978 | $877,493,732 | 0.12214258 |
| $9,962,686,326 | $1,095,719,550 | $8,866,966,776 | |

December 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,107,827 |
| |
| 2,246,123 |
| |
| 8,861,704 |
| |
| 436,467 |
| |
| 14,324 |
| |
| 9,283,847 |

| | |
|---|---|
| $ | 999,585,710 |
| | |
| $ | 122,091,978 |
| $ | 877,493,732 |
| | |
| | 0.12214258 |

November 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,494,634 |
| |
| 2,273,070 |
| |
| 8,221,564 |
| |
| 477,484 |
| |
| 15,870 |
| |
| 8,683,178 |

| | |
|---|---|
| $ | 1,119,279,840 |
| | |
| $ | 136,711,727 |
| $ | 982,568,113 |
| | |
| | 0.12214258 |

October 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,538,710 |
| |
| 2,365,575 |
| |
| 8,173,135 |
| |
| 497,440 |
| |
| 30,247 |
| |
| 8,640,328 |

| | |
|---|---|
| $ | 742,600,148 |
| | |
| $ | 90,703,098 |
| $ | 651,897,050 |
| | |
| | 0.12214258 |

September 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,179,067 |
| |
| 2,309,596 |
| |
| 8,869,471 |
| |
| 503,415 |
| |
| 27,108 |
| |
| 9,345,778 |

| | |
|---|---|
| $ | 713,396,336 |
| | |
| $ | 87,136,069 |
| $ | 626,260,267 |
| | |
| | 0.12214258 |

August 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,552,110 |
| |
| 2,357,204 |
| |
| 9,194,906 |
| |
| 471,688 |
| |
| 20,227 |
| |
| 9,646,368 |

| | |
|---|---|
| $ | 879,181,661 |
| | |
| $ | 107,385,516 |
| $ | 771,796,144 |
| | |
| | 0.12214258 |

July 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,878,019 |
| |
| 2,306,719 |
| |
| 9,571,299 |
| |
| 520,648 |
| |
| 21,274 |
| |
| 10,070,673 |

| | |
|---|---|
| $ | 904,090,409 |
| | |
| $ | 110,267,613 |
| $ | 793,822,797 |
| | |
| | 0.12196525 |

June 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,442,855 |
| |
| 2,060,759 |
| |
| 8,382,096 |
| |
| 577,160 |
| |
| 15,921 |
| |
| 8,943,335 |

| | |
|---|---|
| $ | 943,069,508 |
| | |
| $ | 90,409,028 |
| $ | 852,660,481 |
| | |
| | 0.09586677 |

May 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,386,270 |
| |
| 2,114,955 |
| |
| 8,271,315 |
| |
| 529,316 |
| |
| 17,418 |
| |
| 8,783,214 |

| | |
|---|---|
| $ | 939,140,737 |
| | |
| $ | 90,032,389 |
| $ | 849,108,348 |
| | |
| | 0.09586677 |

April 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,236,952 |
| |
| 2,087,296 |
| |
| 8,149,655 |
| |
| 652,276 |
| |
| 16,901 |
| |
| 8,785,030 |

| | |
|---|---|
| $ | 928,654,671 |
| | |
| $ | 89,027,124 |
| $ | 839,627,548 |
| | |
| | 0.09586677 |

March 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,827,930 |
| |
| 2,143,191 |
| |
| 9,684,739 |
| |
| 494,881 |
| |
| 20,878 |
| |
| 10,158,742 |

| | |
|---|---|
| $ | 706,816,671 |
| | |
| $ | 67,760,231 |
| $ | 639,056,440 |
| | |
| | 0.09586677 |

February 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 12,077,789 |
| |
| 1,986,521 |
| |
| 10,091,268 |
| |
| 399,678 |
| |
| 19,776 |
| |
| 10,471,170 |

| | |
|---|---|
| $ | 458,754,390 |
| | |
| $ | 43,979,302 |
| $ | 414,775,088 |
| | |
| | 0.09586677 |

January 2015 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 12,847,678 |
| |
| 2,084,465 |
| |
| 10,763,212 |
| |
| 462,633 |
| |
| 20,890 |
| |
| 11,204,955 |

| | |
|---|---|
| $ | 628,116,244 |
| | |
| $ | 60,215,476 |
| $ | 567,900,769 |
| | |
| | 0.09586677 |

| Month | Total AQEW | Class A AQEW | CLASS B AQEW | Embedded GEN | Excluded Consumption | TOTAL CLASS B Load for Allocation |
|---|---|---|---|---|---|---|
| Jan | 13,328,023 | 2,161,556 | 11,166,467 | 400,322 | 23,618 | 11,543,171 |
| Feb | 11,825,671 | 2,067,747 | 9,757,924 | 336,417 | 19,541 | 10,074,800 |
| Mar | 12,412,016 | 2,236,220 | 10,175,796 | 435,674 | 22,060 | 10,589,409 |
| Apr | 10,631,857 | 2,141,240 | 8,490,616 | 476,811 | 23,003 | 8,944,424 |
| May | 10,428,530 | 2,139,306 | 8,289,223 | 484,002 | 15,594 | 8,757,631 |
| June | 11,033,703 | 2,153,703 | 8,880,000 | 466,648 | 15,958 | 9,330,691 |
| July | 11,490,278 | 2,203,226 | 9,287,052 | 447,087 | 21,185 | 9,712,954 |
| Aug | 11,468,769 | 2,231,394 | 9,237,375 | 385,056 | 27,990 | 9,594,441 |
| Sept | 10,656,919 | 2,150,083 | 8,506,837 | 422,636 | 22,176 | 8,907,297 |
| Oct | 10,639,787 | 2,143,941 | 8,495,846 | 437,843 | 17,544 | 8,916,146 |
| Nov | 11,287,752 | 2,123,604 | 9,164,148 | 406,264 | 12,969 | 9,557,443 |
| Dec | 11,939,009 | 2,107,296 | 9,831,714 | 425,614 | 12,458 | 10,244,869 |
| Total | 137,142,314 | 25,859,315 | 111,282,999 | 5,124,375 | 234,095 | 116,173,279 |

| | | | |
|---|---|---|---|
| **Total Global Adjustment $** | **Class A GA$** | **Clas B GA$** | **Peak Demand Factor** |
| $160,703,230 | $16,722,314 | $143,980,916 | 0.10405711 |
| $149,534,148 | $15,560,091 | $133,974,056 | 0.10405711 |
| -$1,108,196 | -$115,316 | -$992,880 | 0.10405711 |
| $520,643,567 | $54,176,665 | $466,466,902 | 0.10405711 |
| $703,392,944 | $73,088,611 | $630,304,333 | 0.10390865 |
| $626,884,065 | $65,138,677 | $561,745,388 | 0.10390865 |
| $672,311,617 | $64,826,760 | $607,484,857 | 0.09642368 |
| $717,608,852 | $68,794,843 | $648,814,010 | 0.09586677 |
| $784,468,017 | $75,204,415 | $709,263,602 | 0.09586677 |
| $987,539,342 | $94,672,207 | $892,867,135 | 0.09586677 |
| $870,196,641 | $83,422,941 | $786,773,700 | 0.09586677 |
| $843,465,079 | $80,860,273 | $762,604,807 | 0.09586677 |
| $7,035,639,307 | $692,352,481 | $6,343,286,826 | |

December 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,939,009 |
| |
| 2,107,296 |
| |
| 9,831,714 |
| |
| 425,614 |
| |
| 12,458 |
| |
| 10,244,869 |

| | |
|---|---|
| $ | 843,465,079 |
| | |
| $ | 80,860,273 |
| $ | 762,604,807 |
| | |
| | 0.09586677 |

November 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,287,752 |
| |
| 2,123,604 |
| |
| 9,164,148 |
| |
| 406,264 |
| |
| 12,969 |
| |
| 9,557,443 |

| | |
|---|---|
| $ | 870,196,641 |
| | |
| $ | 83,422,941 |
| $ | 786,773,700 |
| | |
| | 0.09586677 |

October 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,639,787 |
| |
| 2,143,941 |
| |
| 8,495,846 |
| |
| 437,843 |
| |
| 17,544 |
| |
| 8,916,146 |

| | |
|---|---|
| $ | 987,539,342 |
| | |
| $ | 94,672,207 |
| $ | 892,867,135 |
| | |
| | 0.09586677 |

September 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Class B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,656,919 |
| |
| 2,150,083 |
| |
| 8,506,837 |
| |
| 422,636 |
| |
| 22,176 |
| |
| 8,907,297 |

| | |
|---|---|
| $ | 784,468,017 |
| | |
| $ | 75,204,415 |
| $ | 709,263,602 |
| | |
| | 0.09586677 |

August 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,468,769 |
| |
| 2,231,394 |
| |
| 9,237,375 |
| |
| 385,056 |
| |
| 27,990 |
| |
| 9,594,441 |

| | |
|---|---|
| $ | 717,608,852 |
| | |
| $ | 68,794,843 |
| $ | 648,814,010 |
| | |
| | 0.09586677 |

July 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,490,278 |
| |
| 2,203,226 |
| |
| 9,287,052 |
| |
| 447,087 |
| |
| 21,185 |
| |
| 9,712,954 |

| | |
|---|---|
| $ | 672,311,617 |
| | |
| $ | 64,826,760 |
| $ | 607,484,857 |
| | |
| | 0.09642368 |

June 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,033,703 |
| |
| 2,153,703 |
| |
| 8,880,000 |
| |
| 466,648 |
| |
| 15,958 |
| |
| 9,330,691 |

| | |
|---|---|
| $ | 626,884,065 |
| | |
| $ | 65,138,677 |
| $ | 561,745,388 |
| | |
| | 0.10390865 |

May 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,428,530 |
| |
| 2,139,306 |
| |
| 8,289,223 |
| |
| 484,002 |
| |
| 15,594 |
| |
| 8,757,631 |

| | |
|---|---|
| $ | 703,392,944 |
| | |
| $ | 73,088,611 |
| $ | 630,304,333 |
| | |
| | 0.10390865 |

April 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,631,857 |
| |
| 2,141,240 |
| |
| 8,490,616 |
| |
| 476,811 |
| |
| 23,003 |
| |
| 8,944,424 |

| | |
|---|---|
| $ | 520,643,567 |
| | |
| $ | 54,176,665 |
| $ | 466,466,902 |
| | |
| | 0.10405711 |

March 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 12,412,016 |
| |
| 2,236,220 |
| |
| 10,175,796 |
| |
| 435,674 |
| |
| 22,060 |
| |
| 10,589,409 |

| | |
|---|---|
| -$ | 1,108,196 |
| | |
| -$ | 115,316 |
| -$ | 992,880 |
| | |
| | 0.10405711 |

February 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,825,671 |
| |
| 2,067,747 |
| |
| 9,757,924 |
| |
| 336,417 |
| |
| 19,541 |
| |
| 10,074,800 |

| | |
|---|---|
| $ | 149,534,148 |
| | |
| $ | 15,560,091 |
| $ | 133,974,056 |
| | |
| | 0.10405711 |

January 2014 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 13,328,023 |
| |
| 2,161,556 |
| |
| 11,166,467 |
| |
| 400,322 |
| |
| 23,618 |
| |
| 11,543,171 |

| | |
|---|---|
| $ | 160,703,230 |
| | |
| $ | 16,722,314 |
| $ | 143,980,916 |
| | |
| | 0.10405711 |

| Month | Total AQEW | Class A AQEW | CLASS B AQEW | Embedded GEN | Excluded Consumption | TOTAL CLASS B Load for Allocation |
|---|---|---|---|---|---|---|
| Jan | 12,647,423 | 2,046,868 | 10,600,555 | 301,107 | 33,733 | 10,867,929 |
| Feb | 11,515,240 | 1,914,114 | 9,601,126 | 289,137 | 13,886 | 9,876,376 |
| Mar | 11,757,578 | 1,995,390 | 9,762,188 | 352,918 | 17,842 | 10,097,264 |
| Apr | 10,740,825 | 1,789,920 | 8,950,906 | 488,168 | 29,918 | 9,409,156 |
| May | 10,574,639 | 1,956,120 | 8,618,520 | 362,079 | 27,139 | 8,953,460 |
| June | 10,882,868 | 1,916,493 | 8,966,375 | 289,556 | 26,290 | 9,229,642 |
| July | 12,426,194 | 2,016,882 | 10,409,312 | 356,788 | 34,262 | 10,731,844 |
| Aug | 11,822,472 | 2,144,675 | 9,677,797 | 398,069 | 35,431 | 10,040,435 |
| Sept | 10,626,902 | 2,080,759 | 8,546,143 | 335,452 | 33,055 | 8,848,541 |
| Oct | 10,877,471 | 2,195,503 | 8,681,968 | 351,730 | 32,070 | 9,001,628 |
| Nov | 11,399,627 | 2,144,667 | 9,254,961 | 422,093 | 18,768 | 9,658,286 |
| Dec | 12,547,918 | 2,098,682 | 10,449,237 | 329,114 | 18,982 | 10,759,369 |
| Total | 137,819,158 | 24,300,073 | 113,519,087 | 4,276,212 | 321,376 | 117,473,928 |

| | | | |
|---|---|---|---|
| **Total Global Adjustment $** | **Class A GA$** | **Clas B GA$** | **Peak Demand Factor** |
| $605,956,346 | $62,567,562 | $543,388,784 | 0.10325424 |
| $527,700,886 | $54,547,807 | $473,153,079 | 0.10336880 |
| $554,807,967 | $57,349,834 | $497,458,133 | 0.10336880 |
| $614,806,752 | $63,551,836 | $551,254,916 | 0.10336880 |
| $657,201,974 | $67,934,179 | $589,267,794 | 0.10336880 |
| $724,596,076 | $74,900,627 | $649,695,450 | 0.10336880 |
| $609,580,628 | $63,449,364 | $546,131,264 | 0.10408691 |
| $699,840,395 | $72,844,224 | $626,996,171 | 0.10408691 |
| $657,359,157 | $68,405,977 | $588,953,180 | 0.10406180 |
| $634,176,606 | $65,993,559 | $568,183,047 | 0.10406180 |
| $846,999,195 | $88,140,261 | $758,858,935 | 0.10406180 |
| $591,657,265 | $61,566,145 | $530,091,120 | 0.10405711 |
| $7,724,683,248 | $801,251,375 | $6,923,431,873 | |

December 2013 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 12,547,918 |
| |
| 2,098,682 |
| |
| 10,449,237 |
| |
| 329,114 |
| |
| 18,982 |
| |
| 10,759,369 |

| | |
|---|---|
| $ | 591,657,265 |
| | |
| $ | 61,566,145 |
| $ | 530,091,120 |
| | |
| | 0.10405711 |

November 2013 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,399,627 |
| |
| 2,144,667 |
| |
| 9,254,961 |
| |
| 422,093 |
| |
| 18,768 |
| |
| 9,658,286 |

| | |
|---|---|
| $ | 846,999,195 |
| | |
| $ | 88,140,261 |
| $ | 758,858,935 |
| | |
| | 0.1040618 |

October 2013 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,877,471 |
| |
| 2,195,503 |
| |
| 8,681,968 |
| |
| 351,730 |
| |
| 32,070 |
| |
| 9,001,628 |

| | |
|---|---|
| $ | 634,176,606 |
| | |
| $ | 65,993,559 |
| $ | 568,183,047 |
| | |
| | 0.1040618 |

September 2013 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,626,902 |
| |
| 2,080,759 |
| |
| 8,546,143 |
| |
| 335,452 |
| |
| 33,055 |
| |
| 8,848,541 |

| | |
|---|---|
| $ | 657,359,157 |
| | |
| $ | 68,405,977 |
| $ | 588,953,180 |
| | |
| | 0.1040618 |

August 2013 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 11,822,472 |
| |
| 2,144,675 |
| |
| 9,677,797 |
| |
| 398,069 |
| |
| 35,431 |
| |
| 10,040,435 |

| | |
|---|---|
| $ | 699,840,395 |
| | |
| $ | 72,844,224 |
| $ | 626,996,171 |
| | |
| | 0.10408691 |

July 2013 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 12,426,194 |
| |
| 2,016,882 |
| |
| 10,409,312 |
| |
| 356,788 |
| |
| 34,262 |
| |
| 10,731,844 |

| | |
|---|---|
| $ | 609,580,628 |
| | |
| $ | 63,449,364 |
| $ | 546,131,264 |
| | |
| | 0.10408691 |

June 2013 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,882,868 |
| |
| 1,916,493 |
| |
| 8,966,375 |
| |
| 289,556 |
| |
| 26,290 |
| |
| 9,229,642 |

| | |
|---|---|
| $ | 724,596,076 |
| | |
| $ | 74,900,627 |
| $ | 649,695,450 |
| | |
| | 0.1033688 |

May 2013 - GA Allocation data

| |
|---|
| Total AQEW |
| - |
| Class A AQEW |
| |
| CLASS B AQEW |
| + |
| Embedded GEN |
| - |
| Excluded Consumption |
| |
| TOTAL CLASS B Load for Allocation |

| |
|---|
| Total Global Adjustment $ |
| |
| Class A GA$ |
| Clas B GA$ |
| |
| Peak Demand Factor |

| MWH |
|---|
| 10,574,639 |
| |
| 1,956,120 |
| |
| 8,618,520 |
| |
| 362,079 |
| |
| 27,139 |
| |
| 8,953,460 |

| | |
|---|---|
| $ | 657,201,974 |
| | |
| $ | 67,934,179 |
| $ | 589,267,794 |
| | |
| | 0.1033688 |

April 2013 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,740,825 |
| - | |
| Class A AQEW | 1,789,920 |
| | |
| CLASS B AQEW | 8,950,906 |
| + | |
| Embedded GEN | 488,168 |
| - | |
| Excluded Consumption | 29,918 |
| | |
| TOTAL CLASS B Load for Allocation | 9,409,156 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 614,806,752 |
| | | |
| Class A GA$ | $ | 63,551,836 |
| Clas B GA$ | $ | 551,254,916 |
| | | |
| Peak Demand Factor | | 0.1033688 |

March 2013 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,757,578 |
| - | |
| Class A AQEW | 1,995,390 |
| | |
| CLASS B AQEW | 9,762,188 |
| + | |
| Embedded GEN | 352,918 |
| - | |
| Excluded Consumption | 17,842 |
| | |
| TOTAL CLASS B Load for Allocation | 10,097,264 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 554,807,967 |
| | | |
| Class A GA$ | $ | 57,349,834 |
| Clas B GA$ | $ | 497,458,133 |
| | | |
| Peak Demand Factor | | 0.1033688 |

February 2013 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,515,240 |
| - | |
| Class A AQEW | 1,914,114 |
| | |
| CLASS B AQEW | 9,601,126 |
| + | |
| Embedded GEN | 289,137 |
| - | |
| Excluded Consumption | 13,886 |
| | |
| TOTAL CLASS B Load for Allocation | 9,876,376 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 527,700,886 |
| | | |
| Class A GA$ | $ | 54,547,807 |
| Clas B GA$ | $ | 473,153,079 |
| | | |
| Peak Demand Factor | | 0.1033688 |

January 2013 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 12,647,423 |
| - | |
| Class A AQEW | 2,046,868 |
| | |
| CLASS B AQEW | 10,600,555 |
| + | |
| Embedded GEN | 301,107 |
| - | |
| Excluded Consumption | 33,733 |
| | |
| TOTAL CLASS B Load for Allocation | 10,867,929 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 605,956,346 |
| | | |
| Class A GA$ | $ | 62,567,562 |
| Clas B GA$ | $ | 543,388,784 |
| | | |
| Peak Demand Factor | | 0.10325424 |

November 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,905,547 |
| - | |
| Class A AQEW | 1,940,831 |
| | |
| CLASS B AQEW | 9,964,716 |
| + | |
| Embedded GEN | 285,071 |
| - | |
| Excluded Consumption | 30,836 |
| | |
| TOTAL CLASS B Load for Allocation | 10,218,952 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 462,985,650 |
| | | |
| Class A GA$ | $ | 47,774,336 |
| Clas B GA$ | $ | 415,211,314 |
| | | |
| Peak Demand Factor | | 0.10318751 |

November 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,278,642 |
| - | |
| Class A AQEW | 2,012,722 |
| | |
| CLASS B AQEW | 9,265,920 |
| + | |
| Embedded GEN | 271,131 |
| - | |
| Excluded Consumption | 27,179 |
| | |
| TOTAL CLASS B Load for Allocation | 9,509,872 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 575,208,392 |
| | | |
| Class A GA$ | $ | 59,167,626 |
| Clas B GA$ | $ | 516,040,766 |
| | | |
| Peak Demand Factor | | 0.10286294 |

October 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,900,883 |
| - | |
| Class A AQEW | 2,029,476 |
| | |
| CLASS B AQEW | 8,871,408 |
| + | |
| Embedded GEN | 278,004 |
| - | |
| Excluded Consumption | 34,642 |
| | |
| TOTAL CLASS B Load for Allocation | 9,114,770 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 545,591,889 |
| | | |
| Class A GA$ | $ | 55,289,382 |
| Clas B GA$ | $ | 490,302,507 |
| | | |
| Peak Demand Factor | | 0.10133835 |

September 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,812,042 |
| - | |
| Class A AQEW | 1,947,235 |
| | |
| CLASS B AQEW | 8,864,807 |
| + | |
| Embedded GEN | 215,553 |
| - | |
| Excluded Consumption | 38,170 |
| | |
| TOTAL CLASS B Load for Allocation | 9,042,191 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 478,914,594 |
| | | |
| Class A GA$ | $ | 48,409,401 |
| Clas B GA$ | $ | 430,505,193 |
| | | |
| Peak Demand Factor | | 0.10108149 |

August 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 12,372,266 |
| - | |
| Class A AQEW | 2,087,680 |
| | |
| CLASS B AQEW | 10,284,586 |
| + | |
| Embedded GEN | 218,206 |
| - | |
| Excluded Consumption | 39,277 |
| | |
| TOTAL CLASS B Load for Allocation | 10,463,515 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 484,832,901 |
| | | |
| Class A GA$ | $ | 48,972,128 |
| Clas B GA$ | $ | 489,817,759 |
| | | |
| Peak Demand Factor | | 0.10222683 |

July 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 13,167,379 |
| - | |
| Class A AQEW | 2,056,251 |
| | |
| CLASS B AQEW | 11,111,129 |
| + | |
| Embedded GEN | 224,480 |
| - | |
| Excluded Consumption | 41,032 |
| | |
| TOTAL CLASS B Load for Allocation | 11,294,576 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 421,657,603 |
| | | |
| Class A GA$ | $ | 42,438,290 |
| Clas B GA$ | $ | 379,219,313 |
| | | |
| Peak Demand Factor | | 0.10064633 |

June 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,557,688 |
| - | |
| Class A AQEW | 1,807,368 |
| | |
| CLASS B AQEW | 9,750,319 |
| + | |
| Embedded GEN | 280,043 |
| - | |
| Excluded Consumption | 35,265 |
| | |
| TOTAL CLASS B Load for Allocation | 9,995,097 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 584,836,353 |
| | | |
| Class A GA$ | $ | 58,215,306 |
| Clas B GA$ | $ | 526,621,046 |
| | | |
| Peak Demand Factor | | 0.09954119 |

May 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,921,686 |
| - | |
| Class A AQEW | 1,949,039 |
| | |
| CLASS B AQEW | 8,972,647 |
| + | |
| Embedded GEN | 273,589 |
| - | |
| Excluded Consumption | 30,595 |
| | |
| TOTAL CLASS B Load for Allocation | 9,215,640 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 578,188,856 |
| | | |
| Class A GA$ | $ | 57,553,607 |
| Clas B GA$ | $ | 520,624,504 |
| | | |
| Peak Demand Factor | | 0.09954119 |

April 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,430,493 |
| - | |
| Class A AQEW | 1,869,978 |
| | |
| CLASS B AQEW | 8,560,515 |
| + | |
| Embedded GEN | 287,085 |
| - | |
| Excluded Consumption | 28,508 |
| | |
| TOTAL CLASS B Load for Allocation | 8,819,093 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 594,728,963 |
| | | |
| Class A GA$ | $ | 59,220,184 |
| Clas B GA$ | $ | 535,508,779 |
| | | |
| Peak Demand Factor | | 0.09957508 |

March 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,262,788 |
| - | |
| Class A AQEW | 1,915,552 |
| | |
| CLASS B AQEW | 9,347,235 |
| + | |
| Embedded GEN | 304,304 |
| - | |
| Excluded Consumption | 24,729 |
| | |
| TOTAL CLASS B Load for Allocation | 9,626,811 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 666,515,554 |
| | | |
| Class A GA$ | $ | 66,368,340 |
| Clas B GA$ | $ | 600,147,215 |
| | | |
| Peak Demand Factor | | 0.09957508 |

February 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,369,137 |
| - | |
| Class A AQEW | 1,819,388 |
| | |
| CLASS B AQEW | 9,549,749 |
| + | |
| Embedded GEN | 259,661 |
| - | |
| Excluded Consumption | 26,640 |
| | |
| TOTAL CLASS B Load for Allocation | 9,782,770 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 549,975,675 |
| | | |
| Class A GA$ | $ | 54,763,872 |
| Clas B GA$ | $ | 495,211,803 |
| | | |
| Peak Demand Factor | | 0.09957508 |

January 2012 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 12,497,503 |
| - | |
| Class A AQEW | 1,891,865 |
| | |
| CLASS B AQEW | 10,605,638 |
| + | |
| Embedded GEN | 290,100 |
| - | |
| Excluded Consumption | 29,895 |
| | |
| TOTAL CLASS B Load for Allocation | 10,865,843 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 512,347,625 |
| | | |
| Class A GA$ | $ | 51,017,056 |
| Clas B GA$ | $ | 461,330,570 |
| | | |
| Peak Demand Factor | | 0.09957508 |

December 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,893,787 |
| - | |
| Class A AQEW | 1,807,864 |
| | |
| CLASS B AQEW | 10,085,923 |
| + | |
| Embedded GEN | 278,802 |
| - | |
| Excluded Consumption | 28,995 |
| | |
| TOTAL CLASS B Load for Allocation | 10,335,731 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 540,458,223 |
| | | |
| Class A GA$ | $ | 53,816,171 |
| Clas B GA$ | $ | 486,642,053 |
| | | |
| Peak Demand Factor | | 0.09957508 |

November 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,883,510 |
| - | |
| Class A AQEW | 1,818,078 |
| | |
| CLASS B AQEW | 9,065,432 |
| + | |
| Embedded GEN | 267,297 |
| - | |
| Excluded Consumption | 14,037 |
| | |
| TOTAL CLASS B Load for Allocation | 9,318,692 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 451,020,116 |
| | | |
| Class A GA$ | $ | 44,910,364 |
| Clas B GA$ | $ | 406,109,752 |
| | | |
| Peak Demand Factor | | 0.09957508 |

October 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,804,905 |
| - | |
| Class A AQEW | 1,913,542 |
| | |
| CLASS B AQEW | 8,891,363 |
| + | |
| Embedded GEN | 211,046 |
| - | |
| Excluded Consumption | 31,170 |
| | |
| TOTAL CLASS B Load for Allocation | 9,071,240 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 456,870,112 |
| | | |
| Class A GA$ | $ | 45,492,878 |
| Clas B GA$ | $ | 411,377,234 |
| | | |
| Peak Demand Factor | | 0.09957508 |

September 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,918,652 |
| - | |
| Class A AQEW | 1,893,483 |
| | |
| CLASS B AQEW | 9,025,170 |
| + | |
| Embedded GEN | 168,994 |
| - | |
| Excluded Consumption | 48,302 |
| | |
| TOTAL CLASS B Load for Allocation | 9,145,861 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 391,468,827 |
| | | |
| Class A GA$ | $ | 38,980,540 |
| Clas B GA$ | $ | 352,488,288 |
| | | |
| Peak Demand Factor | | 0.09957508 |

August 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 12,281,682 |
| - | |
| Class A AQEW | 1,944,232 |
| | |
| CLASS B AQEW | 10,337,450 |
| + | |
| Embedded GEN | 189,009 |
| - | |
| Excluded Consumption | 36,087 |
| | |
| TOTAL CLASS B Load for Allocation | 10,490,372 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 426,153,523 |
| | | |
| Class A GA$ | $ | 42,434,271 |
| Clas B GA$ | $ | 383,719,252 |
| | | |
| Peak Demand Factor | | 0.09957508 |

July 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 12969441 |
| - | |
| Class A AQEW | 1,863,383 |
| | |
| CLASS B AQEW | 11,106,058 |
| + | |
| Embedded GEN | 200,436 |
| - | |
| Excluded Consumption | 33,473 |
| | |
| TOTAL CLASS B Load for Allocation | 11,273,021 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 391,700,994 |
| | | |
| Class A GA$ | $ | 39,003,658 |
| Clas B GA$ | $ | 352,697,336 |
| | | |
| Peak Demand Factor | | 0.09957508 |

Year to Date 2011 - GA Allocation data (September)

| | MWH |
|---|---|
| Total AQEW | 138,630,409 |
| - | |
| Class A AQEW | 22,728,668 |
| | |
| CLASS B AQEW | 115,901,741 |
| + | |
| Embedded GEN | 2,831,157 |
| - | |
| Excluded Consumption | 350,168 |
| | |
| TOTAL CLASS B Load for Allocation | 118,382,730 |

| | |
|---|---|
| Total Global Adjustment $ | 5,309,712,152 |
| | |
| Class A GA$ | 553,357,286 |
| Clas B GA$ | 4,756,354,865 |
| | |
| Peak Demand Factor (Jan-Jun) | 0.10887593 |
| Peak Demand Factor (Jul-Dec) | 0.09957508 |

June 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,964,964 |
| - | |
| Class A AQEW | 1,847,675 |
| | |
| CLASS B AQEW | 9,117,288 |
| + | |
| Embedded GEN | 218,894 |
| - | |
| Excluded Consumption | 18,487 |
| | |
| TOTAL CLASS B Load for Allocation | 9,317,695 |

| | | |
|---|---|---|
| Total Global Adjustment $ | | $423,140,323.26 |
| | | |
| Class A GA$ | $ | 46,045,841 |
| Clas B GA$ | $ | 377,094,482 |
| | | |
| Peak Demand Factor | | 0.10887593 |

May 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,568,314 |
| - | |
| Class A AQEW | 1,933,429 |
| | |
| CLASS B AQEW | 8,634,885 |
| + | |
| Embedded GEN | 261,085 |
| - | |
| Excluded Consumption | 23,560 |
| | |
| TOTAL CLASS B Load for Allocation | 8,872,410 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 498,229,322 |
| | | |
| Class A GA$ | $ | 54,245,181 |
| Clas B GA$ | $ | 443,984,141 |
| | | |
| Peak Demand Factor | | 0.10887593 |

April 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 10,888,933 |
| - | |
| Class A AQEW | 1,996,233 |
| | |
| CLASS B AQEW | 8,892,700 |
| + | |
| Embedded GEN | 266,583 |
| - | |
| Excluded Consumption | 27,120 |
| | |
| TOTAL CLASS B Load for Allocation | 9,132,162 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 440,436,684 |
| | | |
| Class A GA$ | $ | 47,952,954 |
| Clas B GA$ | $ | 392,483,731 |
| | | |
| Peak Demand Factor | | 0.10887593 |

March 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 12,097,068 |
| - | |
| Class A AQEW | 1,987,339 |
| | |
| CLASS B AQEW | 10,109,729 |
| + | |
| Embedded GEN | 266,580 |
| - | |
| Excluded Consumption | 27,120 |
| | |
| TOTAL CLASS B Load for Allocation | 10,349,190 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 427,712,982 |
| | | |
| Class A GA$ | $ | 46,567,649 |
| Clas B GA$ | $ | 381,145,333 |
| | | |
| Peak Demand Factor | | 0.10887593 |

February 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 11,586,544 |
| - | |
| Class A AQEW | 1,821,355 |
| | |
| CLASS B AQEW | 9,765,189 |
| + | |
| Embedded GEN | 233,940 |
| - | |
| Excluded Consumption | 30,643 |
| | |
| TOTAL CLASS B Load for Allocation | 9,968,486 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 393,446,399 |
| | | |
| Class A GA$ | $ | 42,836,843 |
| Clas B GA$ | $ | 350,609,556 |
| | | |
| Peak Demand Factor | | 0.10887593 |

January 2011 - GA Allocation data

| | MWH |
|---|---|
| Total AQEW | 13,056,516 |
| - | |
| Class A AQEW | 1,981,255 |
| | |
| CLASS B AQEW | 11,075,261 |
| + | |
| Embedded GEN | 252,084 |
| - | |
| Excluded Consumption | 33,446 |
| | |
| TOTAL CLASS B Load for Allocation | 11,293,899 |

| | | |
|---|---|---|
| Total Global Adjustment $ | $ | 469,074,645 |
| | | |
| Class A GA$ | $ | 51,070,938 |
| Clas B GA$ | $ | 418,003,707 |
| | | |
| Peak Demand Factor | | 0.10887593 |

10574639.29
1956119.51
8618519.783
362079.014
27139.07
8953459.727
657201973.7
67934179.38
605041975.5
0.1033688

- GA Allocation data

| | MWH |
|---|---|
| Total AQEW | |
| - | |
| Class A AQEW | |
| | |
| CLASS B AQEW | |
| + | |
| Embedded GEN | |
| - | |
| Excluded Consumption | |
| | |
| TOTAL CLASS B Load for Allocation | |

| | |
|---|---|
| Total Global Adjustment $ | |
| | |
| Class A GA$ | |
| Clas B GA$ | |
| | |
| Peak Demand Factor | |

Ontario Net Energy Demand across Demand Outlooks

| Energy (TWh) | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|
| Outlook A | 142.5 | 143.0 | 141.9 | 140.6 |
| Outlook B | 142.5 | 143.4 | 142.9 | 142.7 |
| Outlook C | 142.5 | 143.5 | 143.2 | 143.7 |
| Outlook D | 142.5 | 143.5 | 143.2 | 144.3 |

Ontario Net Summer Peak Demand across Demand Outlooks

| Summer Peak Demand (MW) | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|
| Outlook A | 23,965 | 23,971 | 23,900 | 23,705 |
| Outlook B | 23,965 | 24,046 | 24,083 | 24,041 |
| Outlook C | 23,965 | 24,048 | 24,088 | 24,108 |
| Outlook D | 23,965 | 24,048 | 24,088 | 24,166 |

Ontario Net Winter Peak Demand across Demand Outlooks

| Winter Peak Demand (MW) | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|
| Outlook A | 22,159 | 22,093 | 22,020 | 21,825 |
| Outlook B | 22,159 | 22,140 | 22,143 | 22,072 |
| Outlook C | 22,159 | 22,190 | 22,251 | 22,315 |
| Outlook D | 22,159 | 22,190 | 22,251 | 22,385 |

| Net Summer minus Net Winter Peak | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|
| Outlook A | 1,806 | 1,878 | 1,880 | 1,880 |
| Outlook B | 1,806 | 1,906 | 1,939 | 1,969 |
| Outlook C | 1,806 | 1,859 | 1,838 | 1,794 |
| Outlook D | 1,806 | 1,859 | 1,838 | 1,781 |

At Generator Level. Net of policy driven conservation including codes and standards

| 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|
| 138.9 | 137.7 | 136.1 | 135.0 | 134.1 | 133.5 | 132.5 | 131.7 |
| 142.2 | 142.2 | 141.7 | 141.6 | 141.5 | 141.7 | 141.5 | 141.2 |
| 144.2 | 145.1 | 145.6 | 146.6 | 147.7 | 149.3 | 150.4 | 151.7 |
| 145.3 | 146.9 | 148.1 | 149.9 | 151.9 | 154.4 | 156.5 | 158.8 |

| 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|
| 23,465 | 23,216 | 23,029 | 22,879 | 22,777 | 22,628 | 22,568 | 22,453 |
| 23,993 | 23,916 | 23,889 | 23,881 | 23,890 | 23,868 | 23,918 | 23,882 |
| 24,124 | 24,112 | 24,152 | 24,216 | 24,298 | 24,353 | 24,486 | 24,549 |
| 24,242 | 24,291 | 24,393 | 24,520 | 24,667 | 24,788 | 24,987 | 25,446 |

| 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|
| 21,574 | 21,338 | 21,143 | 20,976 | 20,864 | 20,694 | 20,602 | 20,483 |
| 21,985 | 21,898 | 21,841 | 21,799 | 21,778 | 21,718 | 21,718 | 21,659 |
| 22,395 | 22,501 | 22,661 | 22,863 | 23,105 | 23,326 | 23,626 | 23,911 |
| 22,560 | 22,783 | 23,083 | 23,442 | 23,862 | 24,273 | 24,779 | 24,742 |

| 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|
| 1,891 | 1,878 | 1,886 | 1,903 | 1,913 | 1,934 | 1,966 | 1,971 |
| 2,007 | 2,018 | 2,048 | 2,082 | 2,113 | 2,149 | 2,200 | 2,223 |
| 1,729 | 1,612 | 1,491 | 1,353 | 1,193 | 1,027 | 859 | 638 |
| 1,682 | 1,508 | 1,311 | 1,078 | 806 | 515 | 208 | 704 |

| 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
|---|---|---|---|---|---|---|---|
| 131.2 | 131.0 | 130.8 | 130.7 | 130.7 | 131.0 | 131.5 | 132.3 |
| 141.5 | 142.1 | 142.4 | 142.8 | 143.3 | 144.0 | 145.0 | 146.3 |
| 153.5 | 155.9 | 158.0 | 160.5 | 163.1 | 166.2 | 169.4 | 173.1 |
| 161.7 | 165.3 | 168.6 | 172.4 | 176.3 | 181.0 | 185.6 | 191.0 |

| 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
|---|---|---|---|---|---|---|---|
| 22,372 | 22,295 | 22,292 | 22,258 | 22,231 | 22,198 | 22,317 | 22,436 |
| 23,918 | 23,940 | 24,030 | 24,082 | 24,133 | 24,171 | 24,369 | 24,568 |
| 24,680 | 24,804 | 25,049 | 25,550 | 26,022 | 26,199 | 26,551 | 26,902 |
| 25,921 | 26,124 | 26,410 | 26,667 | 26,937 | 27,197 | 27,633 | 28,071 |

| 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
|---|---|---|---|---|---|---|---|
| 20,394 | 20,315 | 20,316 | 20,295 | 20,282 | 20,260 | 20,375 | 20,488 |
| 21,668 | 21,672 | 21,746 | 21,794 | 21,844 | 21,875 | 22,052 | 22,229 |
| 24,265 | 24,633 | 24,513 | 25,085 | 25,695 | 26,330 | 27,185 | 28,144 |
| 25,492 | 26,277 | 27,226 | 28,296 | 29,451 | 30,683 | 32,158 | 33,716 |

| 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
|---|---|---|---|---|---|---|---|
| 1,978 | 1,979 | 1,976 | 1,963 | 1,948 | 1,938 | 1,942 | 1,949 |
| 2,249 | 2,268 | 2,284 | 2,288 | 2,289 | 2,296 | 2,317 | 2,339 |
| 415 | 171 | 536 | 465 | 327 | (131) | (634) | (1,242) |
| 429 | (153) | (816) | (1,629) | (2,513) | (3,486) | (4,525) | (5,645) |

| 2035 |
|---|
| 133.4 |
| 147.8 |
| 177.1 |
| 196.7 |

| 2035 |
|---|
| 22,586 |
| 24,792 |
| 27,276 |
| 28,532 |

| 2035 |
|---|
| 20,622 |
| 22,422 |
| 29,167 |
| 35,379 |

| 2035 |
|---|
| 1,964 |
| 2,369 |
| (1,891) |
| (6,847) |

Table 1: Assumptions across Demand Outlooks

| Sector | Outlook A | Outlook B |
|---|---|---|
| Residential (52 TWh in 2015) | 48 TWh in 2035 | 51 TWh in 2035 |
| Commercial (51 TWh in 2015) | 49 TWh in 2035 | 54 TWh in 2035 |
| Industrial (35 TWh in 2015) | 29 TWh in 2035 | 35 TWh in 2035 |
| Electric Vehicles (<1 TWh in 2015) | 2 TWh in 2035 | 3 TWh in 2035 |
| Transit (<1 TWh in 2015) | 1 TWh in 2035 | 1 TWh in 2035 |
| Other* | 5 TWh | 5 TWh |
| Total** (143 TWh in 2015) | 133 TWh in 2035 | 148 TWh in 2035 |

* Others = Agriculture, Remote Communities, Generator Demand, IEI, and S

** At Generator Level. Total may not add up due to rounding

| Outlook C | Outlook D |
|---|---|
| Oil heating switches to heat pumps, electric space and water heating gain 25% of gas market share (58 TWh in 2035) | Oil heating switches to heat pumps, electric space and water heating gain 50% of gas market share (64TWh in 2035) |
| Oil heating switches to heat pumps, electric space and water heating gain 25% of gas market share (63 TWh in 2035) | Oil heating switches to heat pumps, electric space and water heating gain 50% of gas market share (69 TWh in 2035) |
| 5% of 2012 fossil energy switches to electric equivalent (43 TWh in 2035) | 10% of 2012 fossil energy switches to electric equivalent (51 TWh in 2035) |
| 2.4 million electric vehicles (EVs) by 2035 (8 TWh in 2035) | 2.4 million EVs by 2035 (8 TWh in 2035) |
| Planned projects, 2017-2035 (1 TWh in 2035) | Planned projects, 2017-2035 (1 TWh in 2035) |
| 5 TWh | 5 TWh |
| 177 TWh in 2035 | 197 TWh in 2035 |

Street Lighting

Ontario Net Electricity Demand by Sector, TWh

| Residential Net Energy (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 52.1 | 51.5 | 51.8 | 51.3 | 51.1 |
| Outlook B | 52.1 | 51.6 | 52.0 | 51.6 | 51.6 |
| Outlook C | 52.1 | 51.6 | 52.0 | 51.7 | 51.8 |
| Outlook D | 52.1 | 51.6 | 52.0 | 51.8 | 51.9 |

| Commercial Net Energy (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 51.3 | 51.2 | 51.5 | 51.0 | 50.6 |
| Outlook B | 51.3 | 51.5 | 52.1 | 51.8 | 51.7 |
| Outlook C | 51.3 | 51.6 | 52.4 | 52.3 | 52.4 |
| Outlook D | 51.3 | 51.6 | 52.4 | 52.4 | 52.5 |

| Industrial Net Energy (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 34.7 | 35.3 | 34.1 | 33.8 | 32.8 |
| Outlook B | 34.7 | 35.3 | 34.4 | 34.6 | 34.4 |
| Outlook C | 34.7 | 35.3 | 34.4 | 35.0 | 35.3 |
| Outlook D | 34.7 | 35.3 | 34.4 | 35.5 | 36.1 |

| Transportation (EVs and Transit) Net Energy (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 |
| Outlook B | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 |
| Outlook C | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 |
| Outlook D | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 |

| Other Net Energy (TWh)* | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 5.0 | 5.0 | 5.1 | 5.2 | 5.2 |
| Outlook B | 5.0 | 5.0 | 5.1 | 5.2 | 5.2 |
| Outlook C | 5.0 | 5.0 | 5.1 | 5.2 | 5.2 |
| Outlook D | 5.0 | 5.0 | 5.1 | 5.2 | 5.2 |

* Others = Agriculture, Remote Communities, Generator Demand, IEI, and Street Lighting

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50.6 | 49.9 | 49.4 | 49.0 | 48.5 | 48.1 | 47.9 | 47.8 | 47.7 | 47.7 | 47.7 | 47.8 |
| 51.3 | 50.8 | 50.3 | 50.1 | 49.7 | 49.5 | 49.4 | 49.3 | 49.3 | 49.4 | 49.5 | 49.7 |
| 51.7 | 51.4 | 51.2 | 51.3 | 51.2 | 51.4 | 51.7 | 52.1 | 52.6 | 53.2 | 53.8 | 54.5 |
| 51.9 | 51.7 | 51.7 | 52.0 | 52.2 | 52.7 | 53.3 | 54.1 | 54.9 | 55.9 | 57.0 | 58.2 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50.0 | 49.6 | 49.4 | 49.5 | 49.4 | 49.4 | 49.2 | 49.0 | 48.9 | 48.8 | 48.5 | 48.4 |
| 51.3 | 51.2 | 51.3 | 51.5 | 51.6 | 51.9 | 51.9 | 51.9 | 52.0 | 52.1 | 52.1 | 52.1 |
| 52.4 | 52.6 | 53.0 | 53.7 | 54.2 | 54.8 | 55.3 | 55.7 | 56.3 | 56.9 | 57.5 | 58.1 |
| 52.7 | 53.0 | 53.6 | 54.5 | 55.2 | 56.1 | 56.8 | 57.6 | 58.5 | 59.5 | 60.4 | 61.6 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 32.2 | 31.8 | 31.2 | 30.4 | 29.8 | 29.4 | 28.8 | 28.4 | 28.0 | 28.0 | 28.0 | 27.9 |
| 34.6 | 34.8 | 34.8 | 34.3 | 34.1 | 34.1 | 33.6 | 33.7 | 33.5 | 33.6 | 33.8 | 33.8 |
| 35.9 | 36.5 | 37.0 | 37.0 | 37.2 | 37.6 | 37.6 | 38.0 | 38.3 | 38.9 | 39.5 | 40.0 |
| 37.2 | 38.3 | 39.2 | 39.6 | 40.3 | 41.1 | 41.5 | 42.4 | 43.1 | 44.2 | 45.2 | 46.1 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.2 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.3 | 1.5 | 1.7 | 1.8 | 2.0 | 2.1 |
| 0.3 | 0.6 | 0.8 | 1.1 | 1.4 | 1.6 | 1.9 | 2.1 | 2.4 | 2.7 | 2.9 | 3.2 |
| 0.3 | 0.6 | 0.9 | 1.3 | 1.6 | 2.0 | 2.6 | 3.1 | 3.8 | 4.4 | 5.1 | 5.9 |
| 0.3 | 0.6 | 0.9 | 1.3 | 1.6 | 2.0 | 2.6 | 3.1 | 3.8 | 4.4 | 5.1 | 5.9 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |
| 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |
| 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |
| 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 47.7 | 48.0 | 48.2 | 48.5 |
| 49.7 | 50.1 | 50.4 | 50.8 |
| 55.1 | 56.1 | 57.1 | 58.1 |
| 59.2 | 60.8 | 62.3 | 63.8 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 48.2 | 48.5 | 48.7 | 49.1 |
| 52.2 | 52.7 | 53.2 | 53.7 |
| 58.9 | 60.1 | 61.4 | 62.8 |
| 62.9 | 64.7 | 66.6 | 68.7 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 28.0 | 28.1 | 28.4 | 28.8 |
| 33.9 | 34.1 | 34.5 | 34.9 |
| 40.5 | 41.1 | 41.9 | 42.8 |
| 47.0 | 48.2 | 49.4 | 50.7 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 2.3 | 2.4 | 2.5 | 2.6 |
| 3.4 | 3.6 | 3.8 | 3.9 |
| 6.6 | 7.4 | 8.1 | 8.7 |
| 6.6 | 7.4 | 8.1 | 8.7 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 5.4 | 5.5 | 5.5 | 5.5 |
| 5.4 | 5.5 | 5.5 | 5.5 |
| 5.4 | 5.5 | 5.5 | 5.5 |
| 5.4 | 5.5 | 5.5 | 5.5 |

Assumptions of economic drivers underlying electricity demand outlooks

| Driver | 2005-2015 | |
|---|---|---|
| | **Outlook A** | **Outlooks B,C,D** |
| Growth in number of residential households | 15% | 15% |
| Growth in commercial floor space | 20% | 20% |
| Ontario Industrial GDP (annual growth rate) | 2% | -2% |

| 2015-2025 | | 2025-2035 | |
|---|---|---|---|
| **Outlook A** | **Outlooks B,C,D** | **Outlook A** | **Outlooks B,C,D** |
| 11% | 14% | 7% | 9% |
| 10% | 15% | 8% | 11% |
| 0% | 1% | 1% | 1% |

Residential Net Energy Demand and Monthly Intensity 2015-2035: Outlooks A,B,C,D

| Residential Net Energy (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 52.1 | 51.5 | 51.8 | 51.3 | 51.1 |
| Outlook B | 52.1 | 51.6 | 52.0 | 51.6 | 51.6 |
| Outlook C | 52.1 | 51.6 | 52.0 | 51.7 | 51.8 |
| Outlook D | 52.1 | 51.6 | 52.0 | 51.8 | 51.9 |

| Residential Intensity (kWh/HH/month) | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 753 | 735 | 729 | 713 | 703 |
| Outlook B | 753 | 735 | 729 | 713 | 702 |
| Outlook C | 753 | 735 | 730 | 714 | 705 |
| Outlook D | 753 | 735 | 730 | 715 | 707 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|
| 50.6 | 49.9 | 49.4 | 49.0 | 48.5 | 48.1 | 47.9 | 47.8 | 47.7 | 47.7 | 47.7 |
| 51.3 | 50.8 | 50.3 | 50.1 | 49.7 | 49.5 | 49.4 | 49.3 | 49.3 | 49.4 | 49.5 |
| 51.7 | 51.4 | 51.2 | 51.3 | 51.2 | 51.4 | 51.7 | 52.1 | 52.6 | 53.2 | 53.8 |
| 51.9 | 51.7 | 51.7 | 52.0 | 52.2 | 52.7 | 53.3 | 54.1 | 54.9 | 55.9 | 57.0 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|
| 688 | 672 | 658 | 648 | 636 | 627 | 619 | 613 | 607 | 603 | 598 |
| 688 | 672 | 659 | 648 | 637 | 628 | 621 | 615 | 609 | 605 | 601 |
| 693 | 680 | 670 | 664 | 656 | 653 | 650 | 649 | 649 | 651 | 653 |
| 696 | 685 | 677 | 673 | 669 | 669 | 670 | 674 | 678 | 685 | 692 |

| 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|
| 47.8 | 47.7 | 48.0 | 48.2 | 48.5 |
| 49.7 | 49.7 | 50.1 | 50.4 | 50.8 |
| 54.5 | 55.1 | 56.1 | 57.1 | 58.1 |
| 58.2 | 59.2 | 60.8 | 62.3 | 63.8 |

| 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|
| 595 | 590 | 590 | 590 | 589 |
| 598 | 594 | 594 | 594 | 594 |
| 657 | 658 | 665 | 672 | 679 |
| 700 | 708 | 720 | 733 | 747 |

Total Housing Stock

| | 2015 |
|---|---|
| Multi Res High Rise | 23% |
| Multi Res Low Rise | 11% |
| Row House | 13% |
| Single Family | 53% |

New Housing Starts

| | 2020 | 2025 | 2030 |
|---|---|---|---|
| Multi Res High Rise | 27% | 26% | 27% |
| Multi Res Low Rise | 11% | 10% | 10% |
| Row House | 18% | 20% | 20% |
| Single Family | 44% | 43% | 42% |

| 2035 |
|---|
| 31% |
| 12% |
| 21% |
| 36% |

Residential Demand by End Use (TWh) 2015, 2025, 2035: Outlooks A,B,C,D

| Net Energy (TWh) | 2015 | 2025 | 2025 | 2025 | 2025 |
|---|---|---|---|---|---|
| | | A | B | C | D |
| AC Central | 3.1 | 2.9 | 3.0 | 3.0 | 3.0 |
| AC Room | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Clothes Dryers | 2.5 | 2.4 | 2.5 | 2.5 | 2.5 |
| Clothes Washers | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Computers | 1.1 | 1.2 | 1.3 | 1.3 | 1.3 |
| Cooking | 2.5 | 2.1 | 2.2 | 2.2 | 2.2 |
| Dehumidifiers | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Dishwashers | 0.5 | 0.4 | 0.5 | 0.5 | 0.5 |
| Domestic Hot Water | 4.1 | 3.2 | 3.3 | 3.8 | 4.2 |
| Elevators | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Forced Air Central Heating | 1.5 | 1.2 | 1.2 | 2.7 | 3.6 |
| Freezers | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| Lighting | 7.9 | 5.9 | 6.0 | 6.0 | 6.0 |
| Miscellaneous | 4.0 | 4.7 | 4.9 | 4.9 | 4.9 |
| Baseboard Heating | 6.8 | 5.8 | 5.9 | 5.9 | 5.9 |
| Other Consumer Electronics | 3.7 | 3.9 | 4.1 | 4.1 | 4.1 |
| Refrigerators | 4.3 | 4.3 | 4.4 | 4.4 | 4.4 |
| Set Top Boxes | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 |
| Space Heating Room | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Swimming Pool Pumps | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| Televisions | 2.4 | 2.8 | 2.9 | 2.9 | 2.9 |
| Ventilation And Circulation | 3.1 | 2.5 | 2.6 | 2.6 | 2.6 |

| 2035 | 2035 | 2035 | 2035 |
|---|---|---|---|
| A | B | C | D |
| 2.9 | 3.0 | 3.0 | 3.0 |
| 0.5 | 0.5 | 0.5 | 0.5 |
| 2.1 | 2.2 | 2.2 | 2.2 |
| 0.3 | 0.3 | 0.3 | 0.3 |
| 1.3 | 1.4 | 1.4 | 1.4 |
| 2.2 | 2.3 | 2.3 | 2.3 |
| 0.4 | 0.4 | 0.4 | 0.4 |
| 0.5 | 0.5 | 0.5 | 0.5 |
| 3.1 | 3.3 | 5.6 | 7.9 |
| 0.2 | 0.2 | 0.2 | 0.2 |
| 1.3 | 1.5 | 6.4 | 9.9 |
| 1.7 | 1.8 | 1.8 | 1.8 |
| 4.7 | 4.9 | 4.9 | 4.9 |
| 5.5 | 5.8 | 5.8 | 5.8 |
| 5.5 | 5.7 | 5.7 | 5.7 |
| 4.6 | 4.8 | 4.8 | 4.8 |
| 4.6 | 4.6 | 4.6 | 4.6 |
| 0.9 | 0.9 | 0.9 | 0.9 |
| 0.1 | 0.1 | 0.1 | 0.1 |
| 0.6 | 0.6 | 0.6 | 0.6 |
| 3.3 | 3.5 | 3.5 | 3.5 |
| 2.2 | 2.5 | 2.5 | 2.5 |

| Residential Space Heating Total Stock Shares | | | | |
|---|---|---|---|---|
| **Year** | **Outlook A** | **Outlook B** | **Outlook C** | **Outlook D** |
| 2015 | 18% | 18% | 18% | 18% |
| 2020 | 18% | 18% | 19% | 19% |
| 2025 | 17% | 17% | 22% | 24% |
| 2030 | 17% | 17% | 26% | 32% |
| 2035 | 17% | 17% | 31% | 42% |

| Residential Space Heating New Stock Turnover Shares | | | | |
|---|---|---|---|---|
| **Year** | **Outlook A** | **Outlook B** | **Outlook C** | **Outlook D** |
| 2015 | 14% | 14% | 14% | 14% |
| 2020 | 16% | 16% | 22% | 26% |
| 2025 | 17% | 17% | 30% | 38% |
| 2030 | 17% | 17% | 36% | 50% |
| 2035 | 17% | 17% | 41% | 60% |

**Residential Water Heating Total Stock Shares**

| Year | Outlook A | Outlook B | Outlook C | Outlook D |
|---|---|---|---|---|
| 2015 | 23% | 23% | 23% | 23% |
| 2020 | 20% | 20% | 21% | 21% |
| 2025 | 19% | 19% | 22% | 24% |
| 2030 | 19% | 19% | 26% | 32% |
| 2035 | 19% | 19% | 32% | 45% |

**Residential Water Heating New Stock Turnover Shares**

| Year | Outlook A | Outlook B | Outlook C | Outlook D |
|---|---|---|---|---|
| 2015 | 19% | 19% | 19% | 19% |
| 2020 | 19% | 19% | 22% | 26% |
| 2025 | 19% | 19% | 28% | 37% |
| 2030 | 19% | 19% | 34% | 48% |
| 2035 | 19% | 20% | 40% | 60% |

| | Residential Space Heating Additional Heat Pump Sales in the Year Indicated | | | |
|---|---|---|---|---|
| **Year** | **Outlook A** | **Outlook B** | **Outlook C** | **Outlook D** |
| 2015 | - | - | - | - |
| 2020 | 5,887 | 7,500 | 30,553 | 43,624 |
| 2025 | 7,640 | 10,000 | 66,824 | 104,707 |
| 2030 | 8,156 | 10,000 | 75,566 | 123,438 |
| 2035 | 7,725 | 10,000 | 92,221 | 157,607 |

| | Residential Water Heating Additional Heat Pump Sales in the Year Indicated | | | |
|---|---|---|---|---|
| **Year** | **Outlook A** | **Outlook B** | **Outlook C** | **Outlook D** |
| 2015 | - | - | - | - |
| 2020 | 5,887 | 7,500 | 22,690 | 37,879 |
| 2025 | 7,640 | 10,000 | 43,706 | 77,412 |
| 2030 | 8,156 | 10,000 | 79,871 | 149,742 |
| 2035 | 7,725 | 10,000 | 102,783 | 195,566 |

Commercial Net Energy Demand and Intensity 2015-2035: Outlooks A,B,C,D

| Commercial Net Energy (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 51.3 | 51.2 | 51.5 | 51.0 | 50.6 |
| Outlook B | 51.3 | 51.5 | 52.1 | 51.8 | 51.7 |
| Outlook C | 51.3 | 51.6 | 52.4 | 52.3 | 52.4 |
| Outlook D | 51.3 | 51.6 | 52.4 | 52.4 | 52.5 |

| Commercial Intensity (kWh/sq ft) | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Outlook A | 15.0 | 14.8 | 14.8 | 14.5 | 14.2 |
| Outlook B | 15.0 | 14.8 | 14.8 | 14.5 | 14.2 |
| Outlook C | 15.0 | 14.9 | 14.9 | 14.6 | 14.5 |
| Outlook D | 15.0 | 14.9 | 14.9 | 14.7 | 14.5 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|
| 50.0 | 49.6 | 49.4 | 49.5 | 49.4 | 49.4 | 49.2 | 49.0 | 48.9 | 48.8 | 48.5 |
| 51.3 | 51.2 | 51.3 | 51.5 | 51.6 | 51.9 | 51.9 | 51.9 | 52.0 | 52.1 | 52.1 |
| 52.4 | 52.6 | 53.0 | 53.7 | 54.2 | 54.8 | 55.3 | 55.7 | 56.3 | 56.9 | 57.5 |
| 52.7 | 53.0 | 53.6 | 54.5 | 55.2 | 56.1 | 56.8 | 57.6 | 58.5 | 59.5 | 60.4 |

| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|
| 13.9 | 13.7 | 13.5 | 13.4 | 13.3 | 13.2 | 13.0 | 12.9 | 12.7 | 12.6 | 12.5 |
| 14.0 | 13.7 | 13.6 | 13.5 | 13.4 | 13.3 | 13.1 | 13.0 | 12.9 | 12.7 | 12.6 |
| 14.2 | 14.1 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 13.9 | 13.9 | 13.9 | 13.9 |
| 14.3 | 14.2 | 14.2 | 14.2 | 14.3 | 14.3 | 14.4 | 14.4 | 14.5 | 14.5 | 14.6 |

| 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|
| 48.4 | 48.2 | 48.5 | 48.7 | 49.1 |
| 52.1 | 52.2 | 52.7 | 53.2 | 53.7 |
| 58.1 | 58.9 | 60.1 | 61.4 | 62.8 |
| 61.6 | 62.9 | 64.7 | 66.6 | 68.7 |

| 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|
| 12.3 | 12.2 | 12.2 | 12.1 | 12.1 |
| 12.5 | 12.4 | 12.3 | 12.3 | 12.3 |
| 13.9 | 13.9 | 14.1 | 14.2 | 14.4 |
| 14.7 | 14.9 | 15.2 | 15.4 | 15.8 |

Commercial Demand by End Use (TWh) 2015, 2025, 2035: Outlooks A,B,C,D

| Net Energy (TWh) | 2015 | 2025 | 2025 | 2025 | 2025 |
|---|---|---|---|---|---|
| | | A | B | C | D |
| Space Heating | 4.0 | 4.7 | 4.7 | 7.4 | 8.5 |
| Computer Equipment | 4.8 | 4.8 | 5.2 | 5.2 | 5.2 |
| Cooking | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 |
| Cooling Chillers | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 |
| Cooling DX | 3.6 | 3.5 | 3.6 | 3.6 | 3.6 |
| Domestic Hot Water | 0.8 | 0.4 | 0.4 | 0.7 | 0.8 |
| Elevators | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| HVAC Fans Pumps | 4.6 | 3.8 | 3.9 | 3.9 | 3.9 |
| Lighting | 18.7 | 17.9 | 19.0 | 19.0 | 19.0 |
| Miscellaneous Equipment | 4.9 | 5.4 | 5.7 | 5.7 | 5.7 |
| Other Plug Loads | 3.9 | 4.0 | 4.1 | 4.1 | 4.1 |
| Refrigeration | 3.9 | 3.0 | 3.0 | 3.0 | 3.0 |

| 2035 | 2035 | 2035 | 2035 |
|---|---|---|---|
| A | B | C | D |
| 5.0 | 5.1 | 13.3 | 18.6 |
| 4.7 | 5.4 | 5.4 | 5.4 |
| 0.8 | 0.8 | 0.8 | 0.8 |
| 1.0 | 1.1 | 1.1 | 1.1 |
| 3.4 | 3.8 | 3.8 | 3.8 |
| 0.4 | 0.4 | 1.3 | 1.9 |
| 0.3 | 0.3 | 0.3 | 0.3 |
| 3.3 | 3.6 | 3.6 | 3.6 |
| 17.6 | 19.6 | 19.6 | 19.6 |
| 5.9 | 6.6 | 6.6 | 6.6 |
| 4.0 | 4.2 | 4.2 | 4.2 |
| 2.6 | 2.7 | 2.7 | 2.7 |

Commercial Demand by Building Type (TWh) 2015, 2025, 2035: Outlooks A,B,C,D

| Net Energy (TWh) | 2015 | 2025 | 2025 | 2025 | 2025 |
|---|---|---|---|---|---|
| | | A | B | C | D |
| Food Retail | 3.0 | 2.4 | 2.4 | 2.5 | 2.5 |
| Hospital | 1.2 | 1.1 | 1.1 | 1.2 | 1.2 |
| Hotel | 1.8 | 1.8 | 1.8 | 1.9 | 1.9 |
| Non Food Retail | 7.3 | 6.7 | 6.7 | 7.1 | 7.3 |
| Office | 16.2 | 15.3 | 16.4 | 17.3 | 17.7 |
| Nursing Home | 2.1 | 1.9 | 1.9 | 2.1 | 2.1 |
| Other Commercial Buildings | 6.1 | 6.0 | 6.9 | 7.4 | 7.6 |
| Restaurant | 2.3 | 2.2 | 2.2 | 2.2 | 2.3 |
| Schools | 4.1 | 4.7 | 4.7 | 5.0 | 5.1 |
| University Colleges | 2.5 | 2.7 | 2.7 | 2.8 | 2.9 |
| Warehouse Wholesale | 4.8 | 4.6 | 5.0 | 5.4 | 5.6 |

| 2035 | 2035 | 2035 | 2035 |
|---|---|---|---|
| A | B | C | D |
| 2.3 | 2.3 | 2.5 | 2.6 |
| 1.1 | 1.1 | 1.3 | 1.4 |
| 1.9 | 1.9 | 2.2 | 2.4 |
| 6.5 | 6.5 | 7.6 | 8.3 |
| 14.7 | 16.7 | 19.5 | 21.3 |
| 1.9 | 1.9 | 2.3 | 2.5 |
| 5.9 | 7.7 | 9.1 | 10.0 |
| 2.3 | 2.3 | 2.4 | 2.5 |
| 5.1 | 5.1 | 6.1 | 6.7 |
| 2.9 | 2.9 | 3.3 | 3.6 |
| 4.5 | 5.3 | 6.7 | 7.6 |

| Commercial Space Heating Total Stock Shares | | | | |
|---|---|---|---|---|
| **Year** | **Outlook A** | **Outlook B** | **Outlook C** | **Outlook D** |
| 2015 | 10% | 10% | 10% | 10% |
| 2020 | 11% | 10% | 13% | 14% |
| 2025 | 11% | 11% | 18% | 21% |
| 2030 | 11% | 11% | 24% | 31% |
| 2035 | 11% | 11% | 31% | 45% |

| Commercial Space Heating New Stock Turnover Shares | | | | |
|---|---|---|---|---|
| **Year** | **Outlook A** | **Outlook B** | **Outlook C** | **Outlook D** |
| 2015 | 5% | 5% | 5% | 5% |
| 2020 | 7% | 6% | 16% | 19% |
| 2025 | 7% | 6% | 22% | 31% |
| 2030 | 7% | 6% | 28% | 44% |
| 2035 | 7% | 6% | 34% | 56% |

**Commercial Water Heating Total Stock Shares**

| Year | Outlook A | Outlook B | Outlook C | Outlook D |
|---|---|---|---|---|
| 2015 | 19% | 19% | 19% | 19% |
| 2020 | 18% | 17% | 20% | 21% |
| 2025 | 17% | 17% | 23% | 26% |
| 2030 | 17% | 17% | 28% | 35% |
| 2035 | 17% | 17% | 35% | 48% |

**Commercial Water Heating New Stock Turnover Shares**

| Year | Outlook A | Outlook B | Outlook C | Outlook D |
|---|---|---|---|---|
| 2015 | 15% | 15% | 15% | 15% |
| 2020 | 17% | 17% | 25% | 28% |
| 2025 | 16% | 16% | 30% | 38% |
| 2030 | 16% | 16% | 35% | 49% |
| 2035 | 17% | 17% | 41% | 61% |

| | Commercial Space Heating Heat Pump Square Footage Additions in the Year Indicated | | | |
|---|---|---|---|---|
| **Year** | **Outlook A** | **Outlook B** | **Outlook C** | **Outlook D** |
| 2015 | - | - | - | - |
| 2020 | - | - | 28,917,731 | 40,370,716 |
| 2025 | - | - | 36,385,313 | 59,503,277 |
| 2030 | - | - | 52,264,593 | 91,066,047 |
| 2035 | - | - | 79,774,867 | 143,930,226 |

| | Commercial Water Heating Heat Pump Square Footage Additions in the Year Indicated | | | |
|---|---|---|---|---|
| **Year** | **Outlook A** | **Outlook B** | **Outlook C** | **Outlook D** |
| 2015 | - | - | - | - |
| 2020 | - | - | 25,778,179 | 36,627,618 |
| 2025 | - | - | 33,119,019 | 55,128,367 |
| 2030 | - | - | 48,142,138 | 84,986,428 |
| 2035 | - | - | 73,905,731 | 134,580,833 |

Industrial Net Energy Demand and Intensity 2015-2035: Outlooks A,B,C,D

| Industrial Net Energy (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|
| Outlook A | 34.7 | 35.3 | 34.1 | 33.8 | 32.8 | 32.2 |
| Outlook B | 34.7 | 35.3 | 34.4 | 34.6 | 34.4 | 34.6 |
| Outlook C | 34.7 | 35.3 | 34.4 | 35.0 | 35.3 | 35.9 |
| Outlook D | 34.7 | 35.3 | 34.4 | 35.5 | 36.1 | 37.2 |

| Industrial Intensity (kWh/$07 GDP) | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|
| Outlook A | 0.39 | 0.40 | 0.38 | 0.38 | 0.38 | 0.37 |
| Outlook B | 0.39 | 0.40 | 0.38 | 0.38 | 0.37 | 0.37 |
| Outlook C | 0.39 | 0.40 | 0.38 | 0.39 | 0.38 | 0.39 |
| Outlook D | 0.39 | 0.40 | 0.38 | 0.39 | 0.39 | 0.40 |

| 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|
| 31.8 | 31.2 | 30.4 | 29.8 | 29.4 | 28.8 | 28.4 | 28.0 | 28.0 | 28.0 | 27.9 |
| 34.8 | 34.8 | 34.3 | 34.1 | 34.1 | 33.6 | 33.7 | 33.5 | 33.6 | 33.8 | 33.8 |
| 36.5 | 37.0 | 37.0 | 37.2 | 37.6 | 37.6 | 38.0 | 38.3 | 38.9 | 39.5 | 40.0 |
| 38.3 | 39.2 | 39.6 | 40.3 | 41.1 | 41.5 | 42.4 | 43.1 | 44.2 | 45.2 | 46.1 |

| 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.37 | 0.36 | 0.35 | 0.34 | 0.34 | 0.33 | 0.32 | 0.32 | 0.31 | 0.31 | 0.30 |
| 0.37 | 0.37 | 0.36 | 0.35 | 0.34 | 0.34 | 0.33 | 0.32 | 0.32 | 0.32 | 0.31 |
| 0.39 | 0.39 | 0.38 | 0.38 | 0.38 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 |
| 0.41 | 0.41 | 0.41 | 0.41 | 0.42 | 0.41 | 0.42 | 0.42 | 0.42 | 0.43 | 0.43 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 28.0 | 28.1 | 28.4 | 28.8 |
| 33.9 | 34.1 | 34.5 | 34.9 |
| 40.5 | 41.1 | 41.9 | 42.8 |
| 47.0 | 48.2 | 49.4 | 50.7 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 0.30 | 0.30 | 0.30 | 0.30 |
| 0.31 | 0.31 | 0.31 | 0.31 |
| 0.37 | 0.37 | 0.37 | 0.38 |
| 0.43 | 0.43 | 0.44 | 0.45 |

Industrial Demand by Subsector (TWh) 2015, 2025, 2035: Outlooks A,B,C,D

| Net Energy (TWh) | 2015 | 2025 | 2025 | 2025 | 2025 |
|---|---|---|---|---|---|
| | | A | B | C | D |
| Chemicals | 3.1 | 3.5 | 3.5 | 3.9 | 4.2 |
| Fabricated Metals | 1.9 | 1.9 | 1.9 | 2.1 | 2.3 |
| Food And Beverage | 2.3 | 2.3 | 2.3 | 2.5 | 2.8 |
| Mining | 6.5 | 5.7 | 7.4 | 8.1 | 8.9 |
| Transportation And Machinery | 3.3 | 1.8 | 3.0 | 3.3 | 3.6 |
| Miscellaneous Industrial | 3.6 | 3.9 | 4.0 | 4.4 | 4.9 |
| Non-Metallic Minerals | 1.4 | 1.2 | 1.2 | 1.3 | 1.4 |
| Paper Manufacturing | 2.8 | 1.1 | 2.1 | 2.3 | 2.6 |
| Petroleum Refineries | 1.8 | 1.8 | 1.8 | 2.0 | 2.2 |
| Plastic And Rubber | 2.2 | 2.0 | 2.0 | 2.2 | 2.5 |
| Primary Metals | 4.7 | 3.1 | 3.9 | 4.3 | 4.7 |
| Wood Products | 1.1 | 0.9 | 0.9 | 1.0 | 1.1 |

| 2035 | 2035 | 2035 | 2035 |
|---|---|---|---|
| A | B | C | D |
| 4.0 | 4.0 | 4.9 | 5.9 |
| 2.0 | 2.0 | 2.5 | 2.9 |
| 2.6 | 2.6 | 3.2 | 3.7 |
| 4.6 | 7.0 | 8.6 | 10.1 |
| 1.9 | 3.1 | 3.8 | 4.5 |
| 3.9 | 4.4 | 5.3 | 6.3 |
| 1.2 | 1.2 | 1.4 | 1.7 |
| 0.6 | 1.9 | 2.3 | 2.7 |
| 2.0 | 2.0 | 2.5 | 2.9 |
| 2.1 | 2.1 | 2.6 | 3.1 |
| 2.7 | 3.7 | 4.5 | 5.4 |
| 1.0 | 1.0 | 1.2 | 1.4 |

Forecasts for Transportation Electrification Demand

| Transportation Demand (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|
| Transit (A & B) | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 |
| Transit (C & D) | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 |
| EV (A) | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 |
| EV (B) | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 |
| EV (C & D) | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 |

| 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.2 | 0.3 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 0.2 | 0.3 | 0.5 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.8 | 1.0 | 1.1 | 1.3 | 1.5 | 1.6 |
| 0.3 | 0.5 | 0.7 | 0.9 | 1.1 | 1.3 | 1.6 | 1.9 | 2.1 | 2.4 | 2.6 |
| 0.4 | 0.6 | 0.8 | 1.1 | 1.5 | 2.0 | 2.5 | 3.1 | 3.8 | 4.5 | 5.2 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 0.5 | 0.5 | 0.5 | 0.5 |
| 0.6 | 0.6 | 0.6 | 0.6 |
| 1.7 | 1.8 | 2.0 | 2.0 |
| 2.8 | 3.0 | 3.2 | 3.4 |
| 6.0 | 6.7 | 7.4 | 8.1 |

Forecasts for Electric Vehicle Stock

| **Thousands of EVs** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** |
|---|---|---|---|---|---|---|---|
| Outlook A | 5 | 8 | 11 | 17 | 25 | 37 | 55 |
| Outlook B | 5 | 9 | 15 | 24 | 41 | 68 | 104 |
| Outlooks C & D | 5 | 9 | 15 | 24 | 41 | 68 | 109 |

| 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|---|---|---|---|---|---|---|---|---|---|---|
| 80 | 109 | 145 | 187 | 237 | 286 | 336 | 385 | 432 | 476 | 515 |
| 146 | 197 | 257 | 325 | 399 | 477 | 557 | 637 | 712 | 781 | 843 |
| 166 | 241 | 334 | 450 | 588 | 749 | 929 | 1126 | 1336 | 1554 | 1775 |

| 2033 | 2034 | 2035 |
|---|---|---|
| 549 | 579 | 605 |
| 902 | 955 | 1003 |
| 1993 | 2202 | 2401 |

Forecast for Agriculture

| Net Energy (TWh) | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|
| Agriculture | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |

| 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |

| 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|
| 1.9 | 1.9 | 1.9 | 1.9 |

| Load Factor | Outlook A | Outlook B | Outlook C | Outlook D |
|---|---|---|---|---|
| 2025 | 0.67 | 0.68 | 0.70 | 0.72 |
| 2035 | 0.67 | 0.68 | 0.69 | 0.63 |

Peak Contribution

| Peak Contribution (%) | Residential (non heat/AC) | Commercial (non heat/AC) |
|---|---|---|
| 2015 | 23% | 25% |
| 2035 - A | 22% | 25% |
| 2035 - B | 21% | 25% |
| 2035 - C | 22% | 16% |
| 2035 - D | 20% | 13% |

| Industrial | Residential heat | Residential cooling | Commercial heat | Commercial cooling |
|---|---|---|---|---|
| 16% | 0% | 17% | 0% | 18% |
| 14% | 0% | 17% | 0% | 18% |
| 15% | 0% | 16% | 0% | 18% |
| 17% | 14% | 0% | 24% | 0% |
| 17% | 15% | 0% | 29% | 0% |

| Transportation | Other |
|---|---|
| 0% | 2% |
| 2% | 2% |
| 2% | 2% |
| 4% | 3% |
| 3% | 3% |

| | |
|---|---|
| **From:** | Gavin He |
| **To:** | Ronald Kwan |
| **Cc:** | Emily Kerr; Francisco Chinchon; John Kim; Darren Scanlan |
| **Subject:** | RE: Potential Rate Mitigation |
| **Date:** | Wednesday, December 07, 2016 11:48:15 PM |

Hi Ron,

I have consolidated the comments from Francisco and Emily, and I have compared this to the markup version we provided to DMO and TBS. Below is the list of proposed edits that were not accepted:

- The charts on slide 8&9, the proposed total decrease/increase on bills impacts were not included.
- On slide 10, "before the planned ICI expansion" was not added to the end of the 3rd bullet point.
- On slide 13, the typo "OESB" was not fixed.
- On slide 24, the DRC charge "$0.007/kWh" was not corrected.
- Slide 25 – additional bullet points were added; however, our proposed edits were not accepted.
- On slide 29, our proposed bullet "As shown before the positive impact to residential ratepayers is very limited from the proposals with ratepayer impacts estimated by Energy…" was not included.
- Slide 33 & 34 are new, which include jurisdictional comparison charts.

Hope that helps.

Regards,
Gavin He

-----Original Message-----
From: Emily Kerr
Sent: Wednesday, December 07, 2016 11:01 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: RE: Potential Rate Mitigation

Hi,

Other than the addition of the fiscal slide the deck isn't significantly different from the previous version. There are a couple of additional slides in the appendix showing a jurisdictional comparison of industrial electricity prices (33) and industrial prices in Ontario by sector (34). On slide 24 (ending DRC for class B) the additional "0" in the DRC rate is still missing.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Wednesday, December 07, 2016 10:27 PM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: FW: Potential Rate Mitigation

Hi,

Comments?

Ron

-----Original Message-----
From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
Sent: December-07-16 7:10 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Elizabeth Mendes (MOF) <Elizabeth.Mendes@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
Subject: Fw: Potential Rate Mitigation

FYI - tomorrow's deck.

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: McLean, David (MOF) <David.McLean@ontario.ca>
Sent: Wednesday, December 7, 2016 6:56 PM
To: Pearce, Christopher (MOF); Young, Gwendolynne (MOF); Ize-Dukuze, Marilyn (MOF); Clarke-Darshanand, Jamille (MOF)
Subject: Fw: Potential Rate Mitigation

For MPC tomorrow

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
Sent: Wednesday, December 7, 2016 6:55 PM
To: Kwamena, Boafoa (CAB); McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB)
Subject: FW: Potential Rate Mitigation

FYI

From: Imbrogno, Serge (ENERGY)
Sent: December-07-16 6:51 PM
To: Orsini, Steve (CAB); Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: RE: Potential Rate Mitigation

HI,
Here's the latest version of the deck. We tried to incorporate comments from MOF / TBS. This version is with my MO for review but it will likely be the version we will use at Major Projects tomorrow. Keley can share with your EAs.
Serge

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

**From:** John Kim
**To:** Gavin He; Emily Kerr
**Subject:** RE: Potential Rate Mitigation
**Date:** Monday, December 05, 2016 9:38:45 PM

---

Sorry, I meant excluding residential….

---

**From:** John Kim
**Sent:** Monday, December 05, 2016 9:35 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi Emily,

Would you know the composition of Class B consumption from the total? Just wondering if you have that readily available….

Thanks,

John.

---

**From:** Gavin He
**Sent:** Monday, December 05, 2016 9:21 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** Fwd: Potential Rate Mitigation

Hi John/Emily,

Just forwarding the following up communications on this with you.

Regards,
Gavin He

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** December 5, 2016 at 21:18:37 EST
> **To:** Gadi Mayman <Gadi.Mayman@ofina.on.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, "Tim Schuurman (MOF)" <Tim.Schuurman@ontario.ca>, "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, Christina Zhang <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "David McLean (MOF)" <David.McLean@ontario.ca>
> **Subject: Re: Potential Rate Mitigation**
>
> Hi Gadi,

If you recall, we did that table a couple weeks ago on existing fiscally funded mitigation programs. We can suggest adding that in. And, as for the GGRA, I think one of the challenges is it was supposed to be for incremental measures to reduce GHGs (not replacing funding for existing measures. But, that said, that was notion I noodled on too, but it would require at least a change in positioning, convincing the Minister of MOECC, as the arbiter of such and/or change the legislation.

Ron

> On Dec 5, 2016, at 9:08 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:
>
> Big numbers, and I didn't in my scan through see much credit given to the fiscal sacrifices already made. Maybe those amounts could be added in the context section?
>
> Would any of the fiscal plan hits be eligible as offsets for our Cap and Trade revenues? I suppose because so little of our electricity production is carbon producing, probably not, but if ICI moves consumption off-peak does it reduce the need for gas plants to operate?
>
> And at least the idea of offsetting the federal portion of the HST is gone
>
> > On Dec 5, 2016, at 8:03 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
> >
> > Hi Chris,
> >
> > Will do.
> >
> > Ron
> >
> > > On Dec 5, 2016, at 8:02 PM, Pearce, Christopher (MOF) <Christopher.Pearce@ontario.ca> wrote:
> > >
> > > Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here.

Will share with MO shortly.

From: Katona, Keley (ENERGY)

Sent: December 5, 2016 7:44 PM

To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Potential Rate Mitigation

Hi,

See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?

If there are questions, I'm happy to discuss.

Thanks,

Keley

From: Imbrogno, Serge (ENERGY)

Sent: December-05-16 7:41 PM

To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)

Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Potential Rate Mitigation

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that Andrew T. plans to share with PO/your MOs.

Serge

<Price Mitigation Proposals_Dec5-16_v11.pptx>

**From:** John Kim
**To:** Gavin He; Emily Kerr
**Subject:** RE: Potential Rate Mitigation
**Date:** Monday, December 05, 2016 9:35:05 PM

---

Hi Emily,

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Thanks,

John.

---

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> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, "Tim Schuurman (MOF)" <Tim.Schuurman@ontario.ca>, "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, Christina Zhang <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "David McLean (MOF)" <David.McLean@ontario.ca>
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> > >
> > > From: Katona, Keley (ENERGY)
> > > Sent: December 5, 2016 7:44 PM
> > > To: McLean, David (MOF); MacIntyre,

Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Potential Rate Mitigation

Hi,

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Thanks,

Keley

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Sent: December-05-16 7:41 PM

To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)

Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Potential Rate Mitigation

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Serge

<Price Mitigation Proposals_Dec5-16_v11.pptx>

**From:** Emily Kerr
**To:** Ronald Kwan; Francisco Chinchon; John Kim; Darren Scanlan
**Cc:** Gavin He
**Subject:** RE: Potential Rate Mitigation
**Date:** Wednesday, December 07, 2016 11:00:46 PM

---

Hi,

Other than the addition of the fiscal slide the deck isn't significantly different from the previous version. There are a couple of additional slides in the appendix showing a jurisdictional comparison of industrial electricity prices (33) and industrial prices in Ontario by sector (34). On slide 24 (ending DRC for class B) the additional "0" in the DRC rate is still missing.

Emily

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Sent: Wednesday, December 07, 2016 10:27 PM
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Subject: FW: Potential Rate Mitigation

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Comments?

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To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Elizabeth Mendes (MOF) <Elizabeth.Mendes@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
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Subject: Fw: Potential Rate Mitigation

For MPC tomorrow

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To: Kwamena, Boafoa (CAB); McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB)
Subject: FW: Potential Rate Mitigation

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Sent: December-07-16 6:51 PM
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Subject: RE: Potential Rate Mitigation

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Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

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Serge

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon; John Kim; Emily Kerr; Darren Scanlan |
| **Cc:** | Gavin He |
| **Subject:** | RE: Potential Rate Mitigation |
| **Date:** | Tuesday, December 06, 2016 7:17:32 PM |
| **Attachments:** | Price Mitigation Proposals_Dec5-16_v11_CEFD_commented v6a.pptx<br>Price-Mitigation - CEFD Slides-Dec6-2016_v6.pptx |

---

And with a clean version of the summary deck.

Ron

---

**From:** Ronald Kwan
**Sent:** December-06-16 19:14
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi,

I made a few edits to the summary deck too, and to the table on slide 12 on the markup of the Energy deck.

Ron

---

**From:** Ronald Kwan
**Sent:** December-06-16 19:05
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi,

I adjusted the comments and annotations a little, and I`m inclined to send to both the DMO and Energy. I took out the debt comment on OPG borrowing, which I would not want to send to Energy.

Ron

---

**From:** Francisco Chinchon
**Sent:** December-06-16 18:23
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi Ron,

Following our discussion EFB updated the table.

Thanks,

Francisco

---

**From:** Francisco Chinchon
**Sent:** Tuesday, December 06, 2016 5:31 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi Ron,

Attached are three decks:

1. A markup of  Energy's deck to be shared with Energy.
2. A draft annotated version for the DMO/MO at MOF.
3. A draft summary deck.

John and I made several edits to the annotated version to make it more readable for the DMO. Hopefully we didn't misinterpret any of the comments received earlier today.

Thanks to everyone in the three branches for pulling this together on a very short time.

Francisco

---

**From:** Ronald Kwan
**Sent:** Monday, December 05, 2016 8:14 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** Fwd: Potential Rate Mitigation

Hi,

Lets meet in the morning to discuss.

We'll need a product for EOD. Could be an annotated slide deck, as well as a markup. Suggestion on any other formats?

Ron

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Date:** December 5, 2016 at 8:02:36 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
> **Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>
> **Subject: Fw: Potential Rate Mitigation**
>
> Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.
>
> From: Katona, Keley (ENERGY)
> Sent: December 5, 2016 7:44 PM
> To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)
> Subject: FW: Potential Rate Mitigation
>
> Hi,
>
> See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?
>
> If there are questions, I’m happy to discuss.
>
> Thanks,
> Keley
>
> From: Imbrogno, Serge (ENERGY)
> Sent: December-05-16 7:41 PM
> To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
> Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement ~~GEIA~~ renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

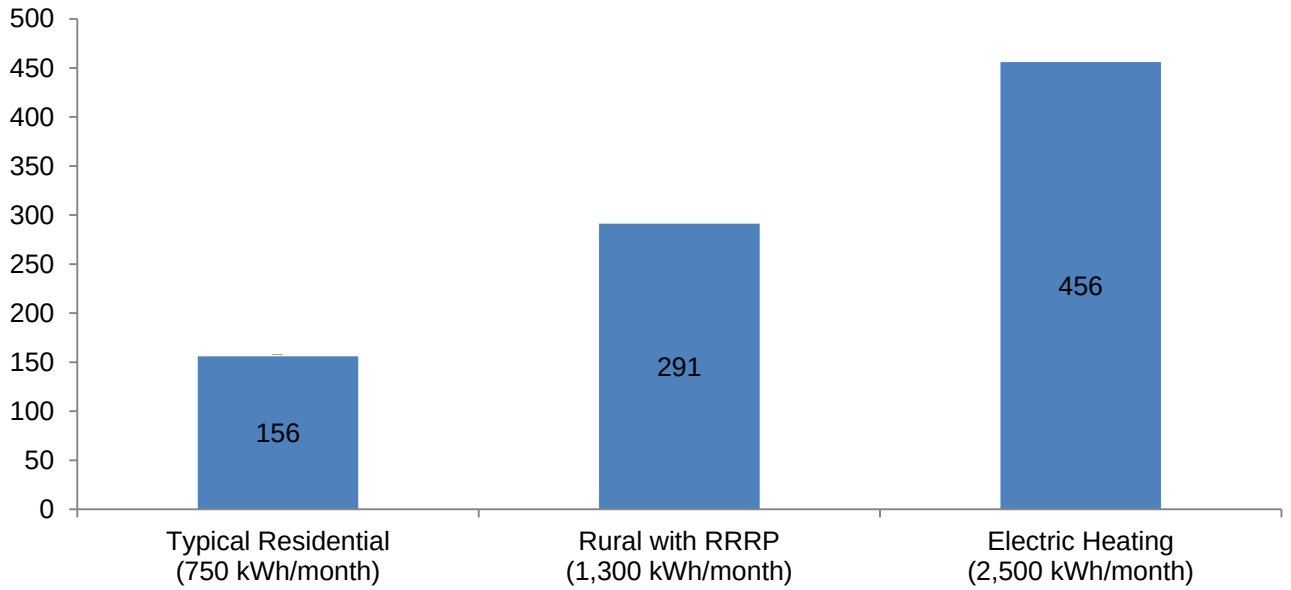
- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate before tax, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II) and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in costs; and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

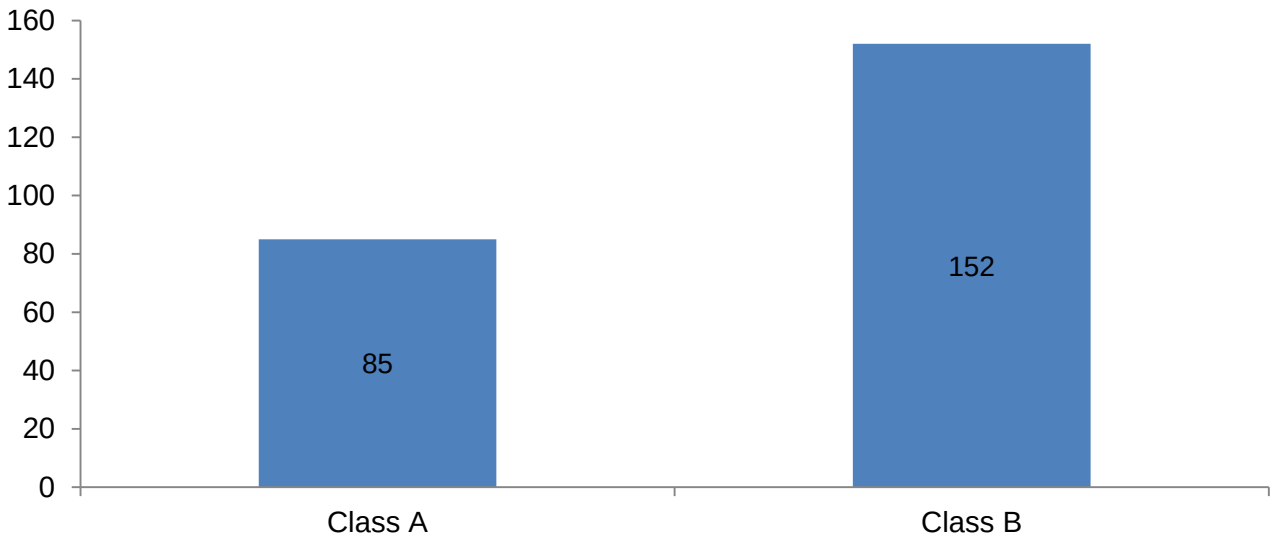



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Current Status on Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.5 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion and before considering any additional funding from the tax base.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how ~~government~~ electricity sector programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);¸(**NTD: If it provides system benefits, why not paid through the rate base)**
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total decrease on typical monthly bill** | **8.38** | **8.23** | **7.75** | **9.26** | **8.52** | **8.17** | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total increase on industrial bill** | **19.96** | **18.97** | **18.34** | **17.14** | **14.45** | **13.7** | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of about $450 million ~~[placeholder for OFA]~~ on the Province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan (before the planned ICI expansion).

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $30 ~~20 to $35~~ million annual fiscal pressure in 2017 to the province ~~[TBC by OPG / OFA]~~ based on new borrowing and increasing to about $70M by 2021.

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.
- A summary of the annual fiscal impacts of the proposed initiatives is presented in the next slide.

# Proposed Taxpayer Funded Electricity Price Mitigation

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+100 | 900+100 | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | TBD | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | -- | -- | -- |
| 8. Other | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,305** | **3,901** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above if various measures proposed in this deck were to be accepted, taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESBP) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.

- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.

- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.

- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

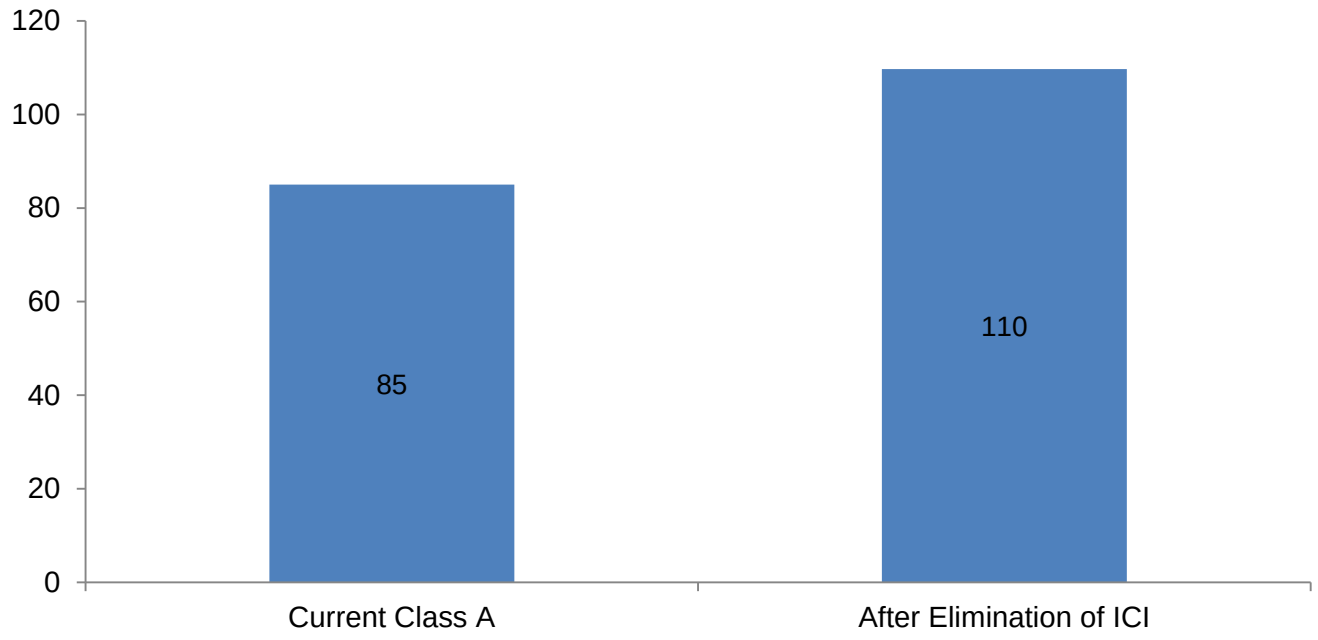
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

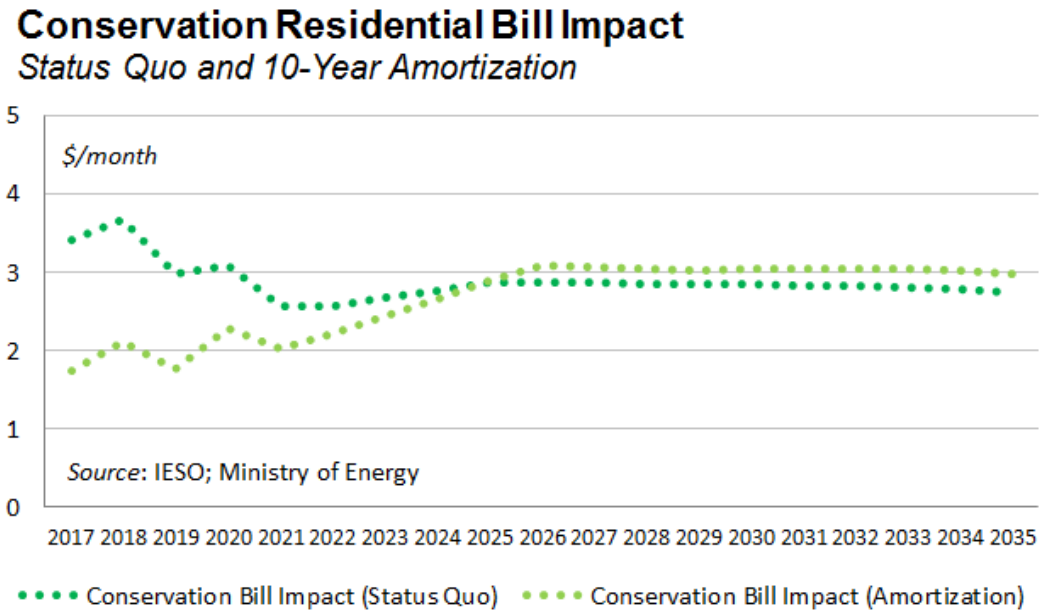
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.007/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), ~~to be~~ dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the pay down / defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

- As shown before the positive impact to residential ratepayers is very limited from the proposals with ratepayer impacts estimated by Energy (between $8 and $9 per month) while the impact to the Province's fiscal position would be material (about $1.2 to $1.5 billion a year). If additional proposals are also fiscally-funded, the fiscal cost could be substantially higher from, e.g., accounting treatment of conservation amortisation or a class B DRC exemption.

# Appendix

# Electricity Consumer Classes

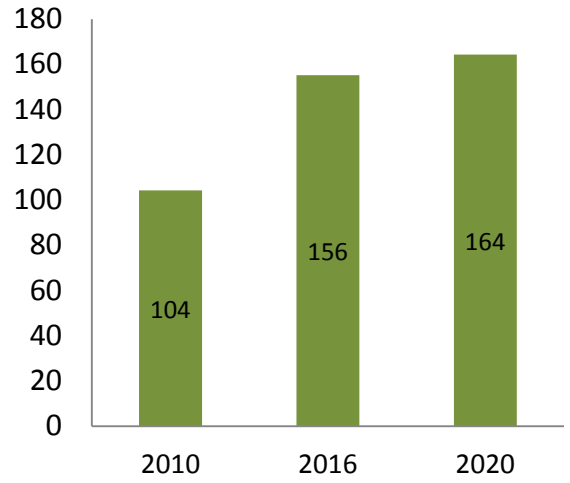
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

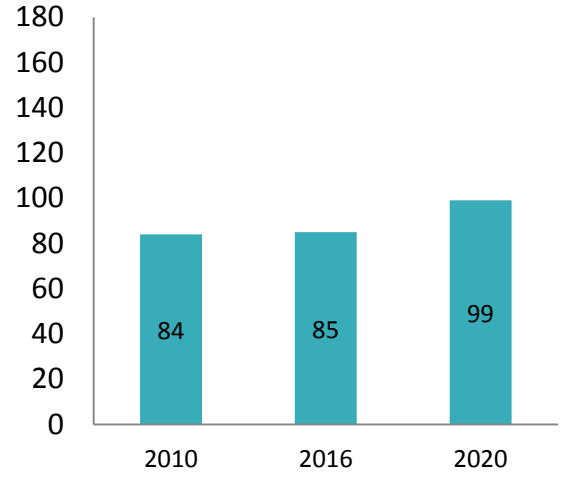
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

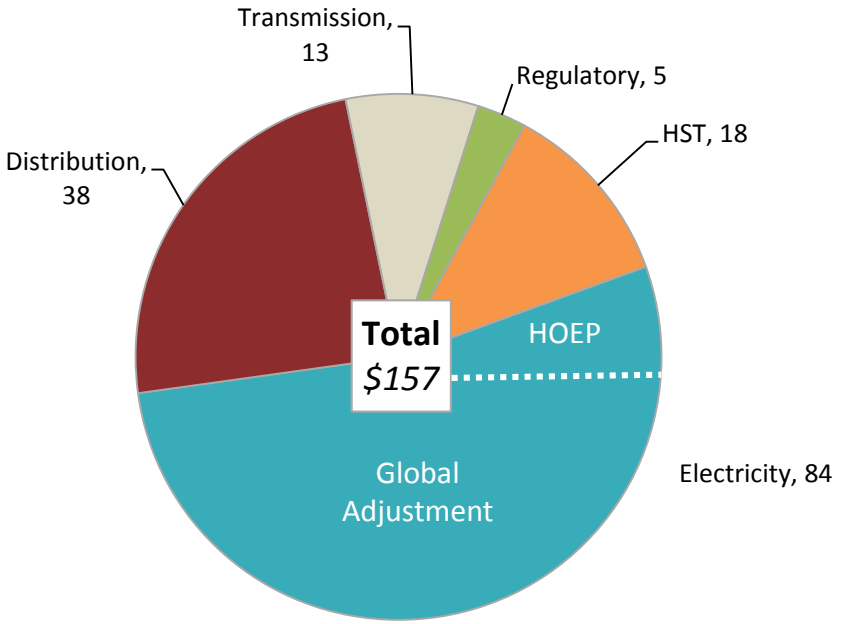
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



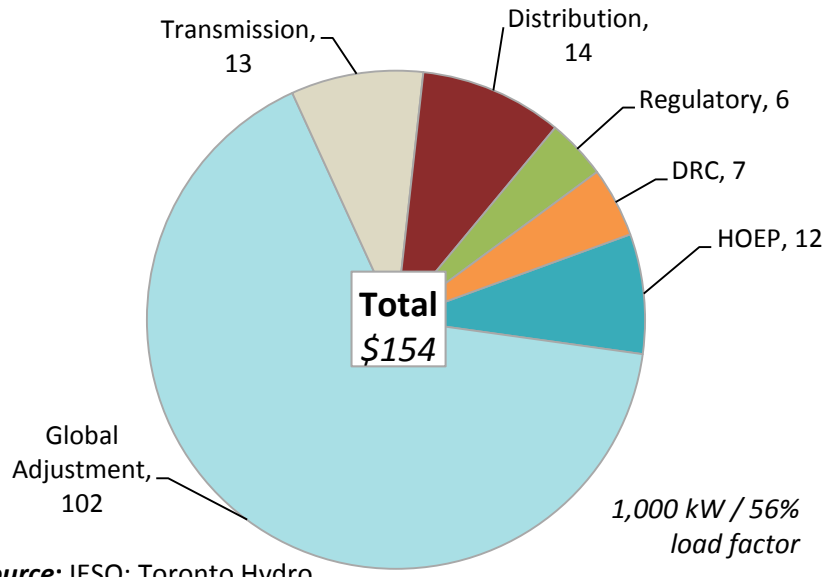

***Source*: OEB, Toronto Hydro**

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

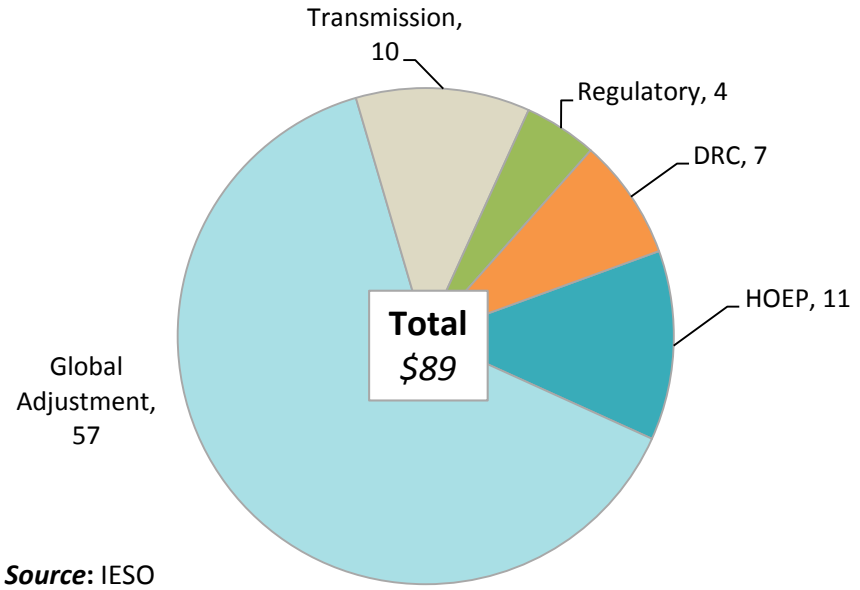
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



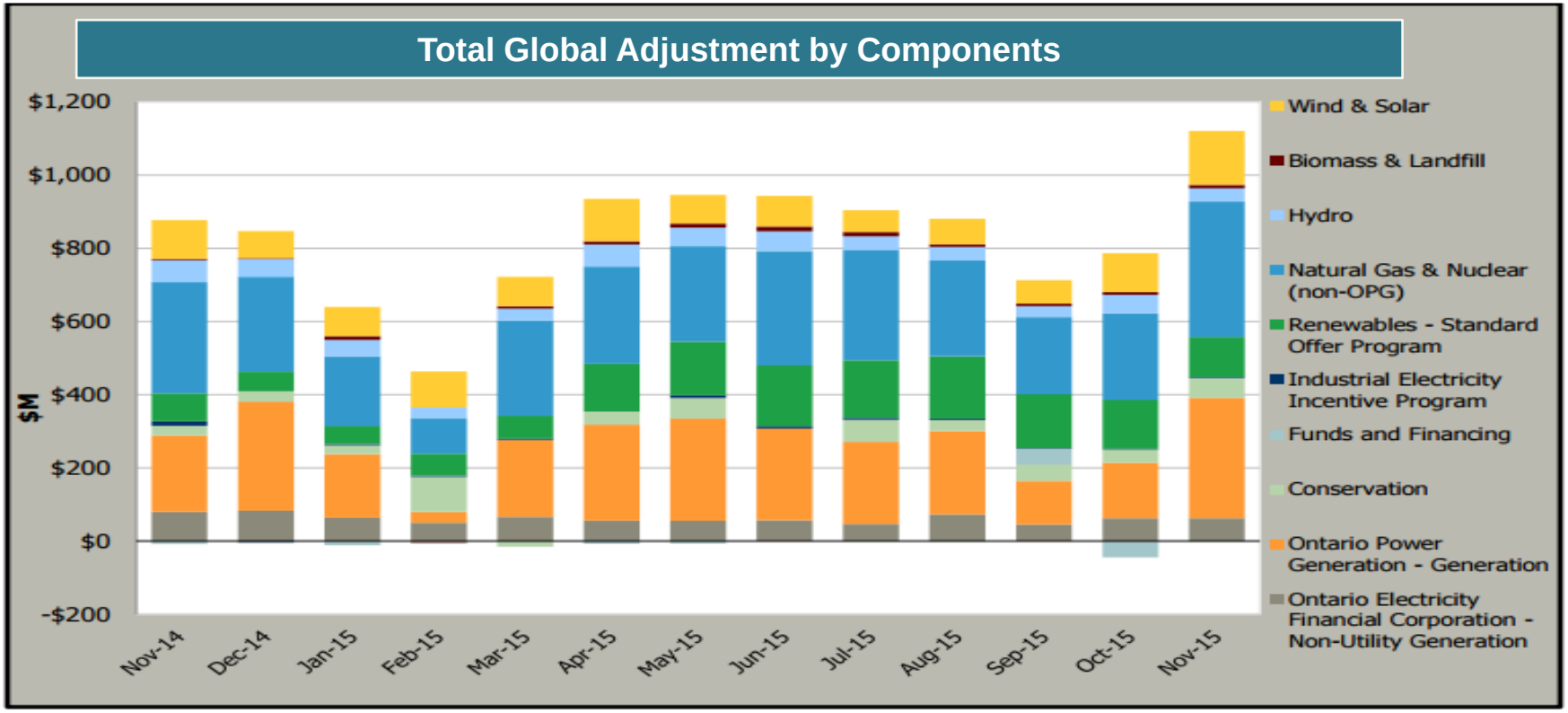

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

DRAFT

# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

DRAFT

# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost [about $1.3 – 1.9 plus bn per year in new fiscal costs].
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 billion in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time), with the total tax-based costs rising to about $3.3-3.9 plus billion in 2017-18, if Energy`s proposals are adopted.
  - These existing mitigation costs are not presented in Energy's deck.
  - Not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

DRAFT

# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

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Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded. They could be upwards of $2 bn/year, (plus the departure tax), which is not included in the fiscal plan, which would challenge the path to balance.

- OESP & RRRP (Total of about $0.4 Bn/yr): This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI -- About $900+ M/yr): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes that about 30% price increase (from $85/MWh to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
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  - This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
  - Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

- Other fiscal cost risks (Total of about $0.8+ Bn):
  - Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
  - Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
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  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

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# Proposed Taxpayer Funded Electricity Price Mitigation
(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| CURRENT TOTAL | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
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| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
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| 8. Other | | 30 | 45 | 60 | 70 |
| TOTAL | 1,305 | 3,901 | 3,197 | 3,237 | 3,261 |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18..
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | The government removed the DRC from residential electricity users' bills as of January 1, 2016. This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
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| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline: Taxpayer-funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

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*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

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# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon; John Kim; Emily Kerr; Darren Scanlan |
| **Cc:** | Gavin He |
| **Subject:** | RE: Potential Rate Mitigation |
| **Date:** | Tuesday, December 06, 2016 7:14:24 PM |
| **Attachments:** | Price-Mitigation - CEFD Slides-Dec6-2016_v5_Markup.pptx<br>Price Mitigation Proposals_Dec5-16_v11_CEFD_commented v6a.pptx |

Hi,

I made a few edits to the summary deck too, and to the table on slide 12 on the markup of the Energy deck.

Ron

---

**From:** Ronald Kwan
**Sent:** December-06-16 19:05
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi,

I adjusted the comments and annotations a little, and I`m inclined to send to both the DMO and Energy. I took out the debt comment on OPG borrowing, which I would not want to send to Energy.

Ron

---

**From:** Francisco Chinchon
**Sent:** December-06-16 18:23
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi Ron,

Following our discussion EFB updated the table.

Thanks,

Francisco

**From:** Francisco Chinchon
**Sent:** Tuesday, December 06, 2016 5:31 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi Ron,

Attached are three decks:

1. A markup of  Energy's deck to be shared with Energy.
2. A draft annotated version for the DMO/MO at MOF.
3. A draft summary deck.

John and I made several edits to the annotated version to make it more readable for the DMO. Hopefully we didn't misinterpret any of the comments received earlier today.

Thanks to everyone in the three branches for pulling this together on a very short time.

Francisco

---

**From:** Ronald Kwan
**Sent:** Monday, December 05, 2016 8:14 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** Fwd: Potential Rate Mitigation

Hi,

Lets meet in the morning to discuss.

We'll need a product for EOD. Could be an annotated slide deck, as well as a markup. Suggestion on any other formats?

Ron

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Date:** December 5, 2016 at 8:02:36 PM EST

**To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
**Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>
**Subject: Fw: Potential Rate Mitigation**

Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.

From: Katona, Keley (ENERGY)
Sent: December 5, 2016 7:44 PM
To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)
Subject: FW: Potential Rate Mitigation

Hi,

See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?

If there are questions, I'm happy to discuss.

Thanks,
Keley

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

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# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

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# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost [about $1.3 – 1.9 plus bn per year in new fiscal costs].
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 billion in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time), with the total tax-based costs rising to about $3.3-3.9 plus billion in 2017-18, if Energy`s proposals are adopted.
  - These existing mitigation costs are not presented in Energy's deck.
  - Not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

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# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
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*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

DRAFT

# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement ~~GEIA~~ renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

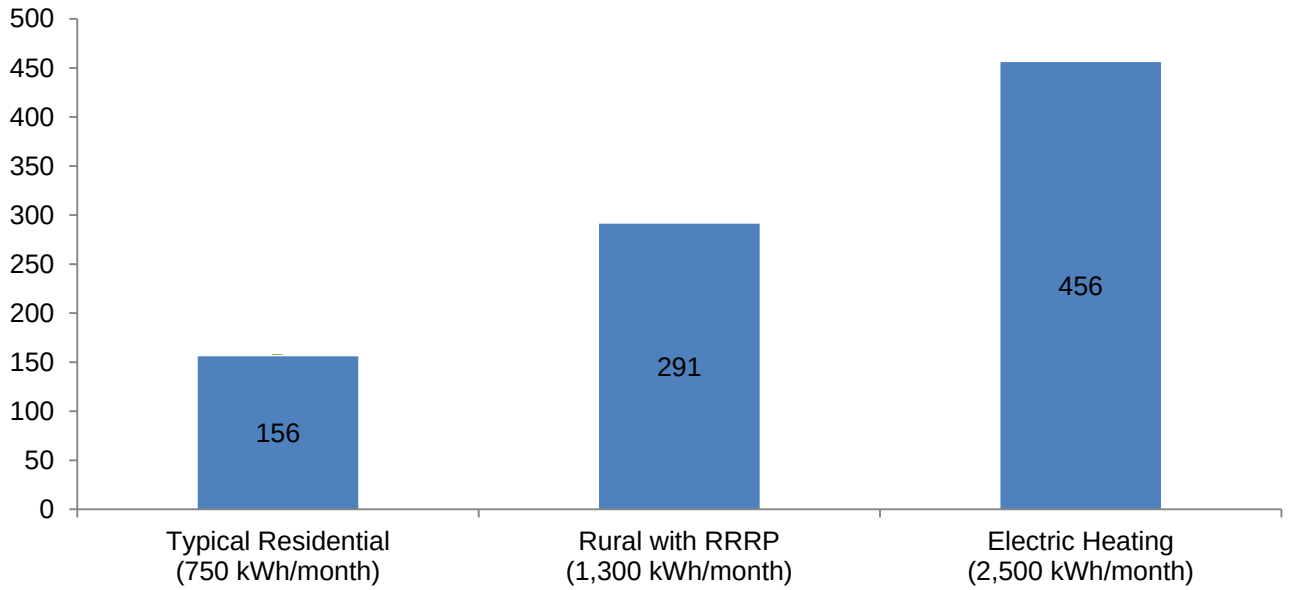
- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate before tax, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II) and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in costs; and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

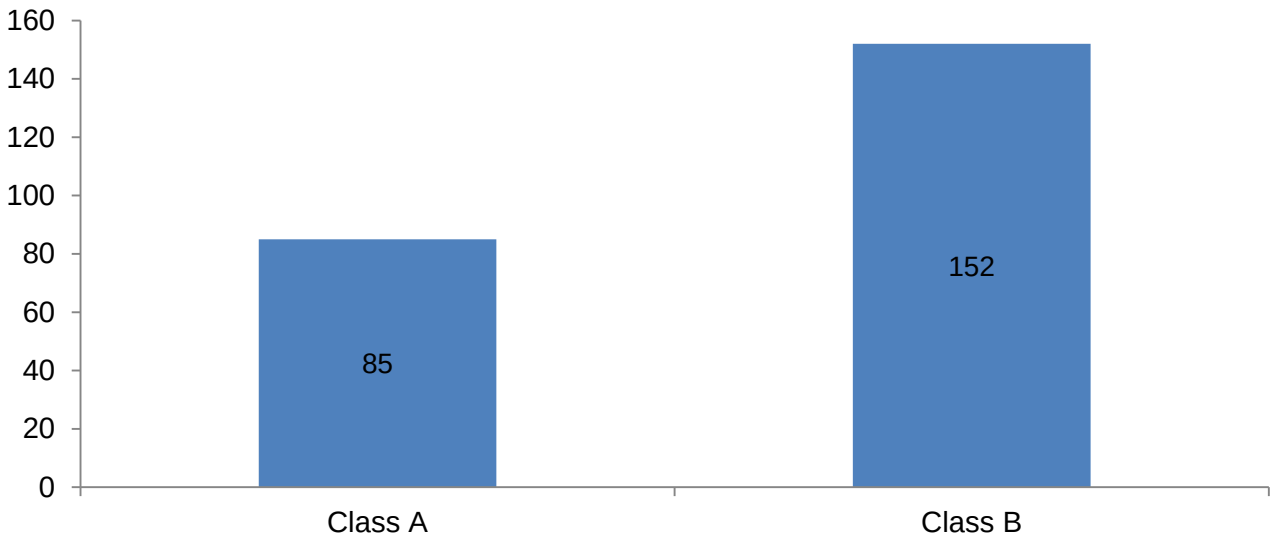



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Current Status on Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.5 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion and before considering any additional funding from the tax base.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how ~~government~~ electricity sector programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);¸(**NTD: If it provides system benefits, why not paid through the rate base)**
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total decrease on typical monthly bill** | **8.38** | **8.23** | **7.75** | **9.26** | **8.52** | **8.17** | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total increase on industrial bill** | **19.96** | **18.97** | **18.34** | **17.14** | **14.45** | **13.7** | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of about $450 million ~~[placeholder for OFA]~~ on the Province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan (before the planned ICI expansion).

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $30 ~~20 to $35~~ million annual fiscal pressure in 2017 to the province ~~[TBC by OPG / OFA]~~ based on new borrowing and increasing to about $70M by 2021.

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.
- A summary of the annual fiscal impacts of the proposed initiatives is presented in the next slide.

# Proposed Taxpayer Funded Electricity Price Mitigation

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+100 | 900+100 | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | TBD | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | -- | -- | -- |
| 8. Other | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,305** | **3,901** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above if various measures proposed in this deck were to be accepted, taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESBP) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.

- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.

- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.

- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

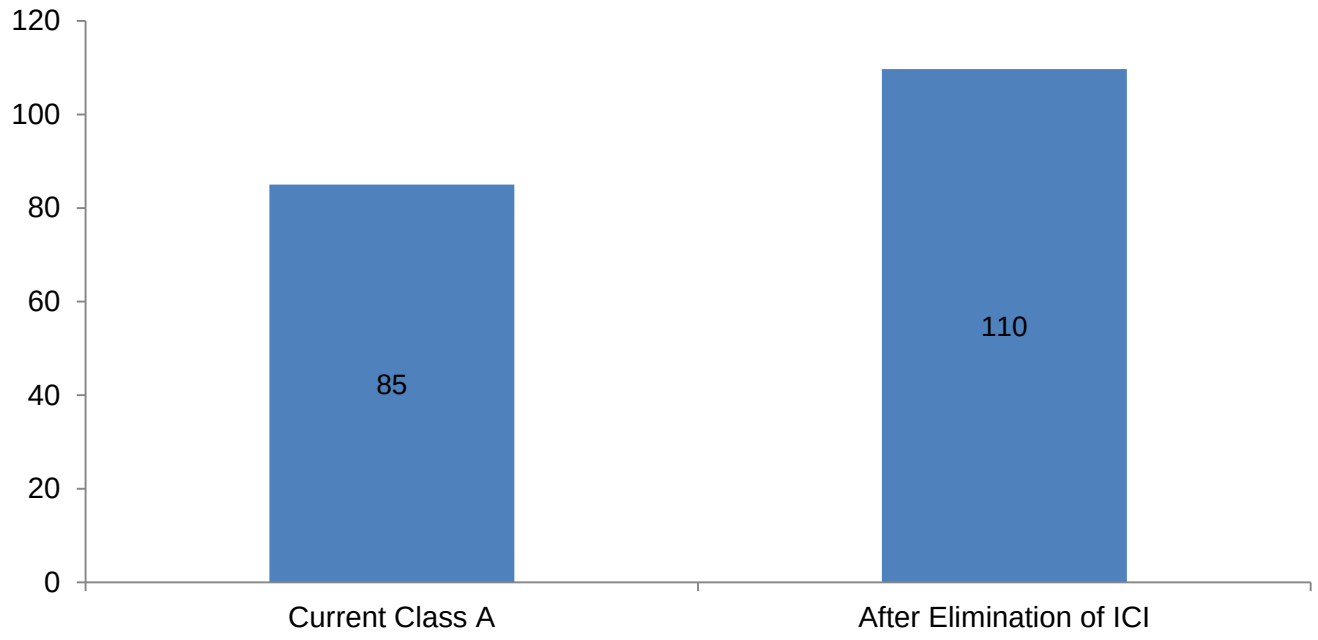
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

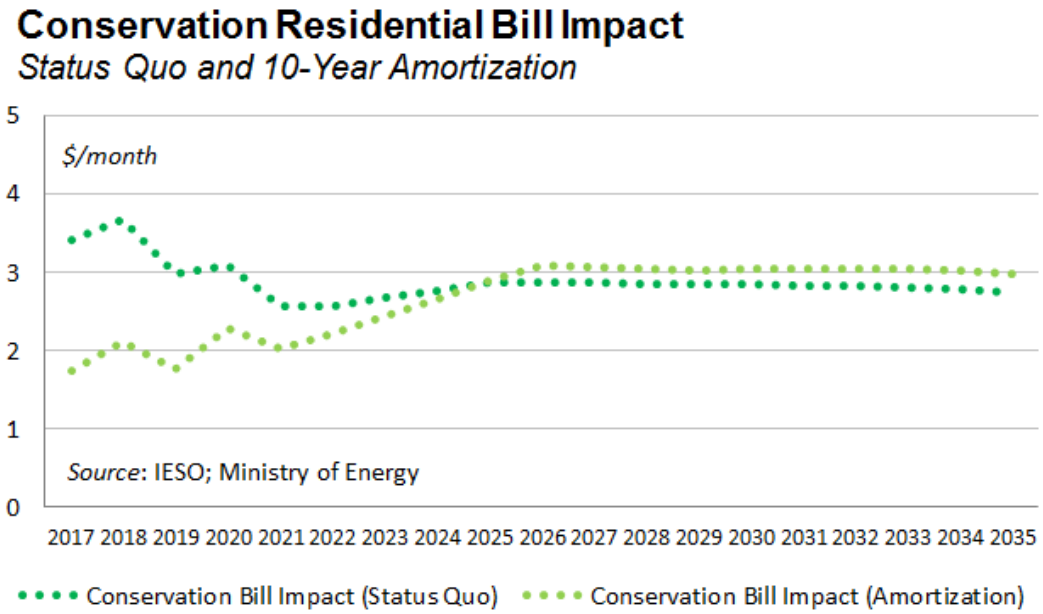
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.007/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), ~~to be~~ dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the pay down / defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

- As shown before the positive impact to residential ratepayers is very limited from the proposals with ratepayer impacts estimated by Energy (between $8 and $9 per month) while the impact to the Province's fiscal position would be material (about $1.2 to $1.5 billion a year). If additional proposals are also fiscally-funded, the fiscal cost could be substantially higher from, e.g., accounting treatment of conservation amortisation or a class B DRC exemption.

# Appendix

# Electricity Consumer Classes

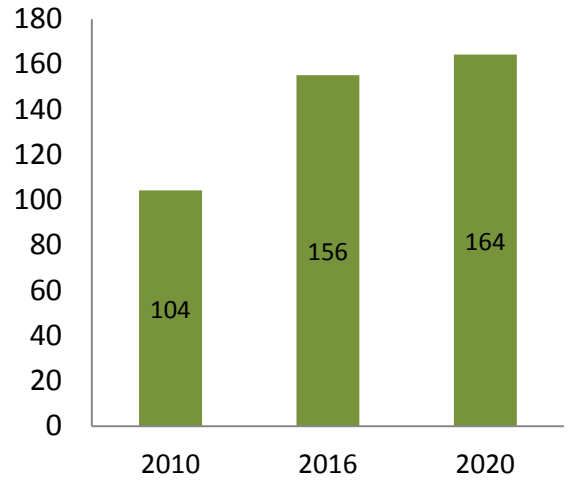
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

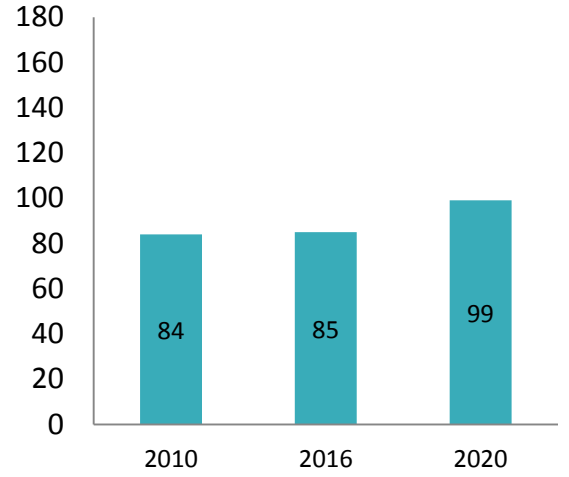
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

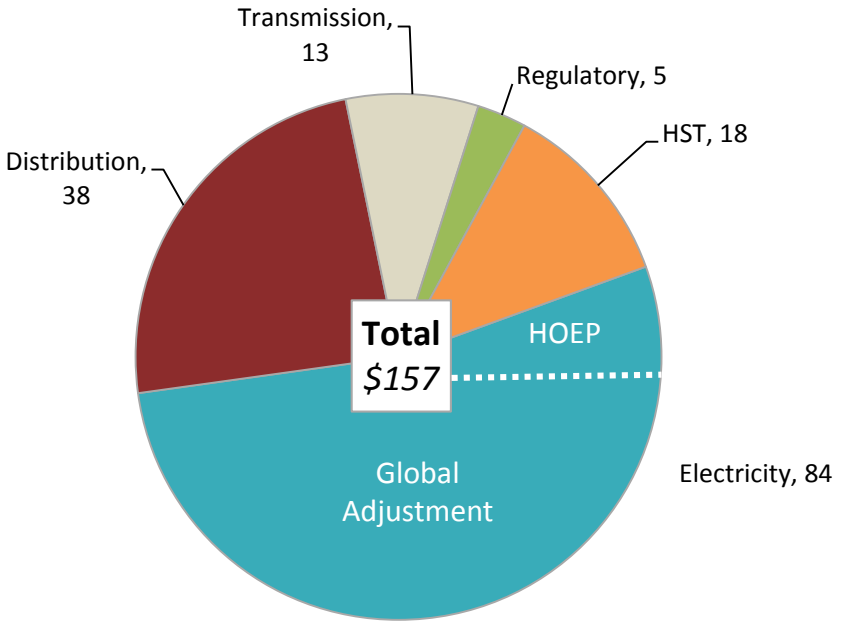
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



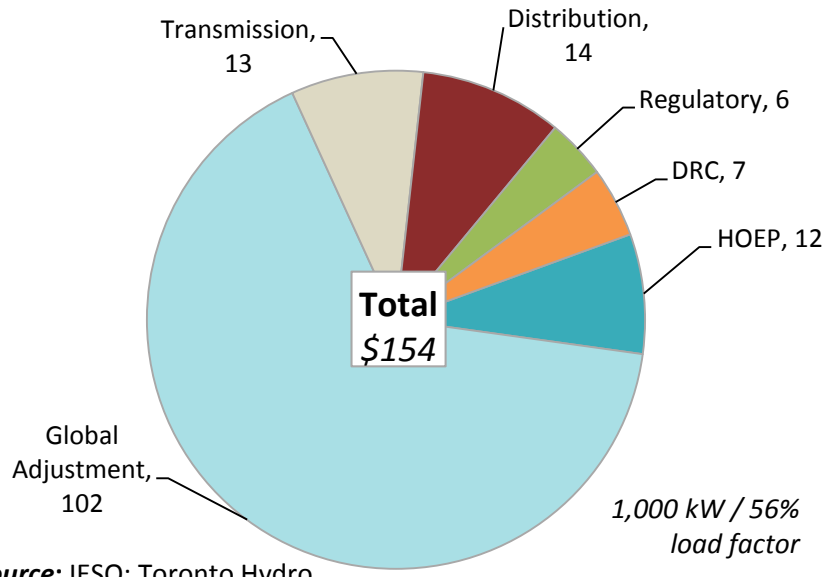

***Source*: OEB, Toronto Hydro**

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

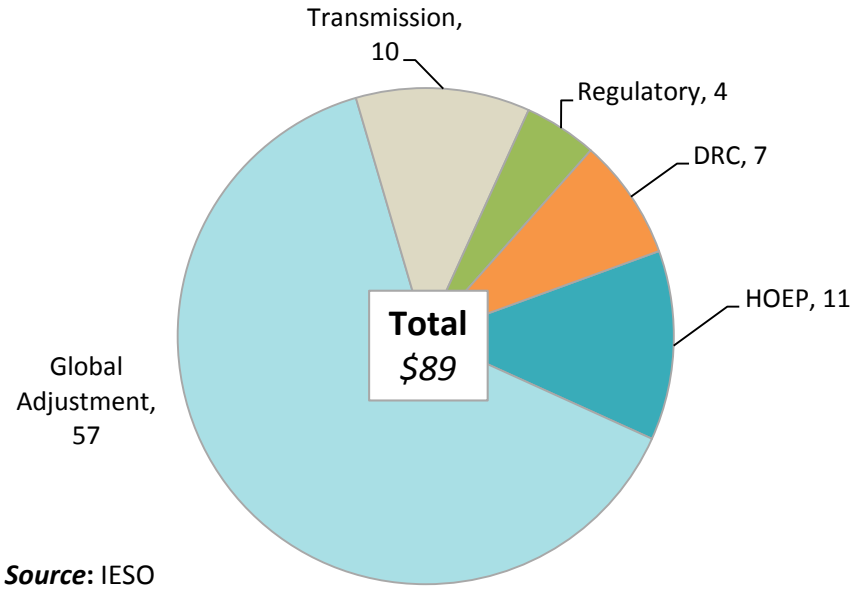
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



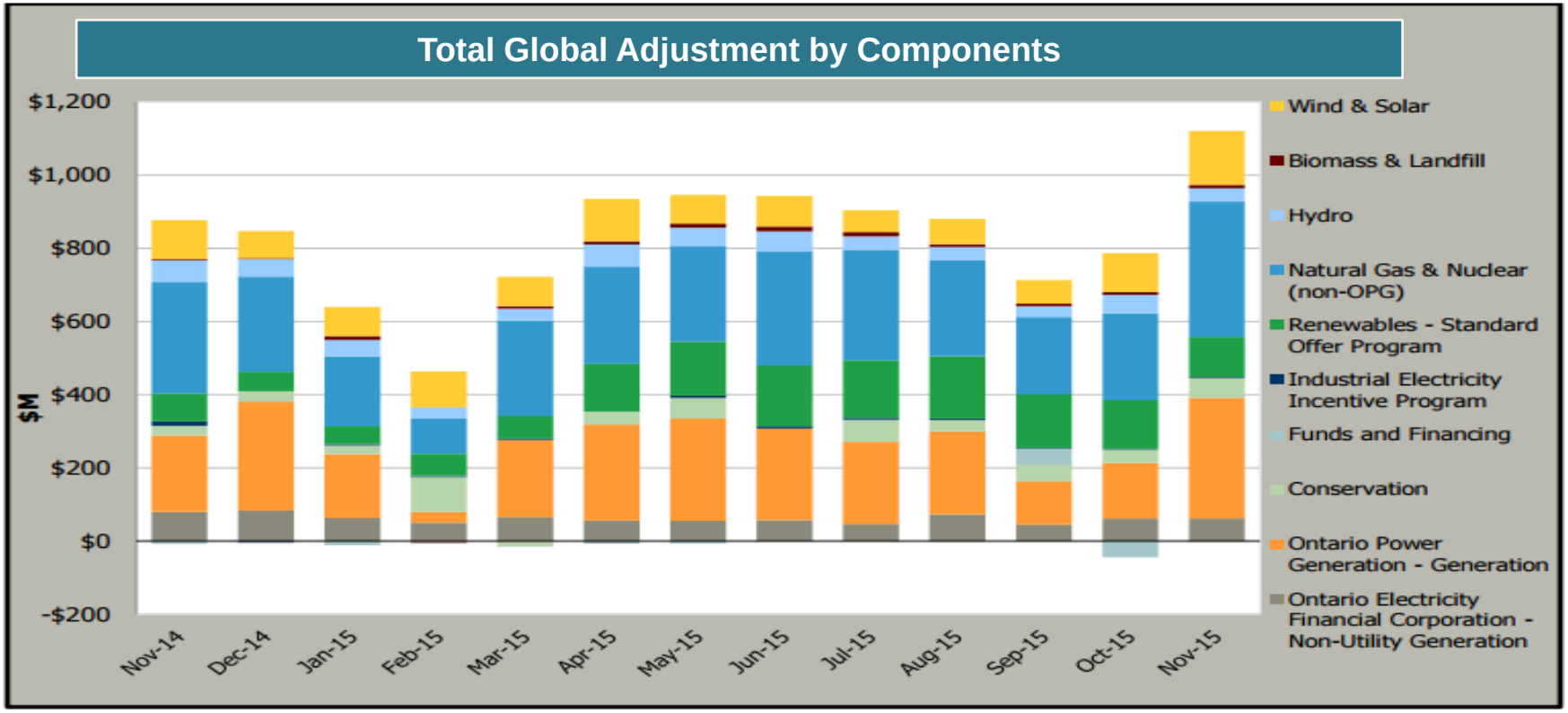

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon; John Kim; Emily Kerr; Darren Scanlan |
| **Cc:** | Gavin He |
| **Subject:** | RE: Potential Rate Mitigation |
| **Date:** | Tuesday, December 06, 2016 7:04:58 PM |
| **Attachments:** | Price Mitigation Proposals_Dec5-16_v11_CEFD_commented v6.pptx |

Hi,

I adjusted the comments and annotations a little, and I`m inclined to send to both the DMO and Energy. I took out the debt comment on OPG borrowing, which I would not want to send to Energy.

Ron

---

**From:** Francisco Chinchon
**Sent:** December-06-16 18:23
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi Ron,

Following our discussion EFB updated the table.

Thanks,

Francisco

---

**From:** Francisco Chinchon
**Sent:** Tuesday, December 06, 2016 5:31 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi Ron,

Attached are three decks:

1. A markup of Energy's deck to be shared with Energy.
2. A draft annotated version for the DMO/MO at MOF.
3. A draft summary deck.

John and I made several edits to the annotated version to make it more readable for the DMO. Hopefully we didn't misinterpret any of the comments received earlier today.

Thanks to everyone in the three branches for pulling this together on a very short time.

Francisco

---

**From:** Ronald Kwan
**Sent:** Monday, December 05, 2016 8:14 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** Fwd: Potential Rate Mitigation

Hi,

Lets meet in the morning to discuss.

We'll need a product for EOD. Could be an annotated slide deck, as well as a markup. Suggestion on any other formats?

Ron

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Date:** December 5, 2016 at 8:02:36 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
> **Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>
> **Subject: Fw: Potential Rate Mitigation**
>
> Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.
>
> From: Katona, Keley (ENERGY)
> Sent: December 5, 2016 7:44 PM
> To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB);

Kwamena, Boafoa (CAB)
Subject: FW: Potential Rate Mitigation

Hi,

See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?

If there are questions, I'm happy to discuss.

Thanks,
Keley

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement ~~GEIA~~ renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

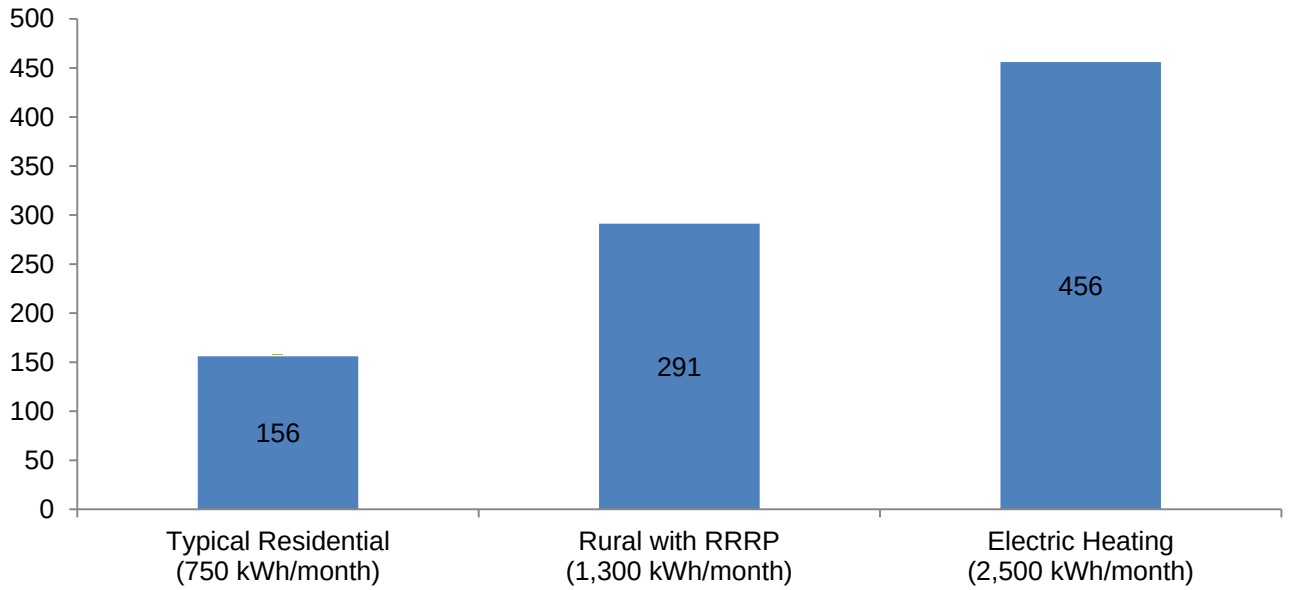
- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate before tax, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II) and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in costs; and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

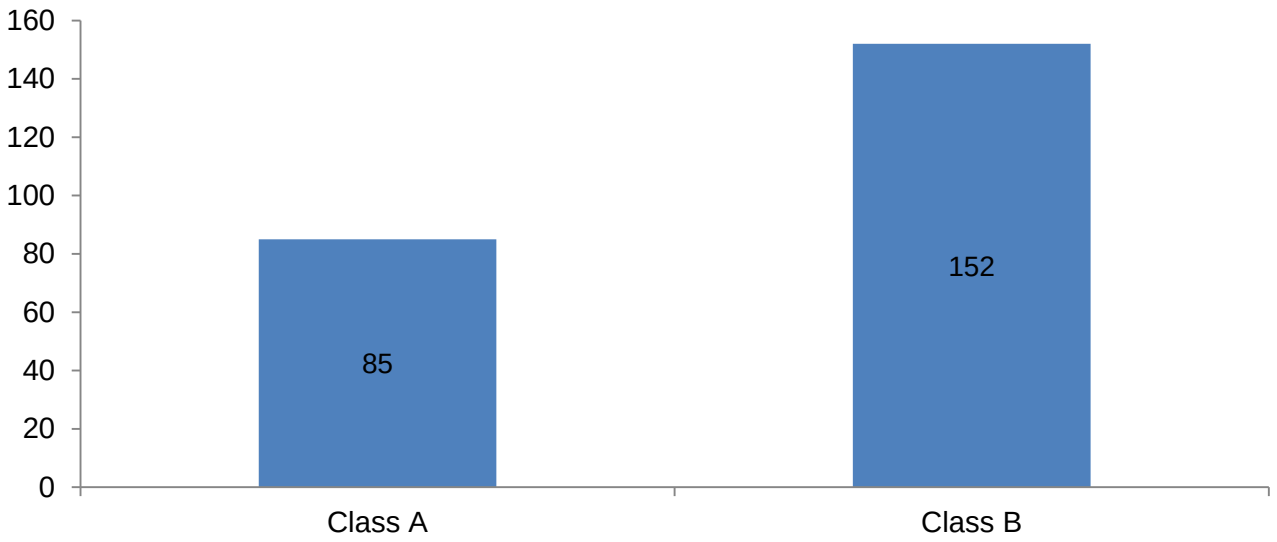



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Current Status on Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.5 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion and before considering any additional funding from the tax base.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how ~~government~~ electricity sector programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);¸(**NTD: If it provides system benefits, why not paid through the rate base)**
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total decrease on typical monthly bill** | **8.38** | **8.23** | **7.75** | **9.26** | **8.52** | **8.17** | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total increase on industrial bill** | **19.96** | **18.97** | **18.34** | **17.14** | **14.45** | **13.7** | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of about $450 million ~~[placeholder for OFA]~~ on the Province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan (before the planned ICI expansion).

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $30 ~~20 to $35~~ million annual fiscal pressure in 2017 to the province ~~[TBC by OPG / OFA]~~ based on new borrowing and increasing to about $70M by 2021.

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.
- A summary of the annual fiscal impacts of the proposed initiatives is presented in the next slide.

# Proposed Taxpayer Funded Electricity Price Mitigation

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+100 | 900+100 | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | TBD | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | -- | -- | -- |
| 8. Other | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,305** | **3,901** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above if various measures proposed in this deck were to be accepted, taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion by 2020-21. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESBP) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.

- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.

- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.

- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

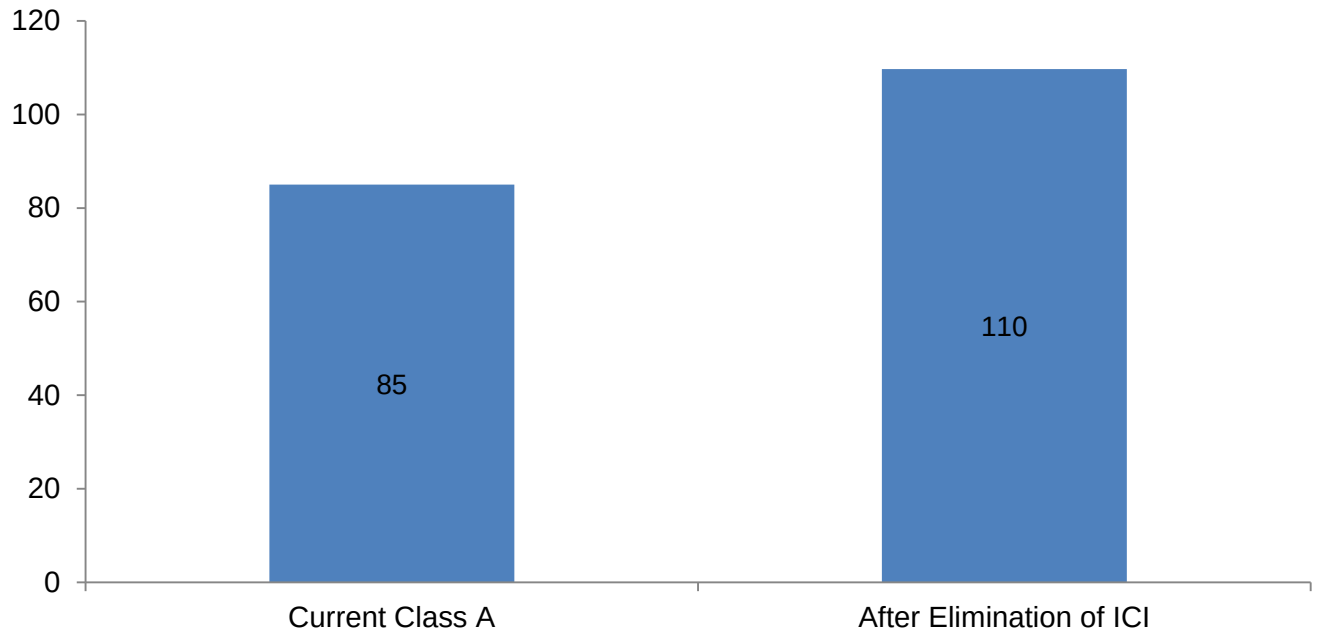
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

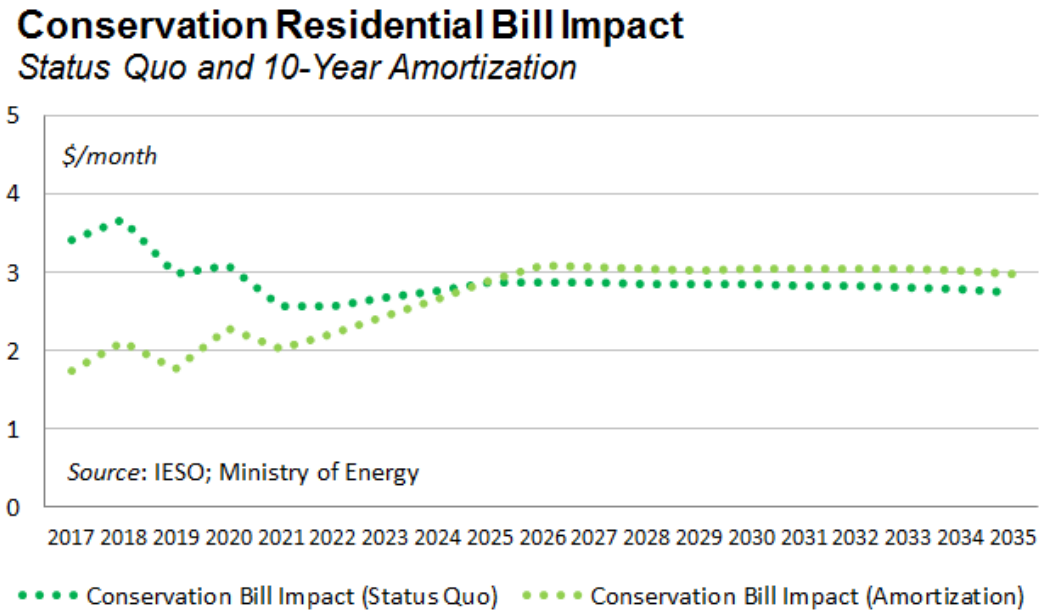
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.007/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), ~~to be~~ dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the pay down / defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

- As shown before the positive impact to residential ratepayers is very limited from the proposals with ratepayer impacts estimated by Energy (between $8 and $9 per month) while the impact to the Province's fiscal position would be material (about $1.2 to $1.5 billion a year). If additional proposals are also fiscally-funded, the fiscal cost could be substantially higher from, e.g., accounting treatment of conservation amortisation or a class B DRC exemption.

# Appendix

# Electricity Consumer Classes

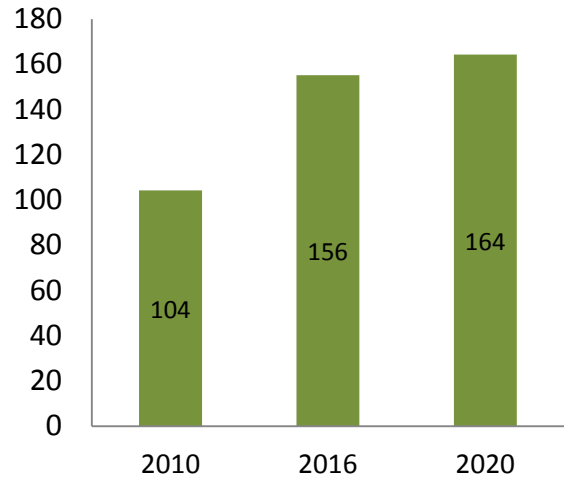
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

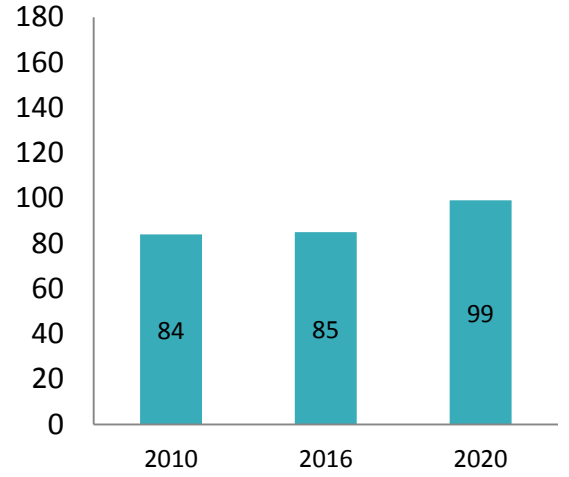
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

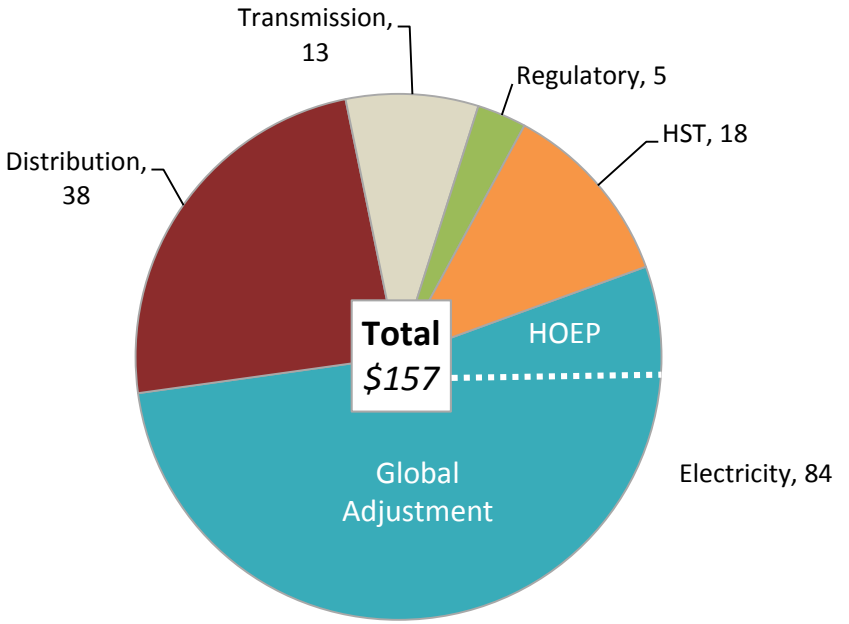
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



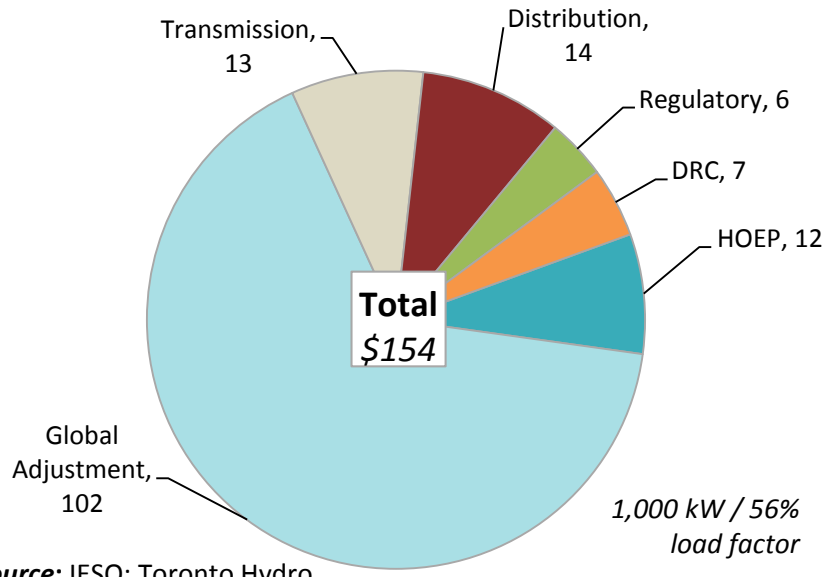

***Source*: OEB, Toronto Hydro**

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

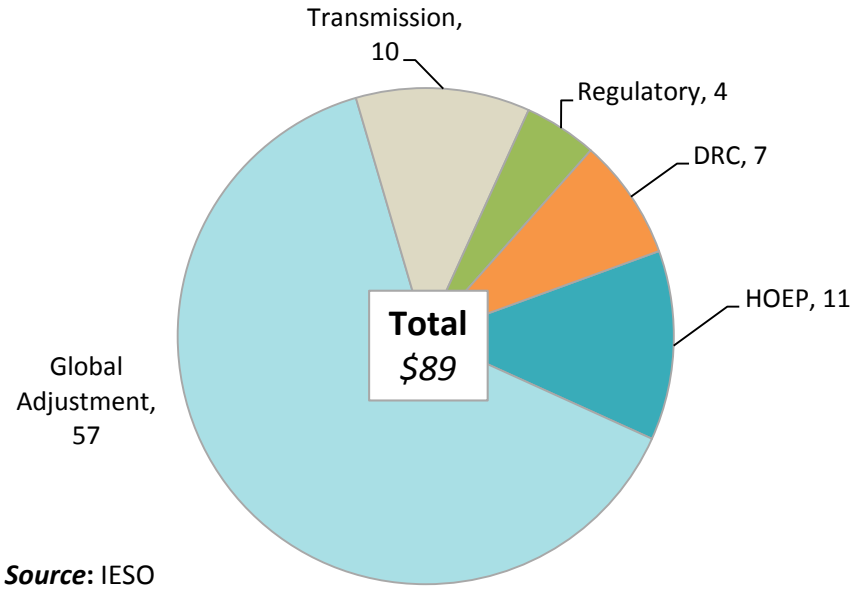
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



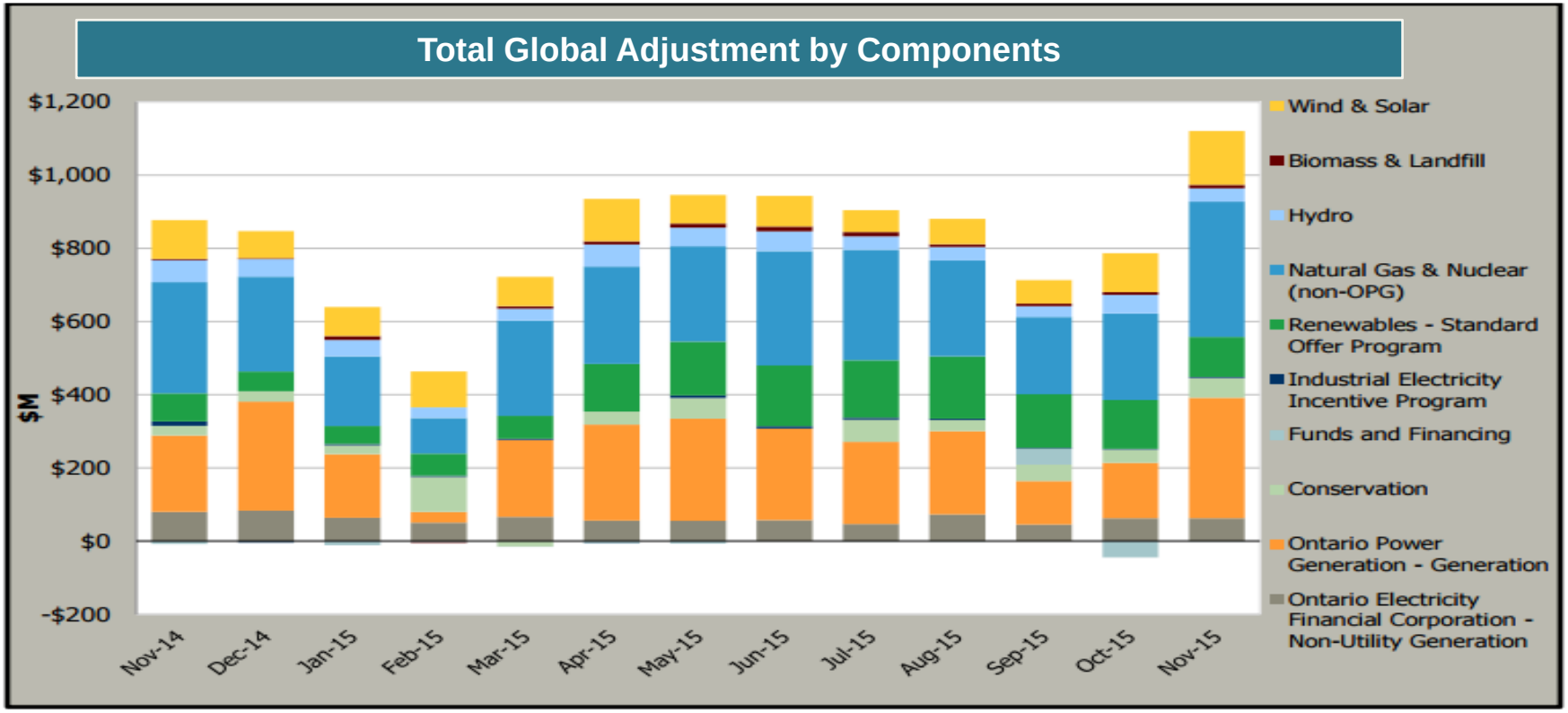

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

| | |
|---|---|
| **From:** | Francisco Chinchon |
| **To:** | Ronald Kwan |
| **Cc:** | Gavin He; John Kim; Emily Kerr; Darren Scanlan |
| **Subject:** | RE: Potential Rate Mitigation |
| **Date:** | Tuesday, December 06, 2016 6:22:44 PM |
| **Attachments:** | Price Mitigation Proposals_Dec5-16_v11_CEFD_markup v5.pptx<br>Price Mitigation Proposals_Dec5-16_v11_CEFD_commented v5.pptx<br>Price-Mitigation - CEFD Slides-Dec6-2016_v5.pptx |

Hi Ron,

Following our discussion EFB updated the table.

Thanks,

Francisco

---

**From:** Francisco Chinchon
**Sent:** Tuesday, December 06, 2016 5:31 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi Ron,

Attached are three decks:

1. A markup of  Energy's deck to be shared with Energy.
2. A draft annotated version for the DMO/MO at MOF.
3. A draft summary deck.

John and I made several edits to the annotated version to make it more readable for the DMO. Hopefully we didn't misinterpret any of the comments received earlier today.

Thanks to everyone in the three branches for pulling this together on a very short time.

Francisco

---

**From:** Ronald Kwan

**Sent:** Monday, December 05, 2016 8:14 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** Fwd: Potential Rate Mitigation

Hi,

Lets meet in the morning to discuss.

We'll need a product for EOD. Could be an annotated slide deck, as well as a markup. Suggestion on any other formats?

Ron

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Date:** December 5, 2016 at 8:02:36 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
> **Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>
> **Subject: Fw: Potential Rate Mitigation**
>
> Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.
>
> From: Katona, Keley (ENERGY)
> Sent: December 5, 2016 7:44 PM
> To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)
> Subject: FW: Potential Rate Mitigation
>
> Hi,
>
> See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?
>
> If there are questions, I'm happy to discuss.
>
> Thanks,
> Keley

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement ~~GEIA~~ renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

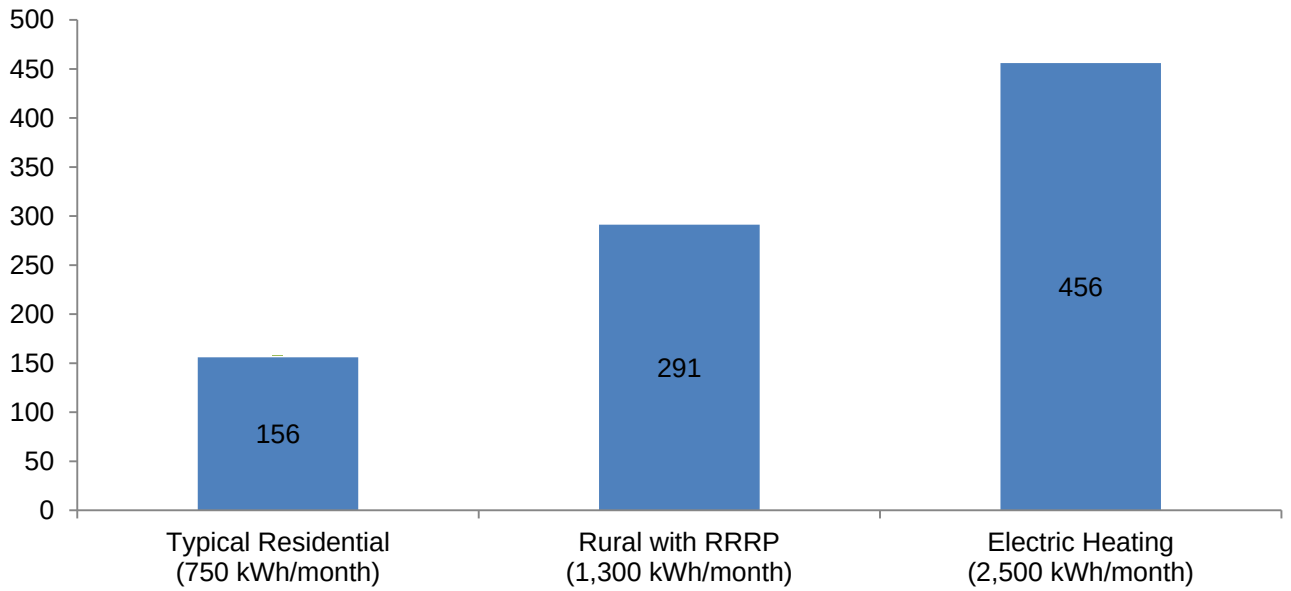
- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate before tax, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II) and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in costs; and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 ~~Long-Term Energy Plan (2013~~ LTEP~~)~~ forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

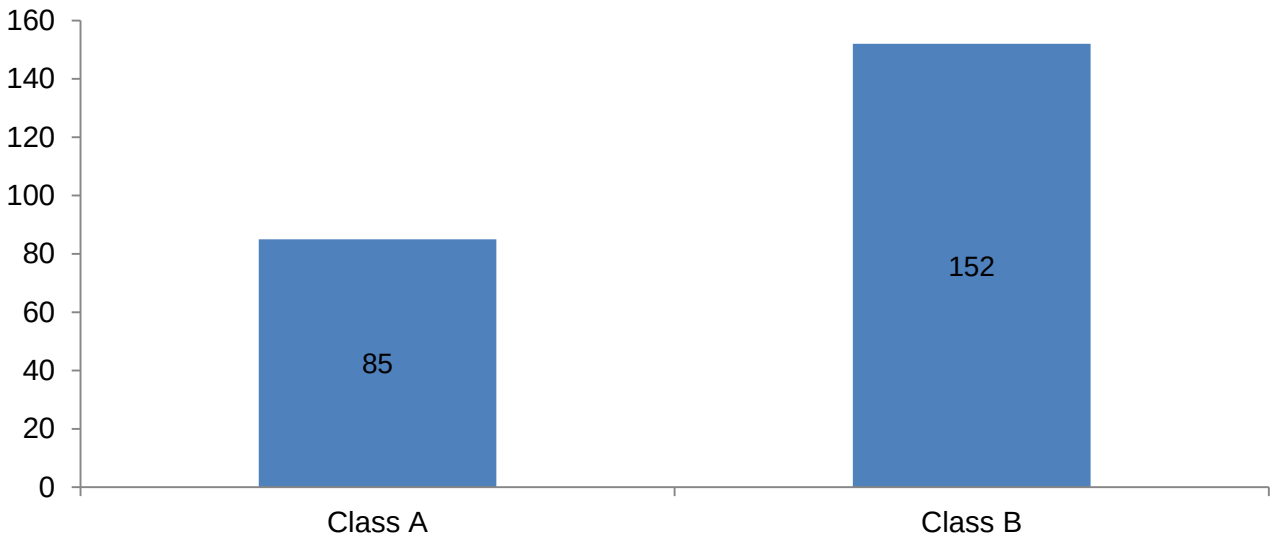



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Current Status on Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from November LRC Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion and before considering any additional funding from the tax base.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total decrease on typical monthly bill** | **8.38** | **8.23** | **7.75** | **9.26** | **8.52** | **8.17** | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total increase on industrial bill** | **19.96** | **18.97** | **18.34** | **17.14** | **14.45** | **13.7** | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of about $[TBD based on Energy's estimate of affected consumption] ~~[placeholder for OFA]~~ on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $30 ~~20 to $35~~ million annual fiscal pressure in 2017 to the province ~~[TBC by OPG / OFA]~~ based only new borrowing and increasing to about $70M by 2021.

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.

- A summary of the annual fiscal impacts of the proposed initiatives is presented in the next slide.

# Proposed Taxpayer Funded Electricity Price Mitigation

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | N/A | N/A | N/A | N/A | N/A |
| 7. DRC Ended for Class B | 110 | 450 | -- | -- | -- |
| 8. Other | | | | | |
| **TOTAL** | **1,305** | **3,871** | **3,152** | **3,177** | **3,191** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.2 billion by 2020-21. That is a 145% increase from the current forecast for 2016-17 or a 93% increase when comparing against the current expected funding for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESBP) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.

- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.

- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.

- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

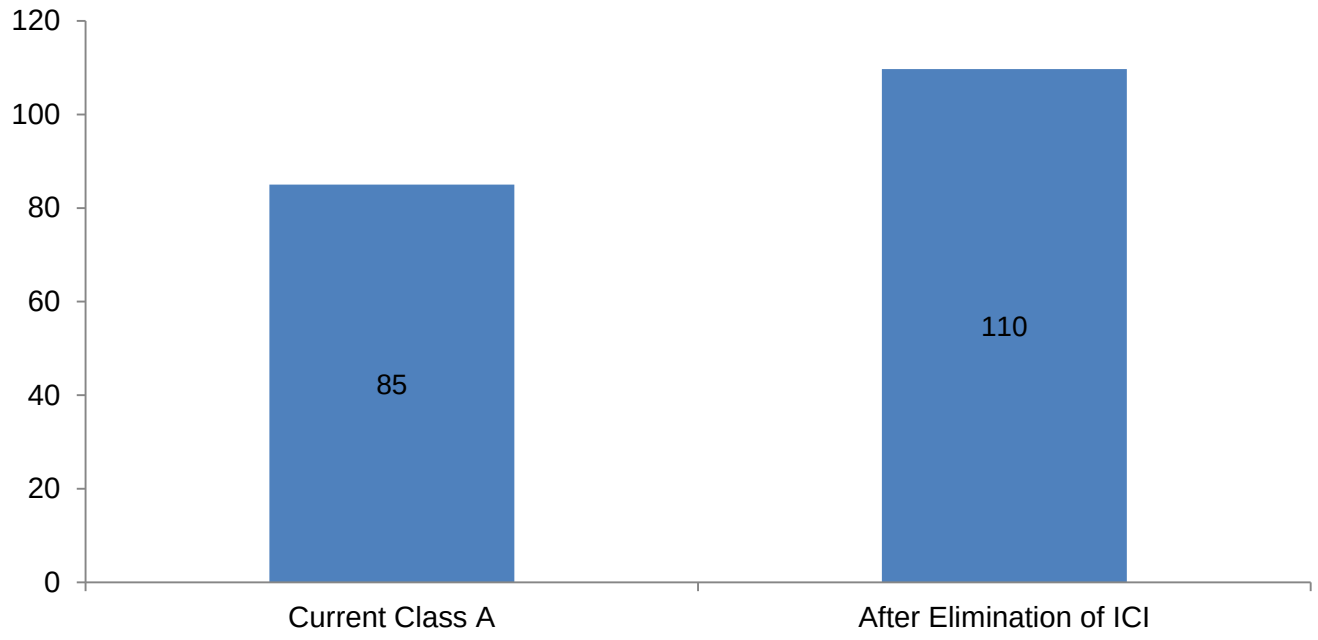
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

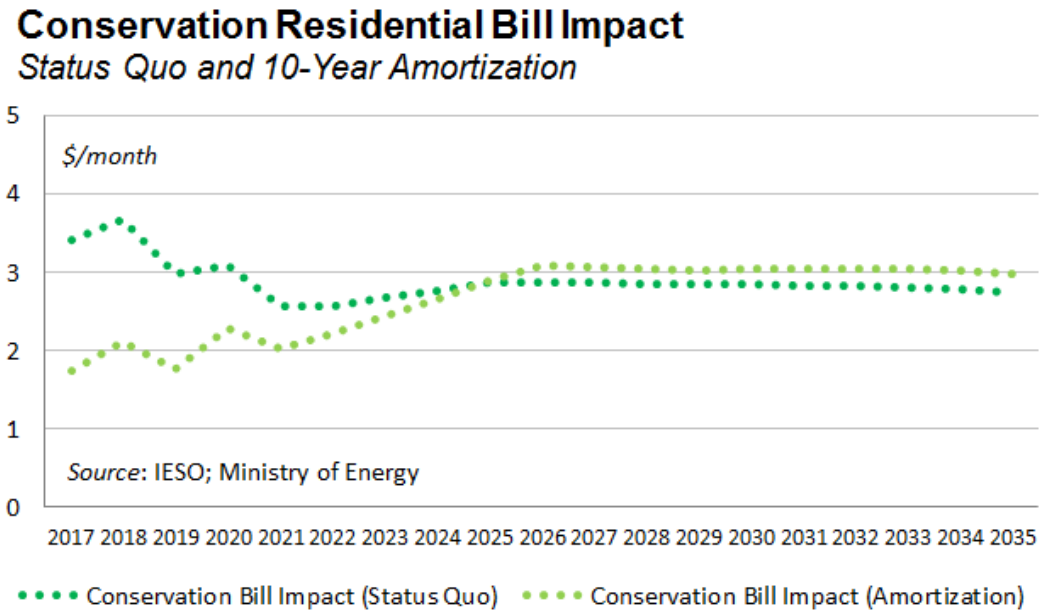
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

- As shown before the positive impact to residential ratepayers is very limited (between $8 and $9 per month) while the impact to the Province's fiscal position would be material (about $1.5 billion a year).

# Appendix

# Electricity Consumer Classes

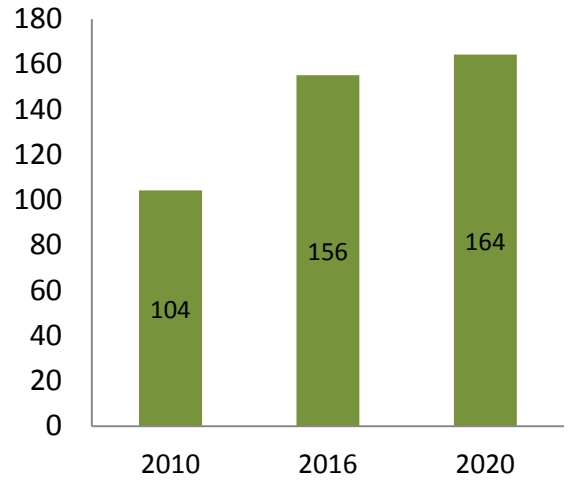
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

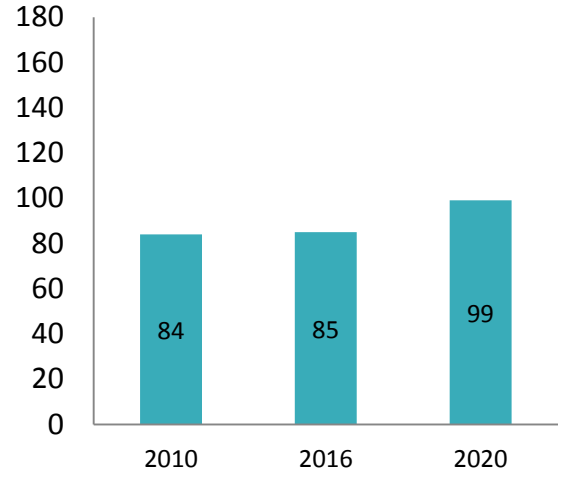
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

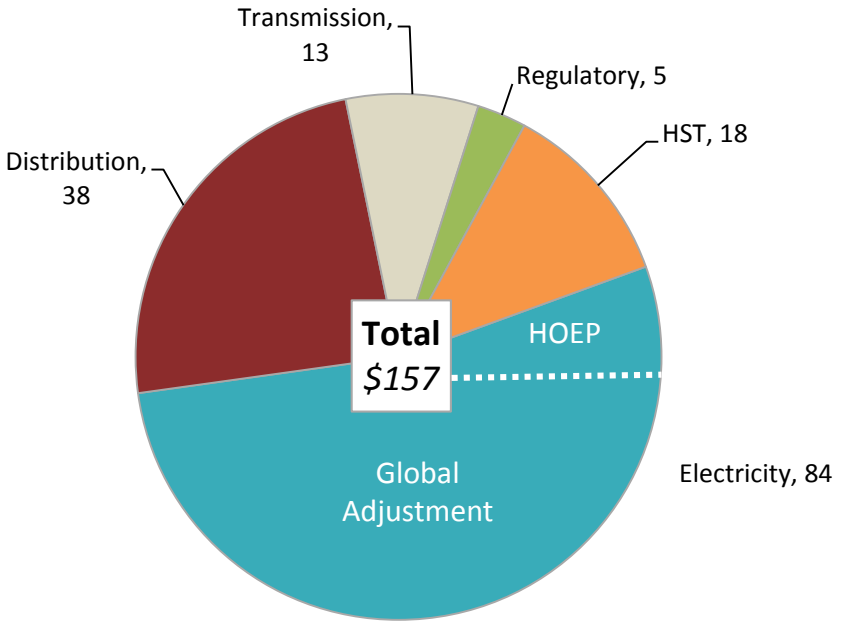
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



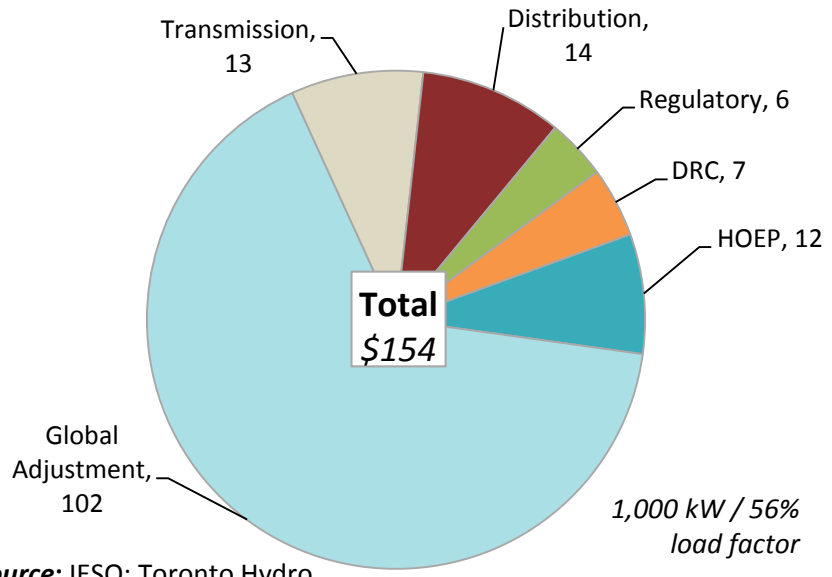

***Source*: OEB, Toronto Hydro**

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

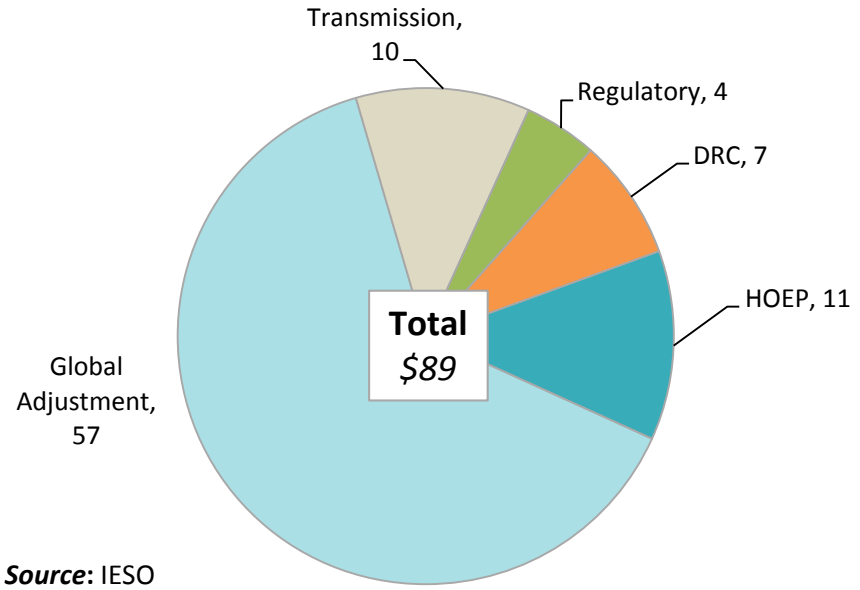
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



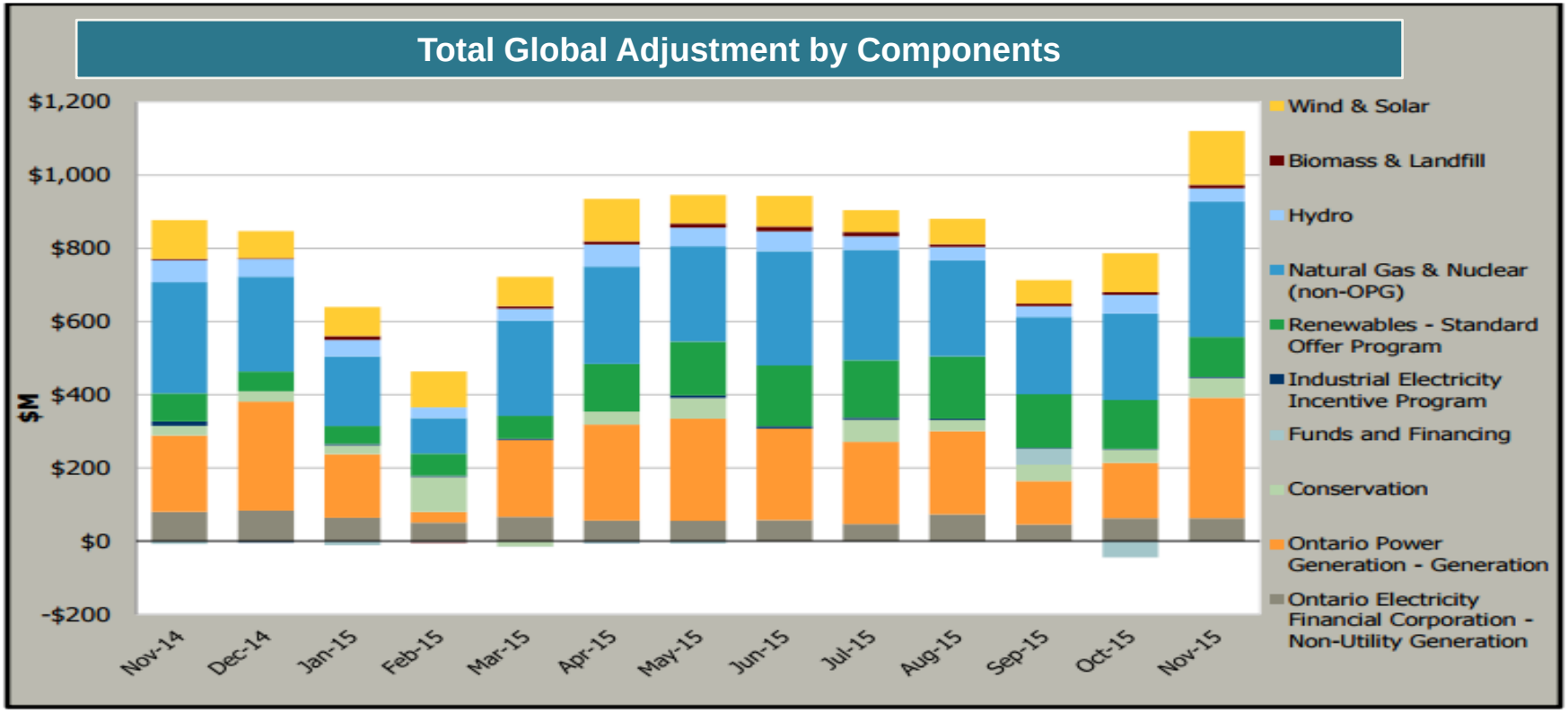

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement ~~GEIA~~ renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

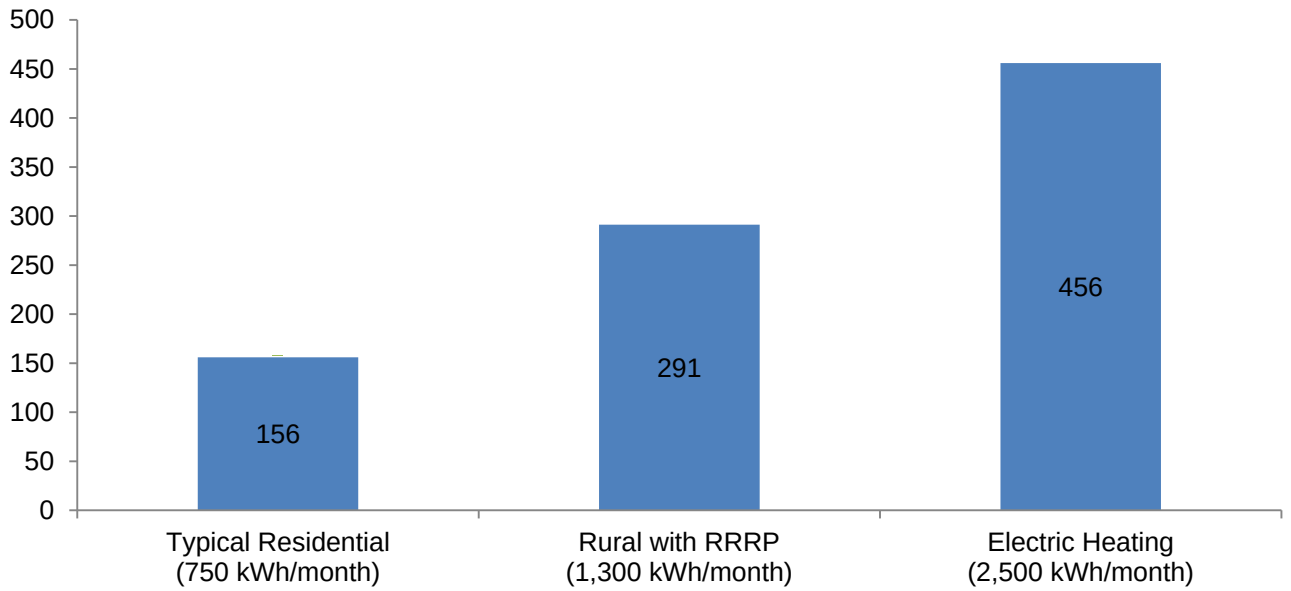
- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate before tax, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II) and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in costs; and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 ~~Long-Term Energy Plan (2013~~ LTEP~~)~~ forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

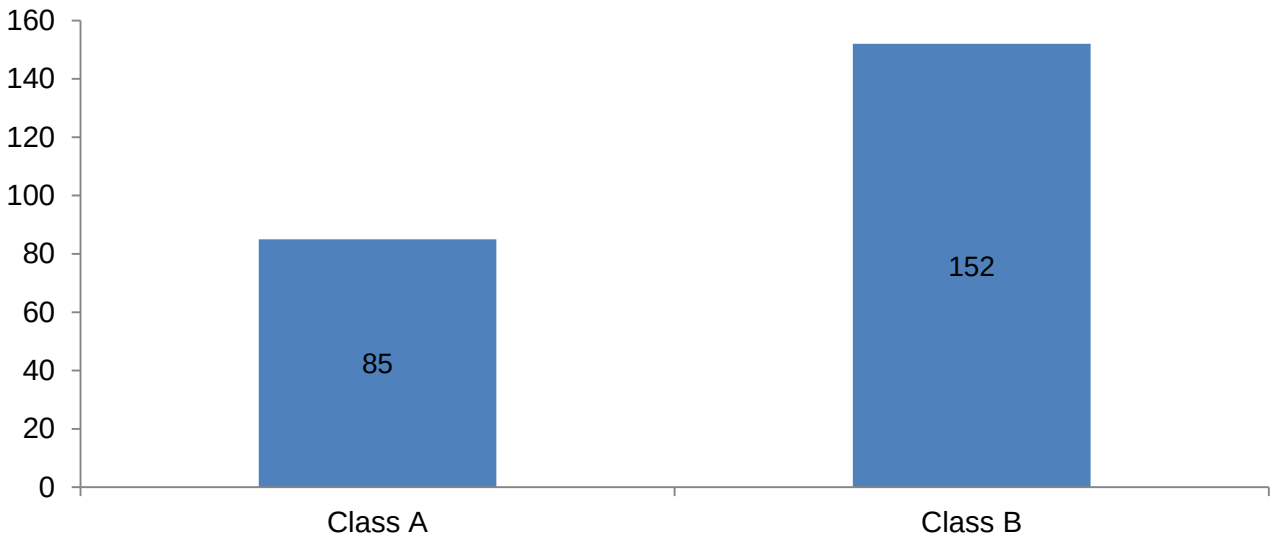



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Current Status on Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from November LRC Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion and before considering any additional funding from the tax base.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total decrease on typical monthly bill** | **8.38** | **8.23** | **7.75** | **9.26** | **8.52** | **8.17** | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total increase on industrial bill** | **19.96** | **18.97** | **18.34** | **17.14** | **14.45** | **13.7** | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of about $[TBD based on Energy's estimate of affected consumption] ~~[placeholder for OFA]~~ on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $30 ~~20 to $35~~ million annual fiscal pressure in 2017 to the province ~~[TBC by OPG / OFA]~~ based only new borrowing and increasing to about $70M by 2021.

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.

- A summary of the annual fiscal impacts of the proposed initiatives is presented in the next slide.

# Proposed Taxpayer Funded Electricity Price Mitigation

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | N/A | N/A | N/A | N/A | N/A |
| 7. DRC Ended for Class B | 110 | 450 | -- | -- | -- |
| 8. Other | | | | | |
| **TOTAL** | **1,305** | **3,871** | **3,152** | **3,177** | **3,191** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.2 billion by 2020-21. That is a 145% increase from the current forecast for 2016-17 or a 93% increase when comparing against the current expected funding for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESBP) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.

- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.

- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.

- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

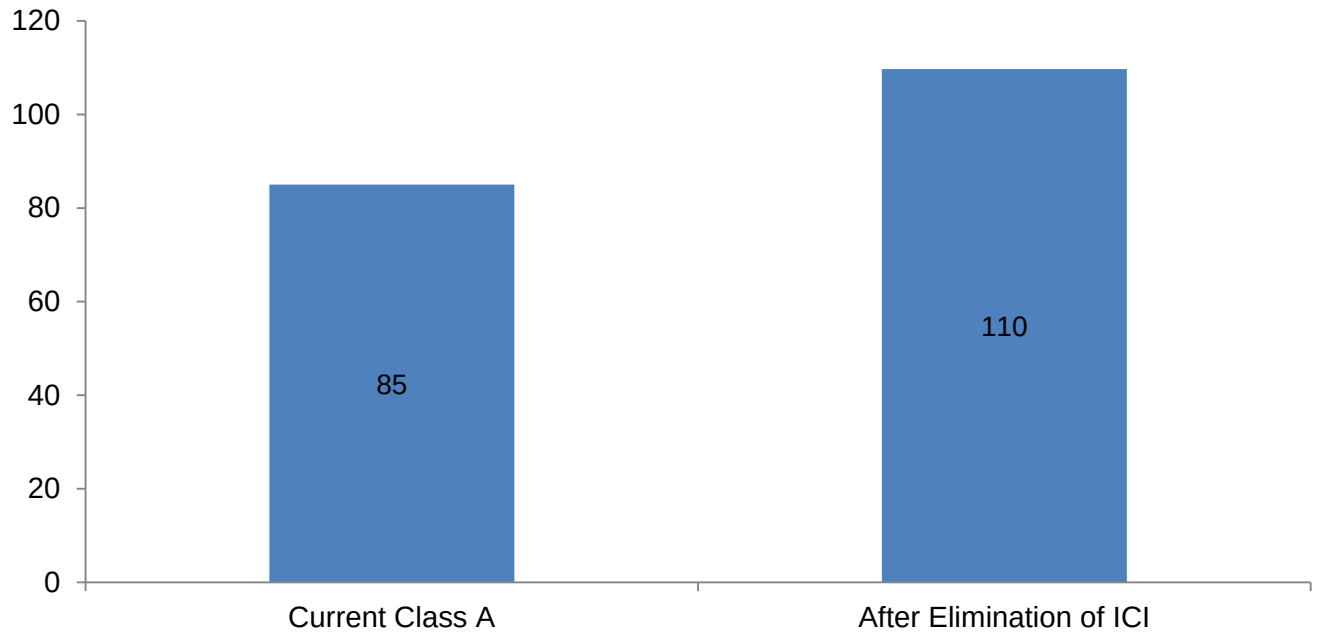
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

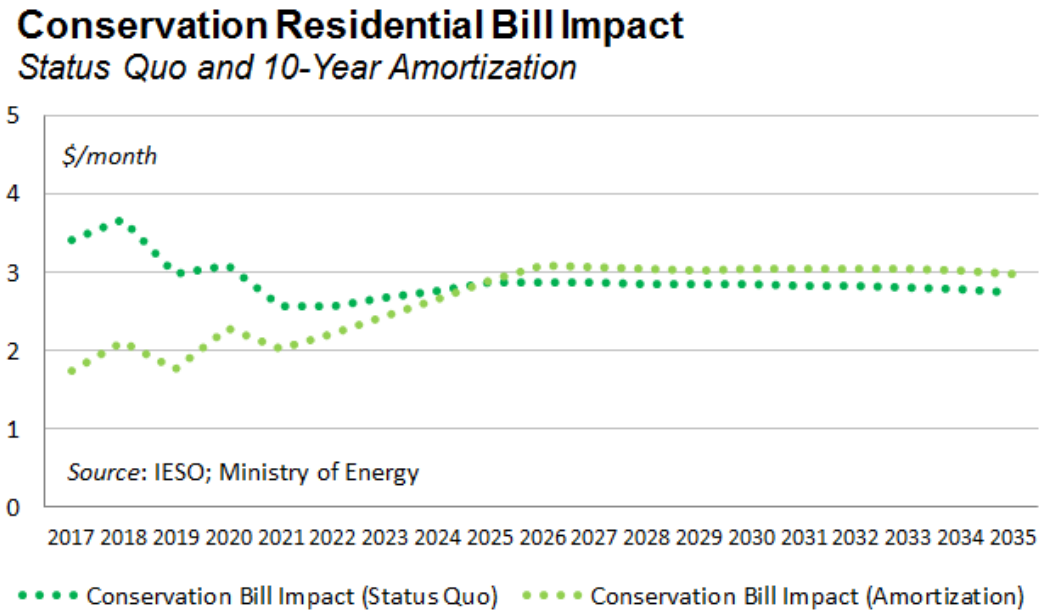
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

- As shown before the positive impact to residential ratepayers is very limited (between $8 and $9 per month) while the impact to the Province's fiscal position would be material (about $1.5 billion a year).

# Appendix

# Electricity Consumer Classes

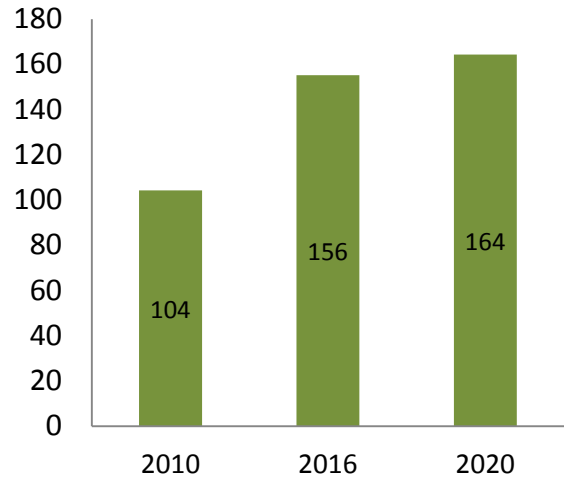
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

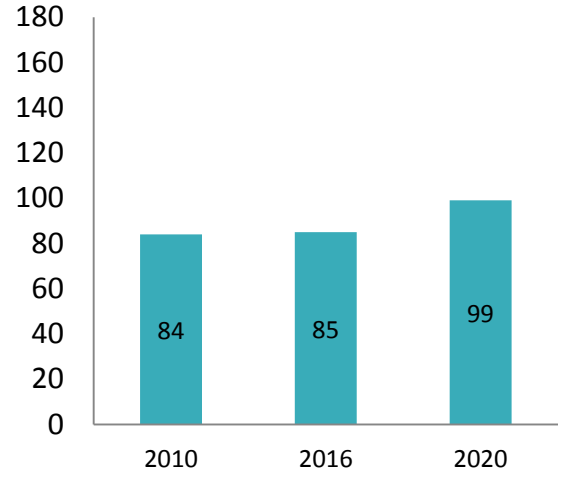
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

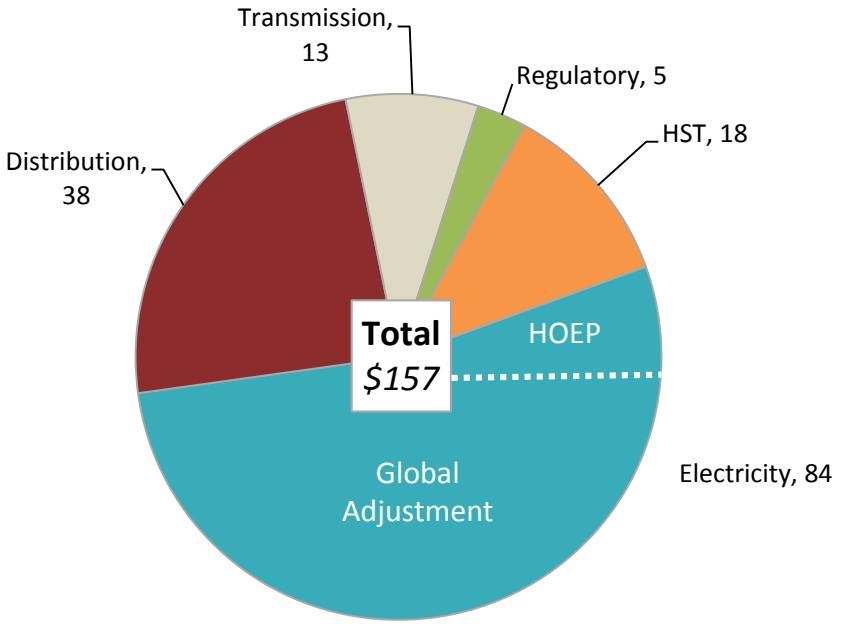
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



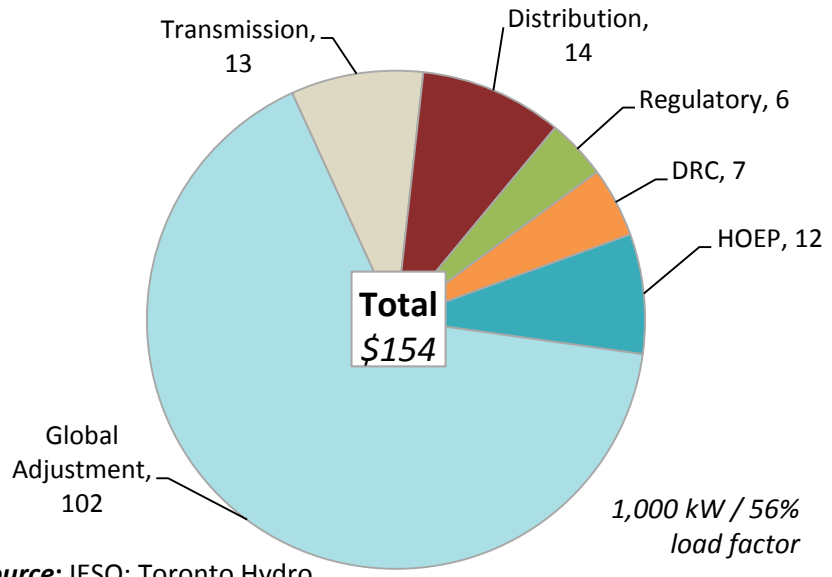

***Source*: OEB, Toronto Hydro**

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

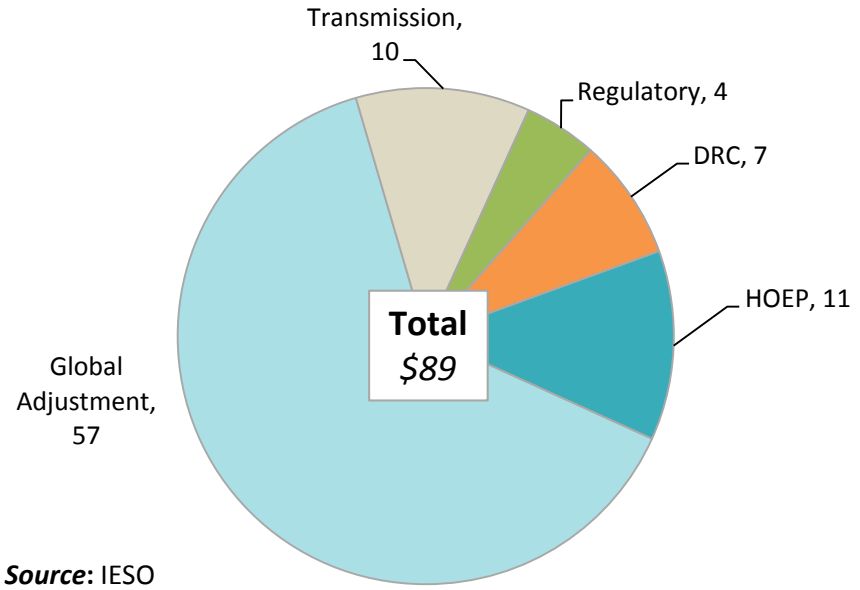
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



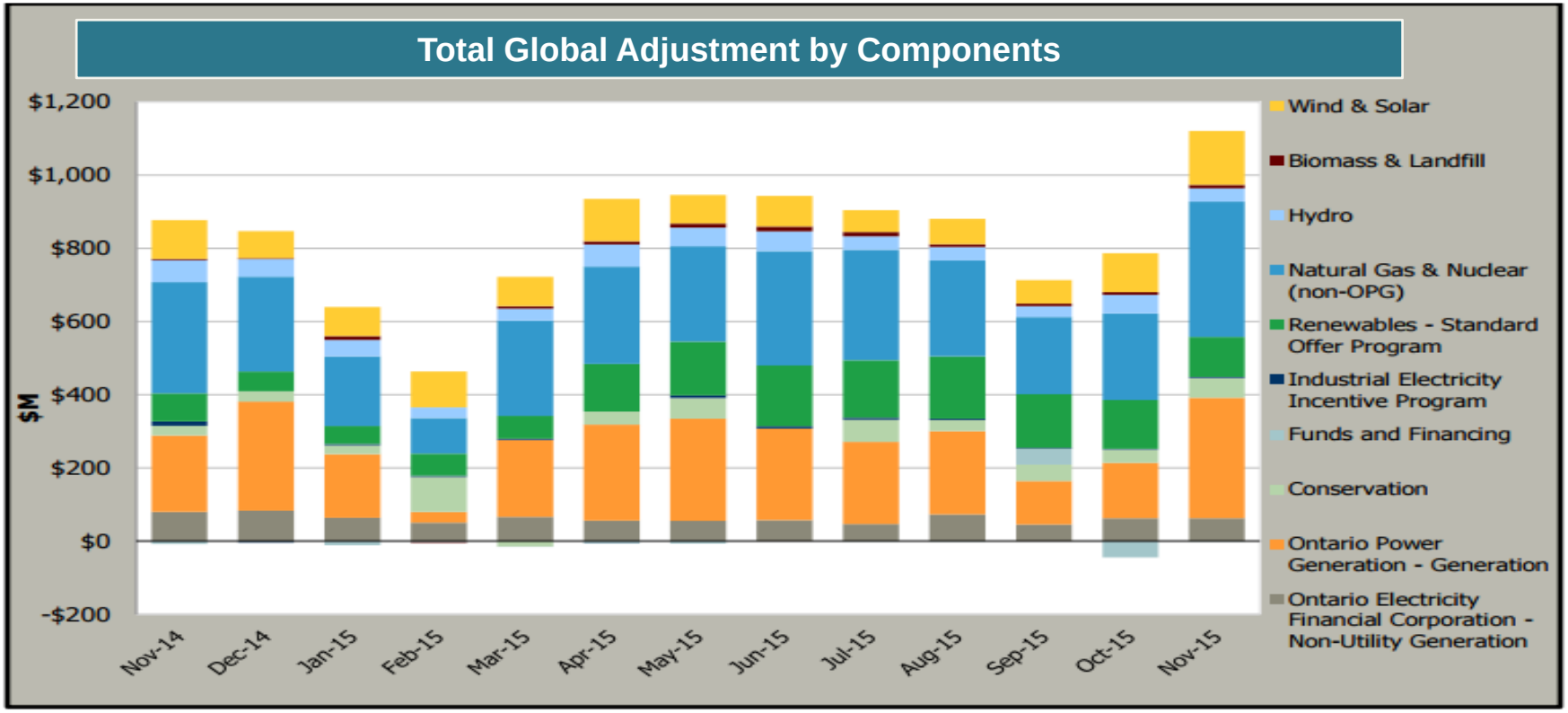

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

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# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

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# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost [about $1.5 billion per year in new fiscal costs].
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 billion in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time), with the total tax-based costs rising to about $3.4 billion in 2017-18.
  - These existing mitigation costs are not presented in Energy's deck.
  - Also not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

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# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

# Energy's Proposals

Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded. They could be upwards of $2 bn/year, (plus the departure tax), which is not included in the fiscal plan, which would challenge the path to balance.

- OESP & RRRP (Total of about $0.4 Bn/yr): This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI -- About $900+ M/yr): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes that about 30% price increase (from $85/MWh to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
  - As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $100 million).

- Departure Tax: As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.
  - This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
  - Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

- Other fiscal cost risks (Total of about $0.8+ Bn):
  - Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
  - Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
  - Lowering of the debt interest paid by OPG (about $30 – 70 million/yr between 2017 and 2021),

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# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
  - These targeted, low-income measures were introduced after the HST was introduced.
  - The OESP provides a larger, targeted and on-bill relief to qualifying consumers.

- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
  - As with the prior OCEB cap, provides a rough incentive for conservation and correlation to larger homes. A higher cap in winter may help with space-heating issue.
  - May be challenging to implement.

- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

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# Proposed Taxpayer Funded Electricity Price Mitigation
(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | | | | |
| 7. DRC Ended for Class B | 110 | 450 | | | |
| 8. Other | | | | | |
| **TOTAL** | **1,305** | **3,871** | **3,152** | **3,177** | **3,191** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.2 billion, or more, by 2020-21. That is a 145% increase from the current forecast for 2016-17 or a 93% increase when comparing against the current expected funding for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | The government removed the DRC from residential electricity users' bills as of January 1, 2016. This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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# Timeline: Taxpayer-funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

DRAFT

# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

| | |
|---|---|
| **From:** | Francisco Chinchon |
| **To:** | Ronald Kwan |
| **Cc:** | John Kim; Emily Kerr; Darren Scanlan |
| **Subject:** | RE: Potential Rate Mitigation |
| **Date:** | Tuesday, December 06, 2016 5:30:56 PM |
| **Attachments:** | Price Mitigation Proposals_Dec5-16_v11_CEFDmarkup4.pptx<br>Price Mitigation Proposals_Dec5-16_v11_CEFD_commented v4.pptx<br>Price-Mitigation - CEFD Slides-Dec6-2016_v4.pptx |

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Hi Ron,

Attached are three decks:

1. A markup of Energy's deck to be shared with Energy.
2. A draft annotated version for the DMO/MO at MOF.
3. A draft summary deck.

John and I made several edits to the annotated version to make it more readable for the DMO. Hopefully we didn't misinterpret any of the comments received earlier today.

Thanks to everyone in the three branches for pulling this together on a very short time.

Francisco

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**From:** Ronald Kwan
**Sent:** Monday, December 05, 2016 8:14 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** Fwd: Potential Rate Mitigation

Hi,

Lets meet in the morning to discuss.

We'll need a product for EOD. Could be an annotated slide deck, as well as a markup. Suggestion on any other formats?

Ron

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Date:** December 5, 2016 at 8:02:36 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald

(OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
**Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>
**Subject: Fw: Potential Rate Mitigation**

Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.

From: Katona, Keley (ENERGY)
Sent: December 5, 2016 7:44 PM
To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)
Subject: FW: Potential Rate Mitigation

Hi,

See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?

If there are questions, I'm happy to discuss.

Thanks,
Keley

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement ~~GEIA~~ renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

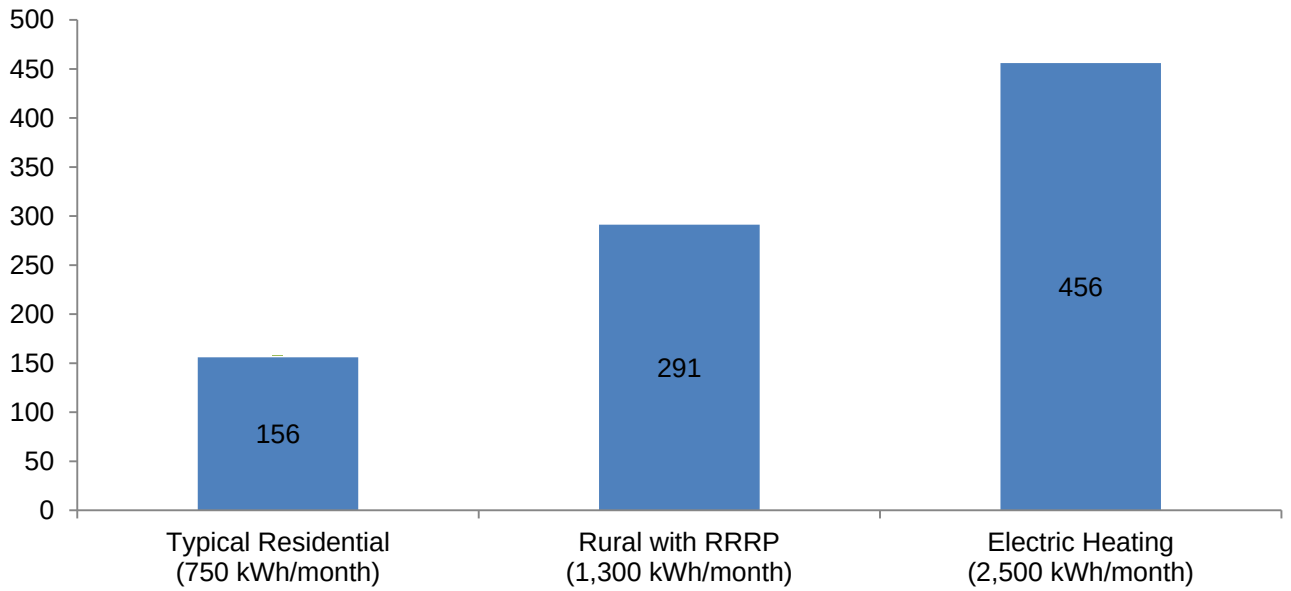
- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate before tax, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II) and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in costs; and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 ~~Long-Term Energy Plan (2013~~ LTEP~~)~~ forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

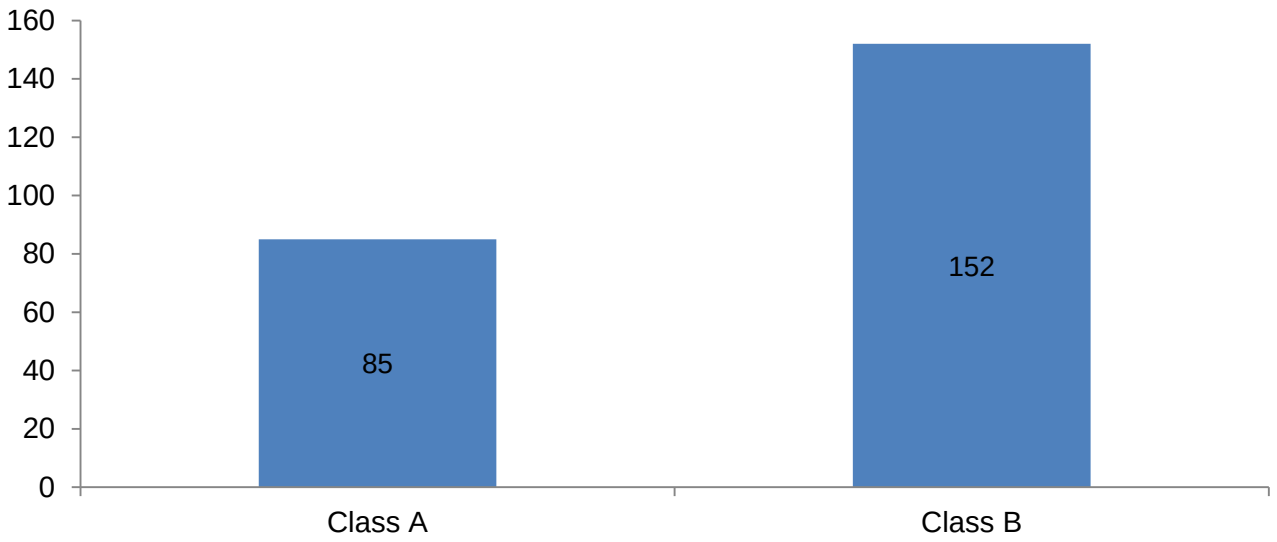



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Current Status on Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from November LRC Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion and before considering any additional funding from the tax base.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total decrease on typical monthly bill** | **8.38** | **8.23** | **7.75** | **9.26** | **8.52** | **8.17** | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total increase on industrial bill** | **19.96** | **18.97** | **18.34** | **17.14** | **14.45** | **13.7** | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of about $450 ~~[placeholder for OFA]~~ on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $30 ~~20 to $35~~ million annual fiscal pressure in 2017 to the province ~~[TBC by OPG / OFA]~~ based on new borrowing and increasing to about $70M by 2021.

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.
- A summary of the annual fiscal impacts of the proposed initiatives is presented in the next slide.

# Proposed Taxpayer Funded Electricity Price Mitigation

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | | | | |
| 7. DRC Ended for Class B | | | | | |
| 8. Other | | | | | |
| **TOTAL** | **1195** | **3,421** | **3,152** | **3,177** | **3,191** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.2 billion by 2020-21. That is a 67% increase from the current forecast for 2016-17.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESBP) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.

- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.

- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.

- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

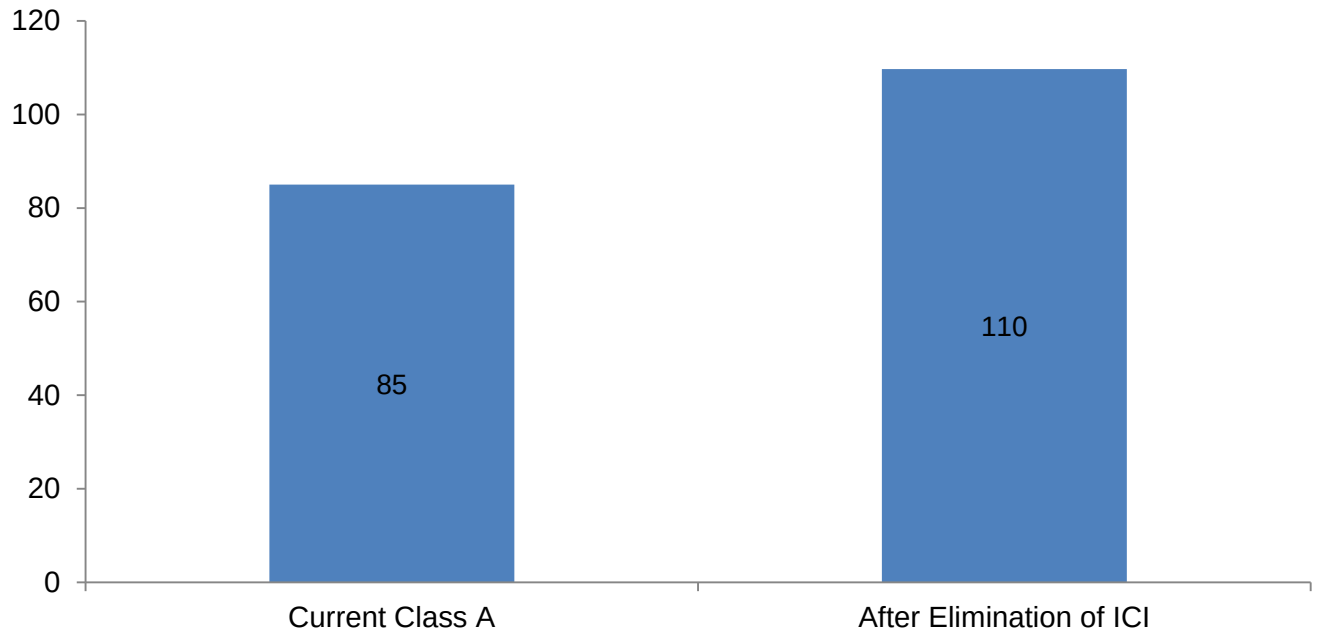
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

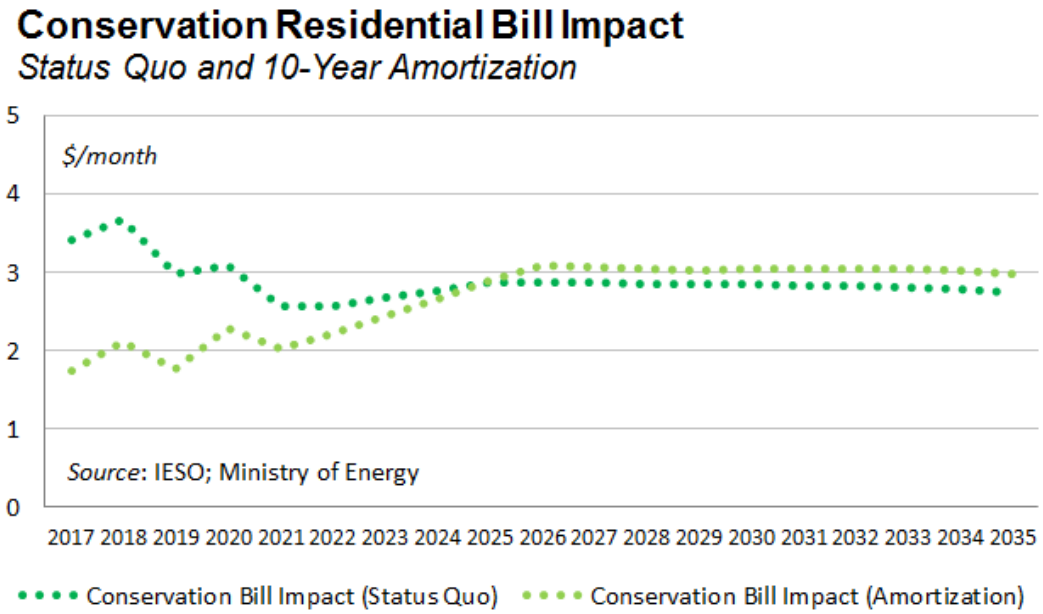
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

- As shown before the positive impact to residential ratepayers is very limited (between $8 and $9 per month) while the impact to the Province's fiscal position would be material (about $1.2 to $1.5 billion a year).

# Appendix

# Electricity Consumer Classes

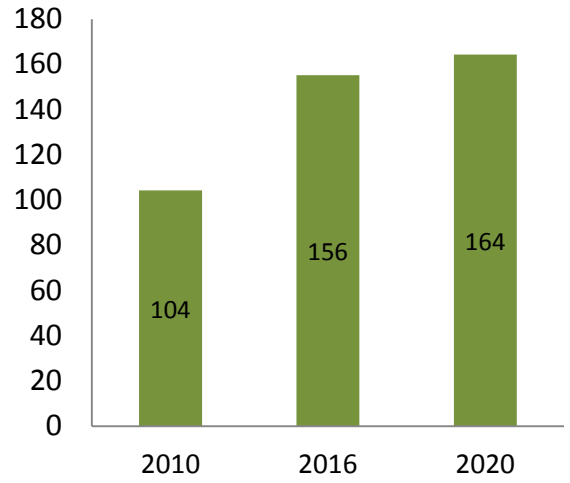
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

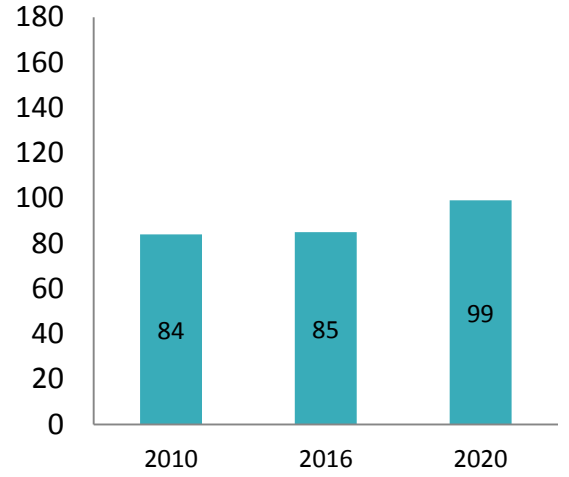
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

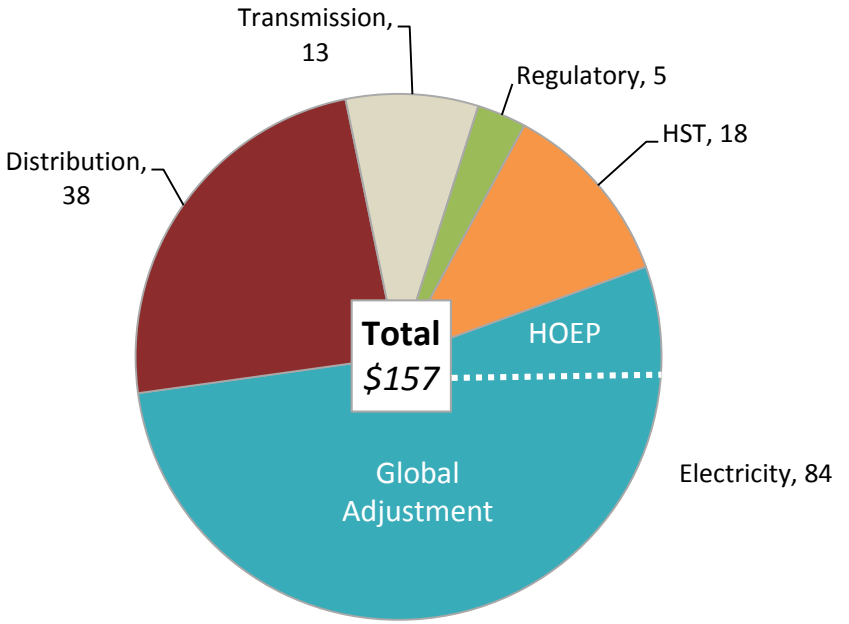
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



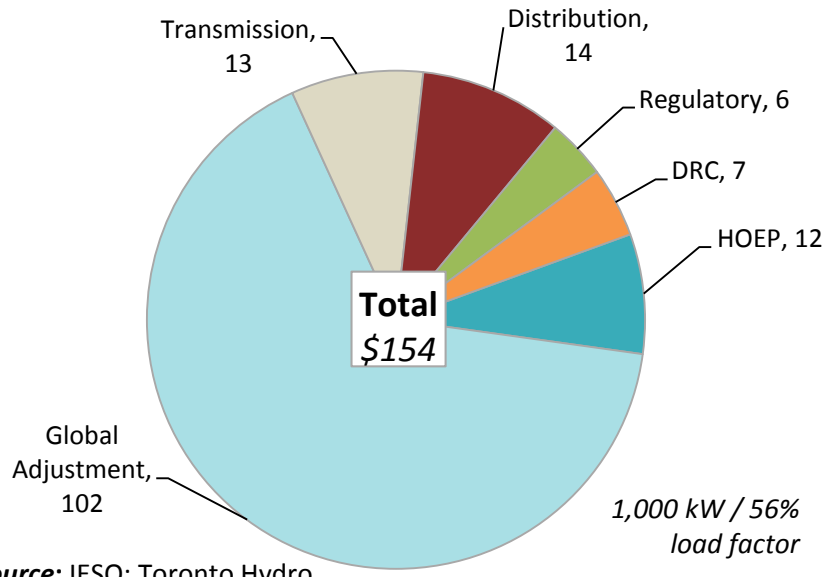

***Source*: OEB, Toronto Hydro**

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

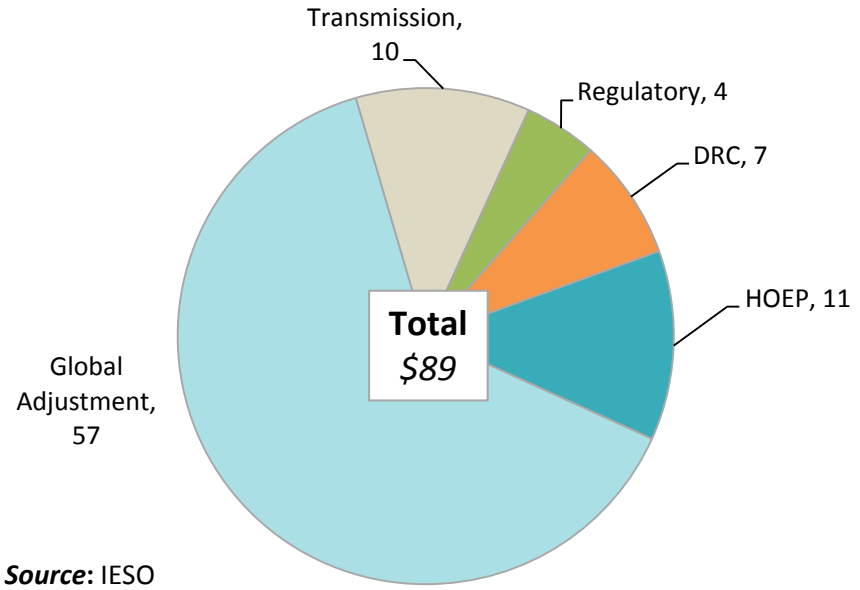
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



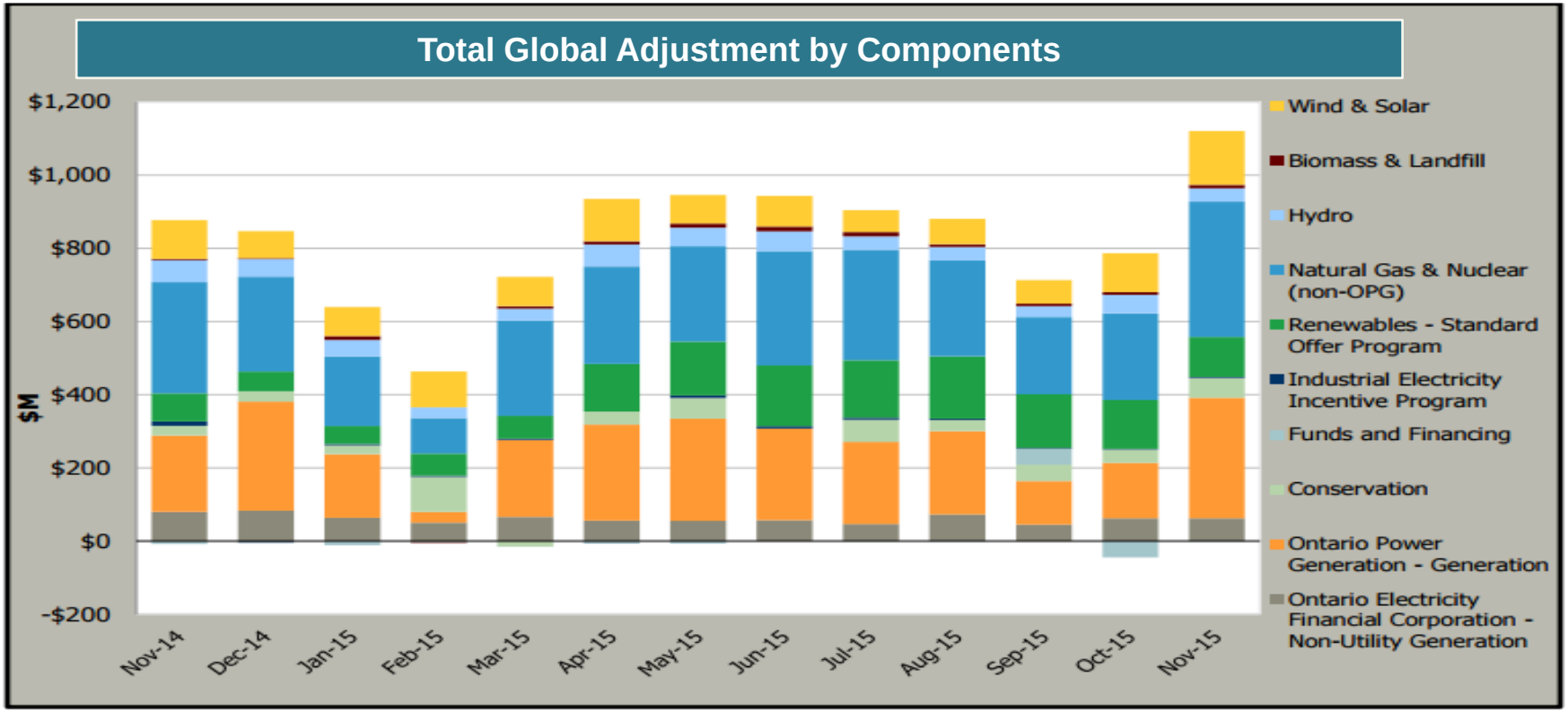

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement ~~GEIA~~ renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

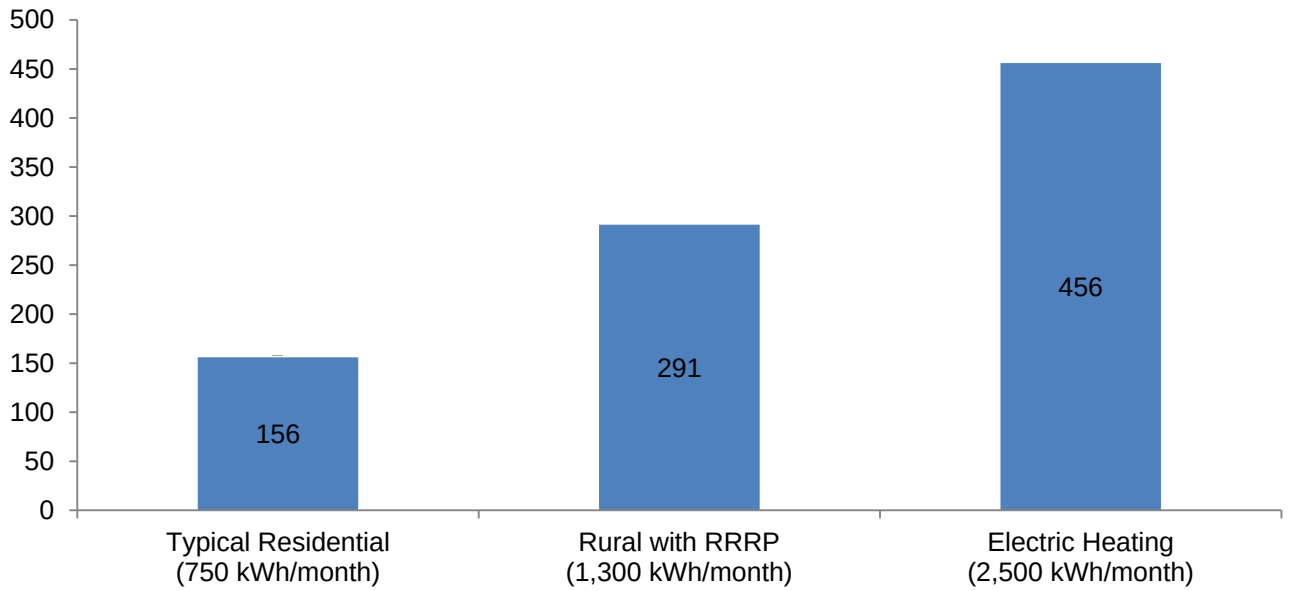
- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate before tax, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II) and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in costs; and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 ~~Long-Term Energy Plan (2013~~ LTEP~~)~~ forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

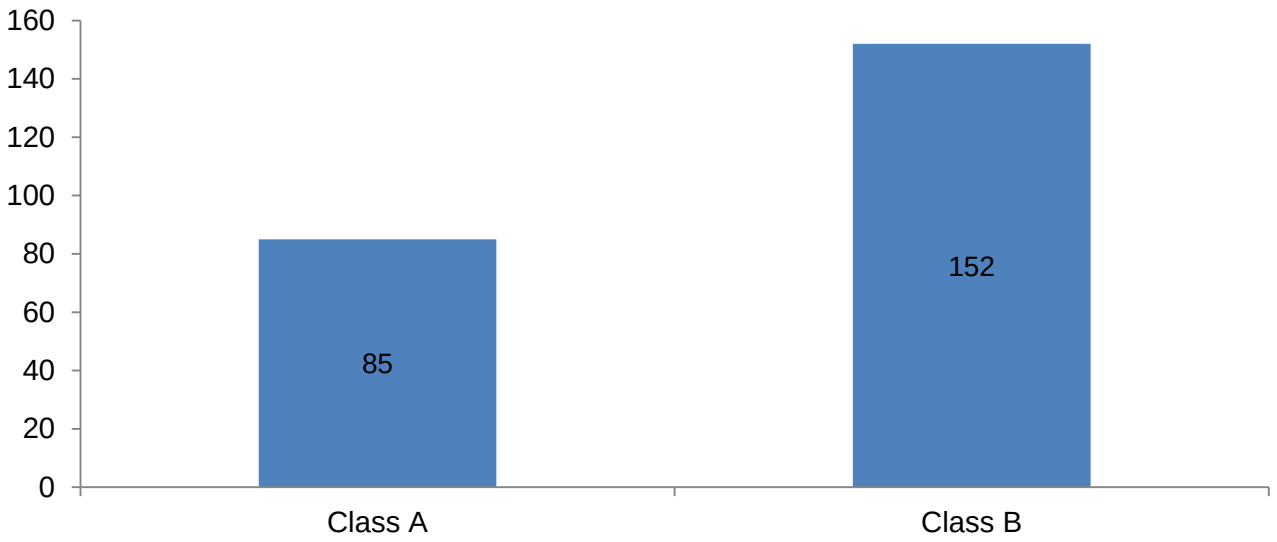



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Current Status on Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from November LRC Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion and before considering any additional funding from the tax base.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total decrease on typical monthly bill** | **8.38** | **8.23** | **7.75** | **9.26** | **8.52** | **8.17** | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total increase on industrial bill** | **19.96** | **18.97** | **18.34** | **17.14** | **14.45** | **13.7** | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of about $450 ~~[placeholder for OFA]~~ on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $30 ~~20 to $35~~ million annual fiscal pressure in 2017 to the province ~~[TBC by OPG / OFA]~~ based on new borrowing and increasing to about $70M by 2021.

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.
- A summary of the annual fiscal impacts of the proposed initiatives is presented in the next slide.

# Proposed Taxpayer Funded Electricity Price Mitigation

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | | | | |
| 7. DRC Ended for Class B | | | | | |
| 8. Other | | | | | |
| **TOTAL** | **1195** | **3,421** | **3,152** | **3,177** | **3,191** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.2 billion by 2020-21. That is a 67% increase from the current forecast for 2016-17.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESBP) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.

- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.

- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.

- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

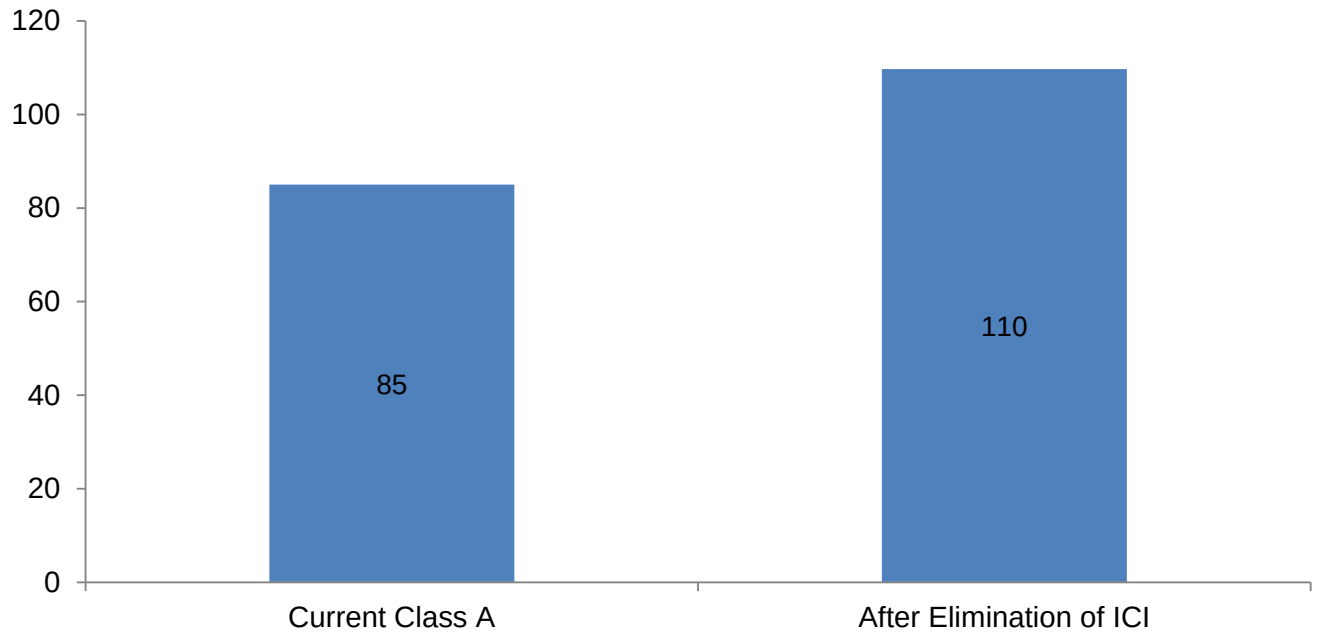
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

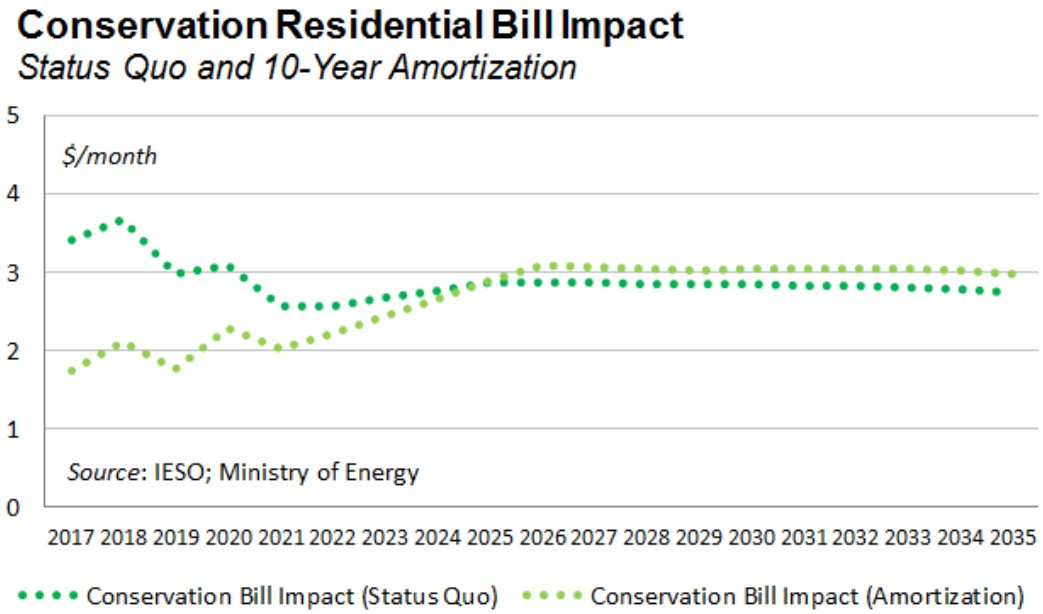
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

- As shown before the positive impact to residential ratepayers is very limited (between $8 and $9 per month) while the impact to the Province's fiscal position would be material (about $1.2 to $1.5 billion a year).

# Appendix

# Electricity Consumer Classes

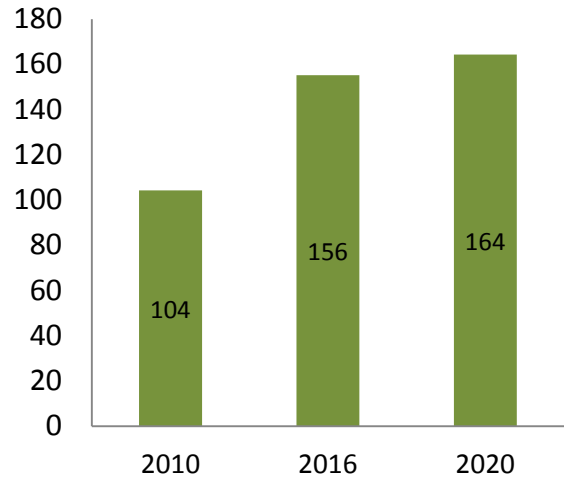
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

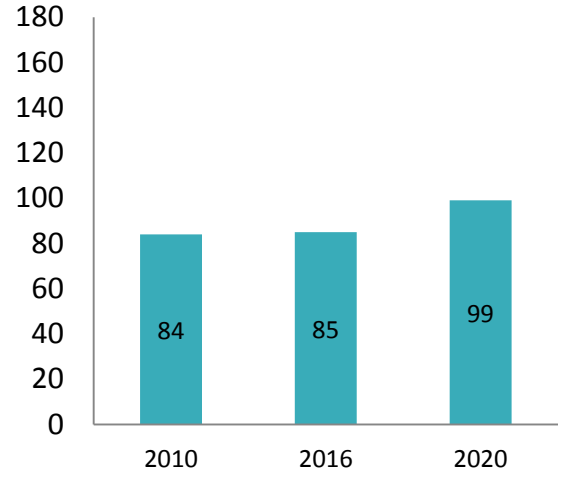
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

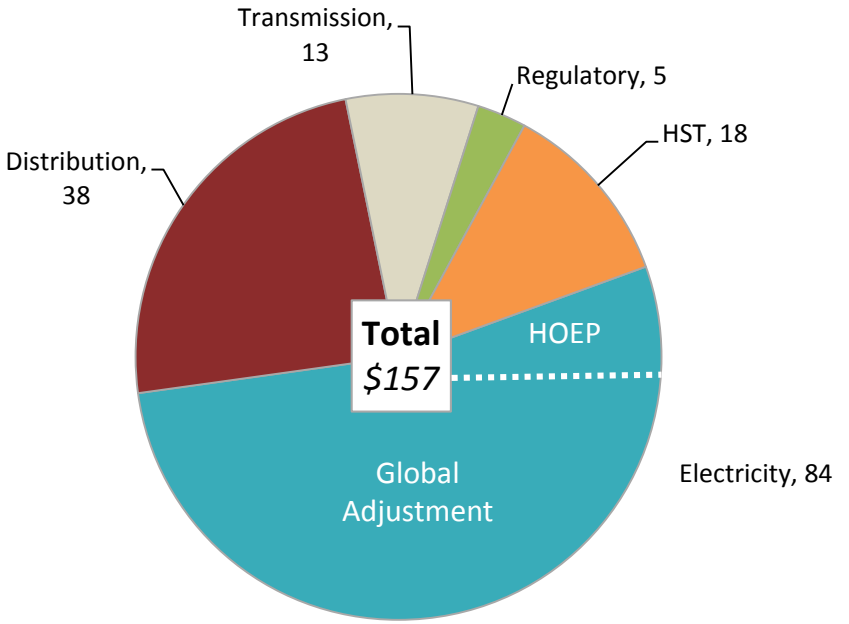
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



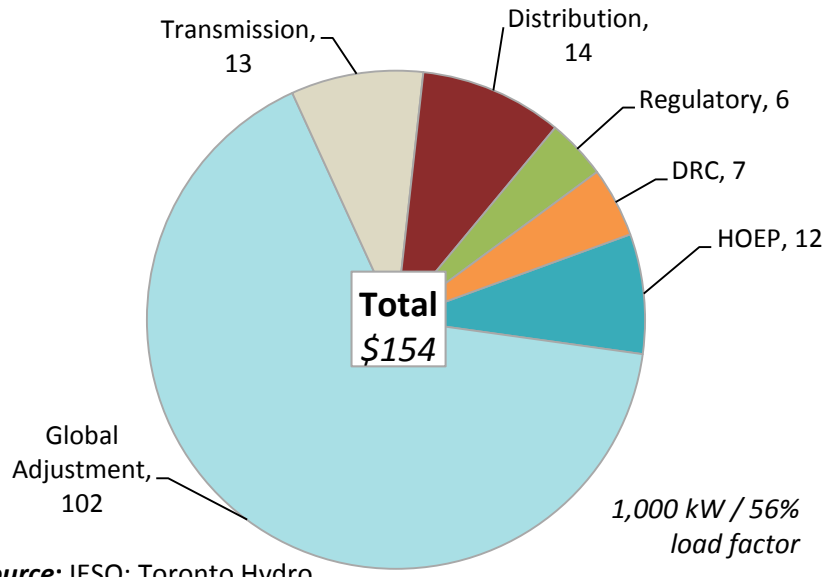

***Source*: OEB, Toronto Hydro**

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

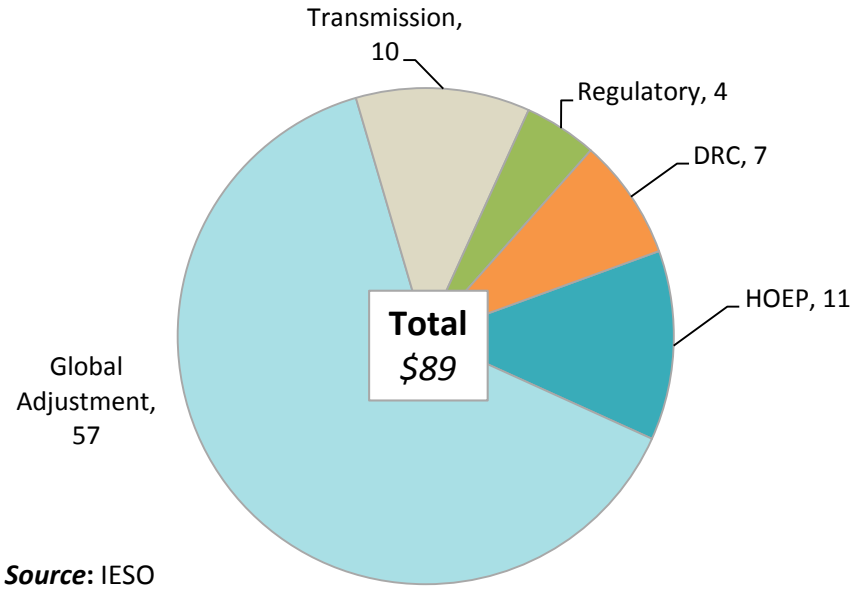
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



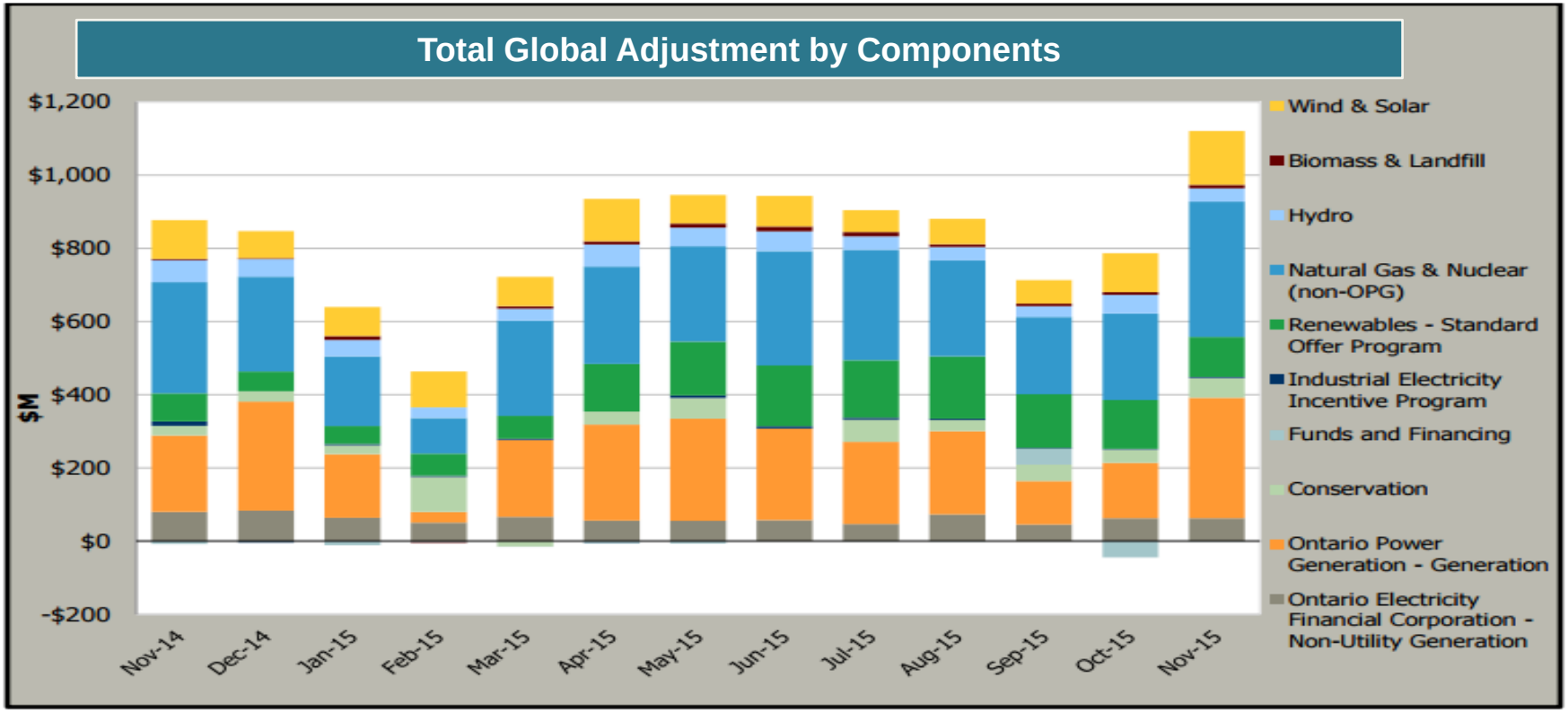

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

DRAFT

# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

DRAFT

# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost [about $1.2 to $1.5 billion per year in new fiscal costs].
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 billion in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time), with the total tax-based costs rising to about $3.4 billion in 2017-18.
  - These existing mitigation costs are not presented in Energy's deck.
  - Also not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

DRAFT

# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

# Energy's Proposals

Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded. They could be upwards of $2 bn/year, (plus the departure tax), which is not included in the fiscal plan, which would challenge the path to balance.

- OESP & RRRP (Total of about $0.4 Bn/yr): This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI -- About $900+ M/yr): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes that about 30% price increase (from $85/MWh to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
  - As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $100 million).

- Departure Tax: As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.
  - This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
  - Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

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  - Lowering of the debt interest paid by OPG (about $30 – 70 million/yr between 2017 and 2021),

DRAFT

# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
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  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
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# Proposed Taxpayer Funded Electricity Price Mitigation
(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
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| 7. DRC Ended for Class B | | | | | |
| 8. Other | | | | | |
| **TOTAL** | **1195** | **3,421** | **3,152** | **3,177** | **3,191** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.2 billion, or more, by 2020-21. That is about a 60% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
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1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

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*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

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*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

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*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

## History of Northern Industrial Electricity Price Relief

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*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

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*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

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| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon; John Kim; Emily Kerr; Darren Scanlan |
| **Cc:** | Gavin He |
| **Subject:** | RE: Potential Rate Mitigation |
| **Date:** | Tuesday, December 06, 2016 3:34:56 PM |
| **Attachments:** | Price-Mitigation - CEFD Slides-Dec6-2016_v3.pptx |

Hi,

It keeps evolving.

Ron

---

**From:** Ronald Kwan
**Sent:** December-06-16 14:52
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi,

Attached is the latest draft.

Ron

---

**From:** Ronald Kwan
**Sent:** December-06-16 13:40
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi,

As discussed, a work-in-progress. Input welcome.

Ron

---

**From:** Ronald Kwan
**Sent:** December-05-16 20:14
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** Fwd: Potential Rate Mitigation

Hi,

Lets meet in the morning to discuss.

We'll need a product for EOD. Could be an annotated slide deck, as well as a markup. Suggestion on any other formats?

Ron

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Date:** December 5, 2016 at 8:02:36 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
> **Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>
> **Subject: Fw: Potential Rate Mitigation**
>
> Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.
>
> From: Katona, Keley (ENERGY)
> Sent: December 5, 2016 7:44 PM
> To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)
> Subject: FW: Potential Rate Mitigation
>
> Hi,
>
> See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?
>
> If there are questions, I’m happy to discuss.
>
> Thanks,
> Keley
>
> From: Imbrogno, Serge (ENERGY)
> Sent: December-05-16 7:41 PM
> To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
> Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

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# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost.
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 bn in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time).
  - These existing mitigation costs are not presented in Energy's deck.
  - Also not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

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# Context: Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* * Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

# Energy's Proposals

Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded. They could be upwards of $2 bn/year, (plus the departure tax), which is not included in the fiscal plan, which would challenge the path to balance.

- OESP & RRRP (Total of about $0.4 Bn/yr): This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI -- About $900+ M/yr): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes the about 30% price increase (from $85/MWH to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
  - As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $xxx million).

- Departure Tax: As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.
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| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Gavin He |
| **Cc:** | Emily Kerr; Francisco Chinchon; John Kim; Darren Scanlan |
| **Subject:** | RE: Potential Rate Mitigation |
| **Date:** | Thursday, December 08, 2016 5:14:09 AM |

Thanks Gavin.

Ron

**From:** Gavin He
**Sent:** December-07-16 11:48 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Subject:** RE: Potential Rate Mitigation

Hi Ron,

I have consolidated the comments from Francisco and Emily, and I have compared this to the markup version we provided to DMO and TBS. Below is the list of proposed edits that were not accepted:

- The charts on slide 8&9, the proposed total decrease/increase on bills impacts were not included.
- On slide 10, "before the planned ICI expansion" was not added to the end of the 3rd bullet point.
- On slide 13, the typo "OESB" was not fixed.
- On slide 24, the DRC charge "$0.007/kWh" was not corrected.
- Slide 25 – additional bullet points were added; however, our proposed edits were not accepted.
- On slide 29, our proposed bullet "As shown before the positive impact to residential ratepayers is very limited from the proposals with ratepayer impacts estimated by Energy…" was not included.
- Slide 33 & 34 are new, which include jurisdictional comparison charts.

Hope that helps.

Regards,
Gavin He

-----Original Message-----
From: Emily Kerr
Sent: Wednesday, December 07, 2016 11:01 PM

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: RE: Potential Rate Mitigation

Hi,

Other than the addition of the fiscal slide the deck isn't significantly different from the previous version. There are a couple of additional slides in the appendix showing a jurisdictional comparison of industrial electricity prices (33) and industrial prices in Ontario by sector (34). On slide 24 (ending DRC for class B) the additional "0" in the DRC rate is still missing.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Wednesday, December 07, 2016 10:27 PM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: FW: Potential Rate Mitigation

Hi,

Comments?

Ron

-----Original Message-----
From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
Sent: December-07-16 7:10 PM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Elizabeth Mendes (MOF) <Elizabeth.Mendes@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
Subject: Fw: Potential Rate Mitigation

FYI - tomorrow's deck.

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: McLean, David (MOF) <David.McLean@ontario.ca>
Sent: Wednesday, December 7, 2016 6:56 PM
To: Pearce, Christopher (MOF); Young, Gwendolynne (MOF); Ize-Dukuze, Marilyn (MOF); Clarke-Darshanand, Jamille (MOF)
Subject: Fw: Potential Rate Mitigation

For MPC tomorrow

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
Sent: Wednesday, December 7, 2016 6:55 PM
To: Kwamena, Boafoa (CAB); McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB)
Subject: FW: Potential Rate Mitigation

FYI

From: Imbrogno, Serge (ENERGY)
Sent: December-07-16 6:51 PM
To: Orsini, Steve (CAB); Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: RE: Potential Rate Mitigation

HI,
Here's the latest version of the deck. We tried to incorporate comments from MOF / TBS. This version is with my MO for review but it will likely be the version we will use at Major Projects tomorrow. Keley can share with your EAs.
Serge

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

**From:** John Kim
**To:** Ronald Kwan; Francisco Chinchon
**Subject:** RE: Price Mitigation & Accounting Meeting
**Date:** Saturday, January 21, 2017 2:14:33 PM

---

Just went through the chain of emails. I find the idea of creating an asset via preferreds. It just happens as you pointed out that goes against the policy positions taken by the government, including , e.g. not forcing consolidation.

---

**From:** Ronald Kwan
**Sent:** Saturday, January 21, 2017 1:00 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: Price Mitigation & Accounting Meeting

Yes, yesterday John and I noted that latter risk too on the RPP treatment.

Ron

On Jan 21, 2017, at 12:55 PM, Francisco Chinchon <Francisco.Chinchon@ofina.on.ca> wrote:

> Hi,
>
> I'm not sure how this would not represent a fiscal risk at the least.
>
> OEFC would remain exposed to LDCs ability to recover and service the debt in the future. Also, the lack of matching between the asset and the liability that is being introduced would remain and become structural to LDCs and would affect ratepayers differently if not all participate.
>
> As you suggest, I don't see why LDCs would agree to carry the debt. They would be assuming a massive regulatory/accounting risk. Even if well structured it may prevent shareholders (municipal or private) from being able to fully realize their equity in the future.
>
> With respect to the RPP model is it off the books because its short-term nature? I wonder if this will put the whole model at risk forcing to bring everything on the books.
>
> Francisco
>
> On Jan 21, 2017, at 12:13 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> > Hi,

FYI and comments -- and not for further distribution.

Thanks,
Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 21, 2017 at 12:09:55 PM EST
> **To:** Gadi Mayman <Gadi.Mayman@ofina.on.ca>
> **Cc:** "Scott Thompson (CAB)" <Scott.Thompson@ontario.ca>, "Nancy Kennedy (MOHLTC)" <Nancy.Kennedy@ontario.ca>
> **Subject: Re: Price Mitigation & Accounting Meeting**
>
> I think Steen is putting his hopes on the RPP as a model, writ larger. There seemed to be quite a lot of interest in IESO"s "market books" treatment  That said, Cindy did raise the issue of how the AG might feel about this, and her general dislike of rate-regulated accounting.
>
> And That said on the RPP.  I agree that an LDC plus model should be explored more fully, but, like other options, it arguably can be seen as a shift  from past policies & narrative of the government on LDCs.
>
> The risk on recovery and impact on the balance sheet, even with the government offering to help out, could be seen as creating a disincentive for further private-sector interest in the sector. Not sure if it would no net push for or impede consolidation, but likely at a lower value for municipalities.
>
> LDC consolidation could be seen as more of an Energy interest than Finance's, though we have supported it in various documents and initiatives.
>
> If government policy is to take on more responsibility for financing the sector, maybe it is consistent to also have the government take on more equity and rely less on private sector capital, debt or equity. But that would be seen as a policy shift too.
>
> Good to flesh out the options, so that the government can make a decision with more information on accounting and other considerations than was provided at MPC
>
> Ron

On Jan 21, 2017, at 11:51 AM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

I can't imagine that there's a perfect solution to this challenge, but if we aren't able to come up with something that, blemishes and all, gets the 25% reduction they're looking for, we're going to end up swallowing all of it in the fiscal plan. Maybe something complex but reasonably viable allows an announcement to be made soon with implementation later in the year - summer might be a good time when bills peak - to allow time to work out the wrinkles.

Original Message

From: Ronald Kwan

Sent: Saturday, January 21, 2017 11:41 AM

To: Gadi Mayman

Cc: Scott Thompson (CAB); Nancy Kennedy (MOHLTC)

Subject: Re: Price Mitigation & Accounting Meeting

A few quick comments:

There are non-LDC direct connects, so the policy would have to deal with those. Presumably they are not to be debt-financing. Could be carved out and the cost variance for their load still done through the Province, but without the rate-regulated accounting. It would limit the fiscal impact.

For LDCs there are municipally-owned and private sector ones. So they may respond differently.

And we may need to not just finance this but also their capex (IO has a program for municipally-owned ones) depending on how public capital markets view the balance

sheets with the preferred equity.

LDCs (as should the Province) would also be concerned about people going off grid and never paying in the future "their share" of the accumulated debt. They may argue for exit fees that other jurisdictions have had for their "stranded debt". But I think the government would be sensitive to visibility of a debt amount accruing by customer and a view of forced borrowing by the customer (as compared to debt-financed by the government).

Not sure if Steen had discussed the external advisors' views on the LDC option yet.

Ron

> On Jan 21, 2017, at 10:53 AM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:
>
> So let's get creative here. The LDCs would give us the accounting treatment we need, but lack the balance sheet. The Province has the balance sheet space, arguably, but not the appropriate accounting ability, which, I assume, is because of the way OEFC or the IESO are consolidated on the Province's books and because neither of us can use rate regulated accounting. As a solution, what if the IESO bills the LDCs, but instead of the LDCs taking on debt to pay the IESO, we have OEFC borrow the money and invest in an equal amount of equity of the LDC (could be common, but maybe preferred is better so it doesn't mess up the other shareholders in privately, or partially privately,

held LDCs like Hydro One). As we get later in the process many years from now and the repayment begins, we'd begin unwinding the equity and paying down OEFC debt.

Sounds crazy, but maybe this, or something like it, puts the debt where it's affordable, gives the accounting treatment we need to not have this impact the fiscal plan, and achieves the policy goal of spreading the GA costs over the actual life, rather then the contractual life, of the contracts.

Is it worth suggesting this to Energy and the internal and external accountants?

Original Message

From: Thompson, Scott (MOF)

Sent: Saturday, January 21, 2017 7:33 AM

To: Ronald Kwan; Gadi Mayman; Nancy Kennedy (MOHLTC)

Subject: Re: Price Mitigation & Accounting Meeting

Thanks Ron. Good update

Scott

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Ronald Kwan

Sent: Friday, January 20, 2017 11:39 PM

To: Thompson, Scott (MOF); Mayman, Gadi (OFA);

Kennedy, Nancy (MOF)

Subject: Price Mitigation & Accounting Meeting

Hi Scott, Gadi, Nancy,

Steen organised a meeting this afternoon with OPCD, IESO and KPMG, as well as various government / OPS staff.

Steen had asked me to talk about the OEFC and DRC, as he had said that some folks were under the impression that OEFC and the DRC could be a model that could be useful for a structure for the GA option.

I explained at the meeting that OEFC was not a rate regulated entity and does not have regulatory assets, and that it's consolidated into Public Accounts such that its shortfalls in revenues vs expense negatively affect the Province's bottom line. I noted that was the case when OEFC did not recover its full NUG contract costs and when it funded the 2002 price freeze. I noted that even with the current structure with legislative cost recovery of NUG costs since 2005, OEFC still records the NUG contract-related expenses and revenues, and if they were ever different there would be a bottomline impact.

Steen was aware of that, but just wanted to have that recounted and move on in the meeting to look at another potential

structure/option.

There was also a brief mention of the LDC option; however, it seemed to have been discussed earlier with KPMG and Pelino (who was there as an external consultant supporting KPMG it seemed) and the view was it was not a viable option, as it would destroy LDC balance sheets by adding too much debt to them relative to their balance sheets. It was also viewed as an option that would take too long to put in place, though there was a feeling that the desired accounting would work in this structure.

Most of the discussion was on how the IESO records the regulated price plan (RPP) variances. Note that in any given period the inflows from RPP customers for electricity does vary from the outflows to pay for the power -- since RPP prices are set every six months to recover costs on a forecast basis, and actuals differ from forecasts, there's a variance. The IESO has a credit facility from the OFA that it can access to cover balances, though the variances are small and short-term compared to the amounts under discussion in the GA option.

The meeting ran long. There was going to be further discussions amongst the accountants from OPCD, IESO and KPMG on how the IESO records the RPP. It wasn't clear if the RPP case would work in the case of the GA option such

that there would not be a bottomline impact.

There was also a brief aside from KPMG and Pelino on how the accounting would work if a third party financial institution got in the middle of this, which was thought to be feasible from a procurement perspective, but way more costly than a government financing of the deferral. As such, folks dismissed this option at the meeting , but I wanted to mention it should it be brought up again. I would think Gadi might have some views on such an option.

I'm not sure if Energy will hold another multi-party meeting or if it will meet just with the various accountants as it prepares to report in to FPC next week.

If I do hear more in the interim, I'll provide an update.

Ron

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and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

**From:** Salman Qadir
**To:** John Kim
**Cc:** Shajee Kathirgamanathan; Gavin He; Adam Prokop
**Subject:** RE: Price Mitigation Deck
**Date:** Tuesday, December 06, 2016 1:43:50 PM
**Attachments:** Price Mitigation Proposals_Dec5-16_v11_CEFDmarkup_withSPFB&SIFB_v2.pptx

---

Hi John,

V2 now incorporates all comments.

Salman

---

**From:** Salman Qadir
**Sent:** Tuesday, December 06, 2016 1:34 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: Price Mitigation Deck

Here is the latest draft. I have not moved that slide that we were creating to the end (after summary) yet (Slide 7).

Z:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016

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**From:** John Kim
**Sent:** Tuesday, December 06, 2016 10:57 AM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** FW: Price Mitigation Deck

Hi Salman,

Let's consolidate SPFB's too.

Thanks,

John.

---

**From:** Emily Kerr
**Sent:** Tuesday, December 06, 2016 10:56 AM

**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Price Mitigation Deck

Hi John,

I have included comments in the attached version of the price mitigation deck on slides 3, 4, 5, 8, 13, 14, 15, 20.

I will be out this afternoon, so could you combine with comments on the deck you will submit to Ron.

Emily

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement ~~GEIA~~ renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

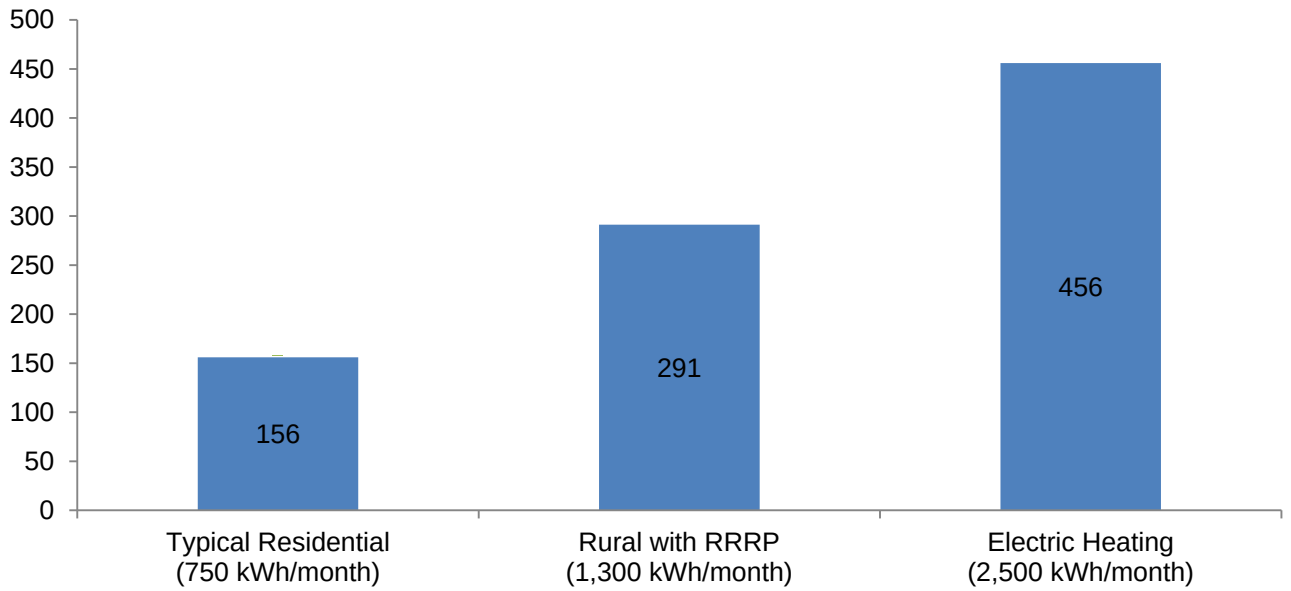
- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate before tax, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II) and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in costs; and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 ~~Long-Term Energy Plan (2013~~ LTEP~~)~~ forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

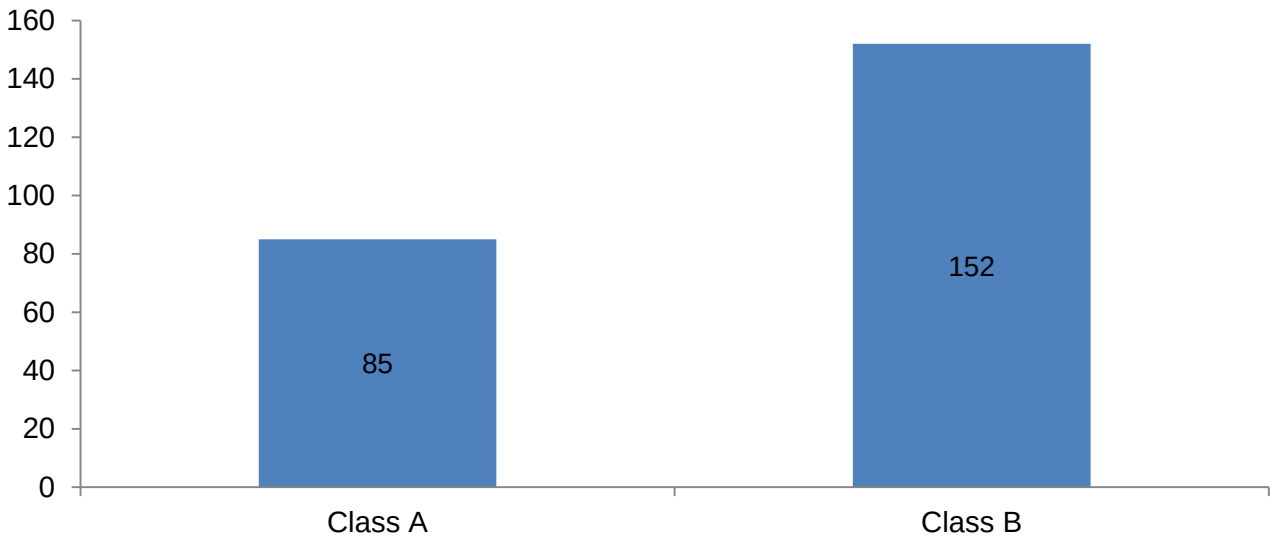



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,200* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,105** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from November LRC Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

SLIDE ADDED BY CEFD

# Taxpayer Funded Electricity Price Mitigation

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | | | |
| OREC | 300 | 1,200* | 1,200* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | 330 | 330 | 330 |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **TOTAL** | **1,195** | **2,105** | **2145** | **2156** | **2156** |
| 1. Electricity Market Renewal Initiative | | TBD | TBD | TBD | TBD |
| 2. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 2. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 3. Fund ICI through Tax Base | | 900 | 900 | 900 | 900 |
| **TOTAL** | **1195** | **3,421** | **3,482** | **3,507** | **3,521** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of $xx [placeholder for OFA] on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $20 to $35 million annual fiscal pressure to the province [TBC by OPG / OFA].

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESBP) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.

- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.

- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.

- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

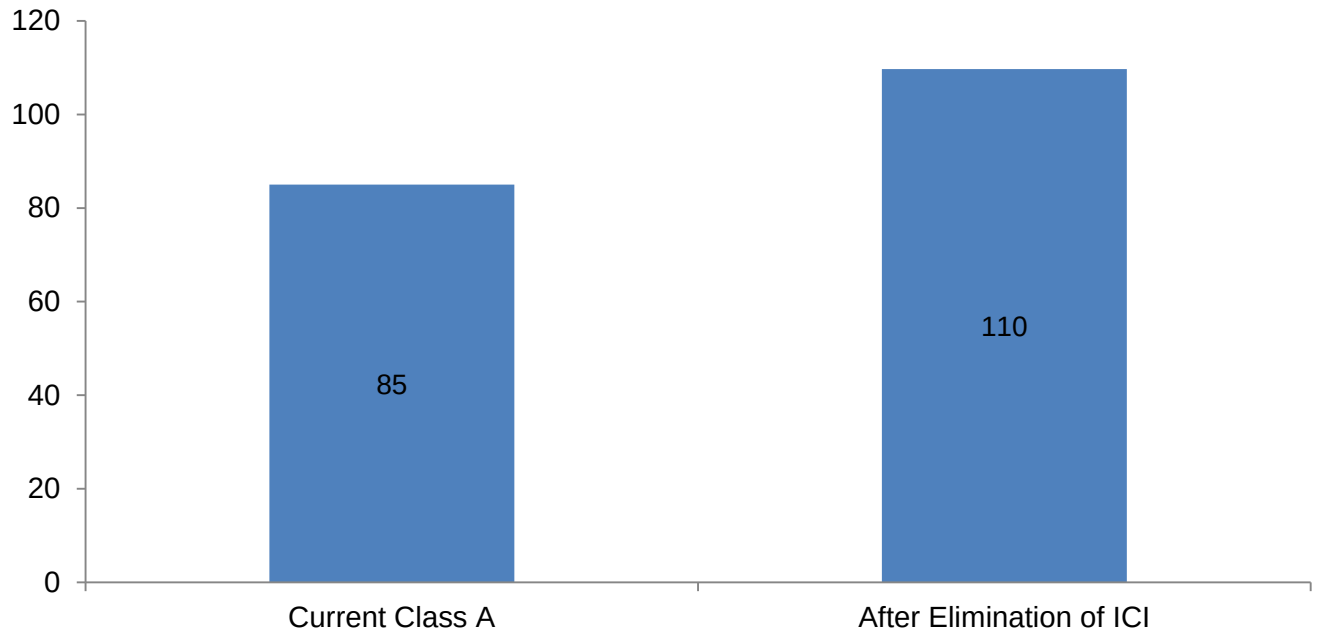
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

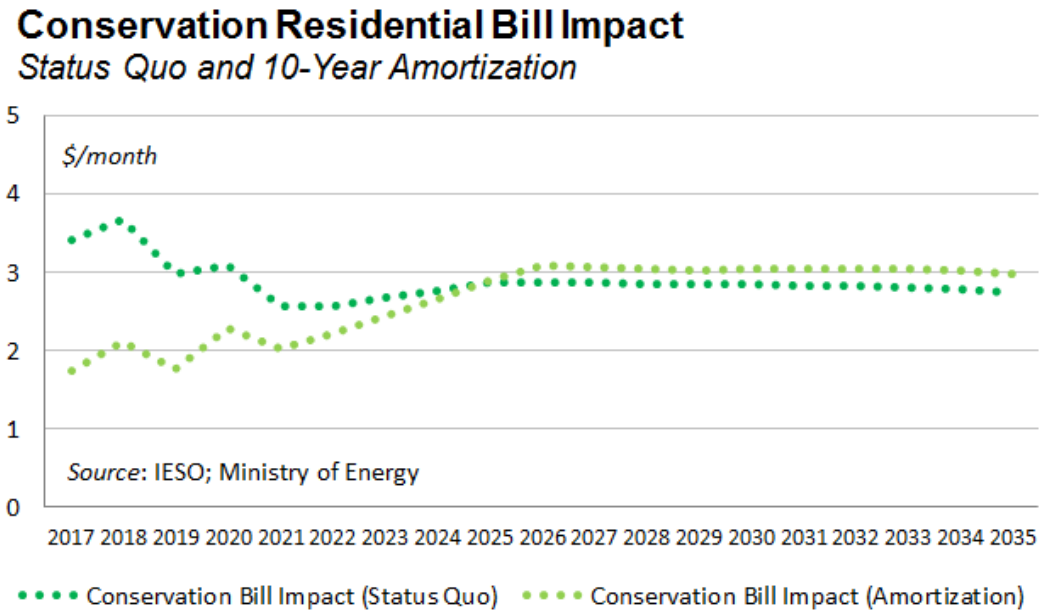
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

# Electricity Consumer Classes

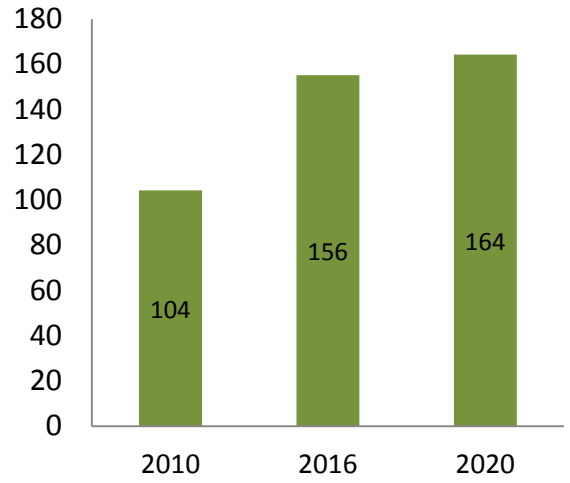
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

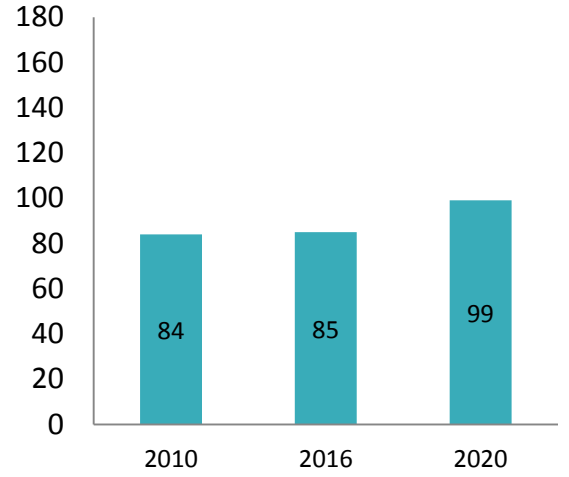
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

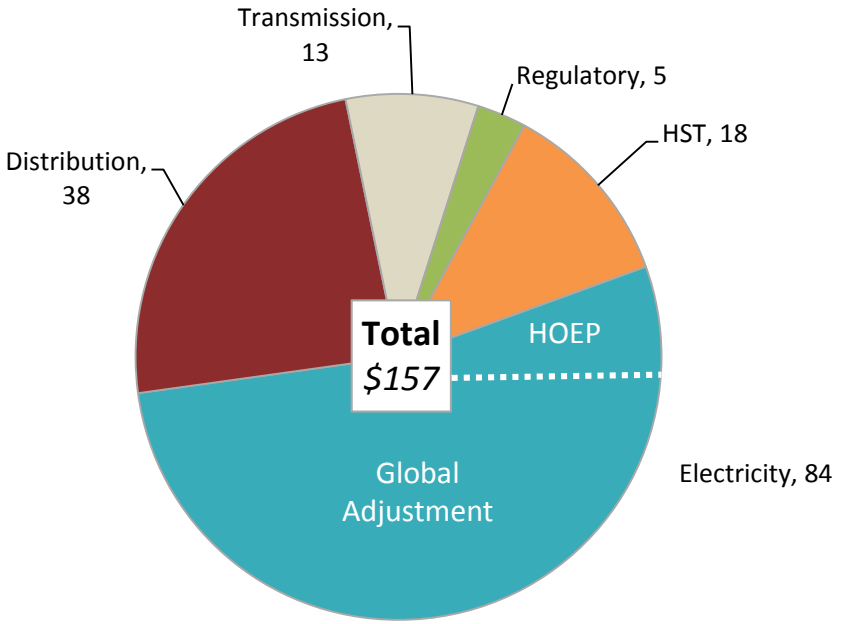
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



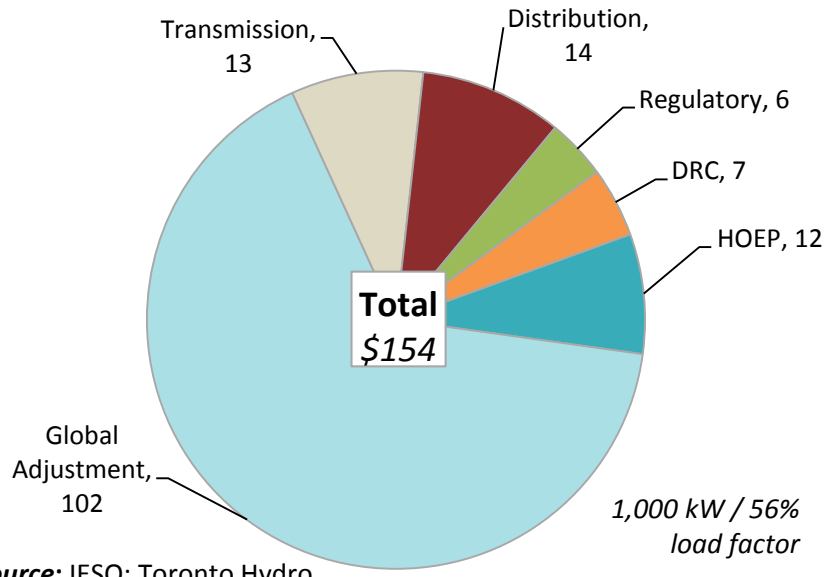

***Source*: OEB, Toronto Hydro**

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

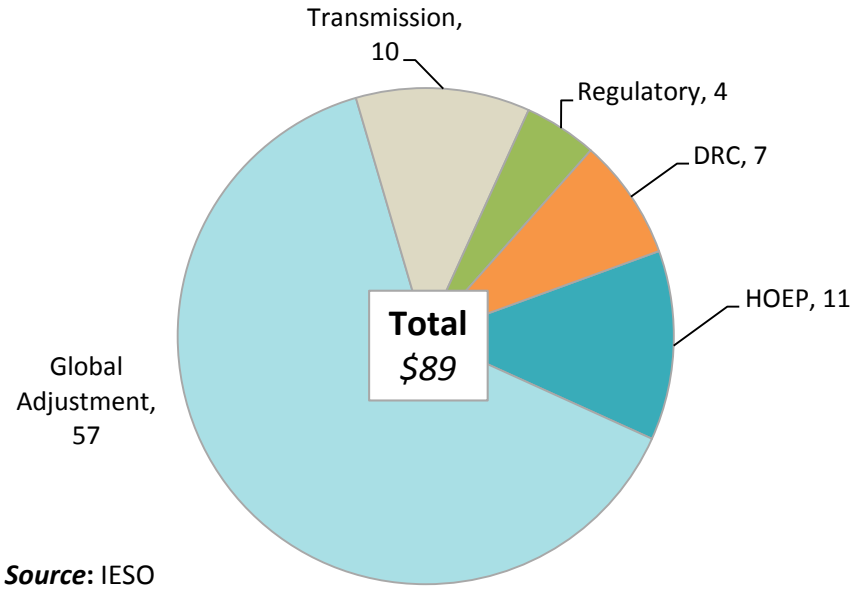
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



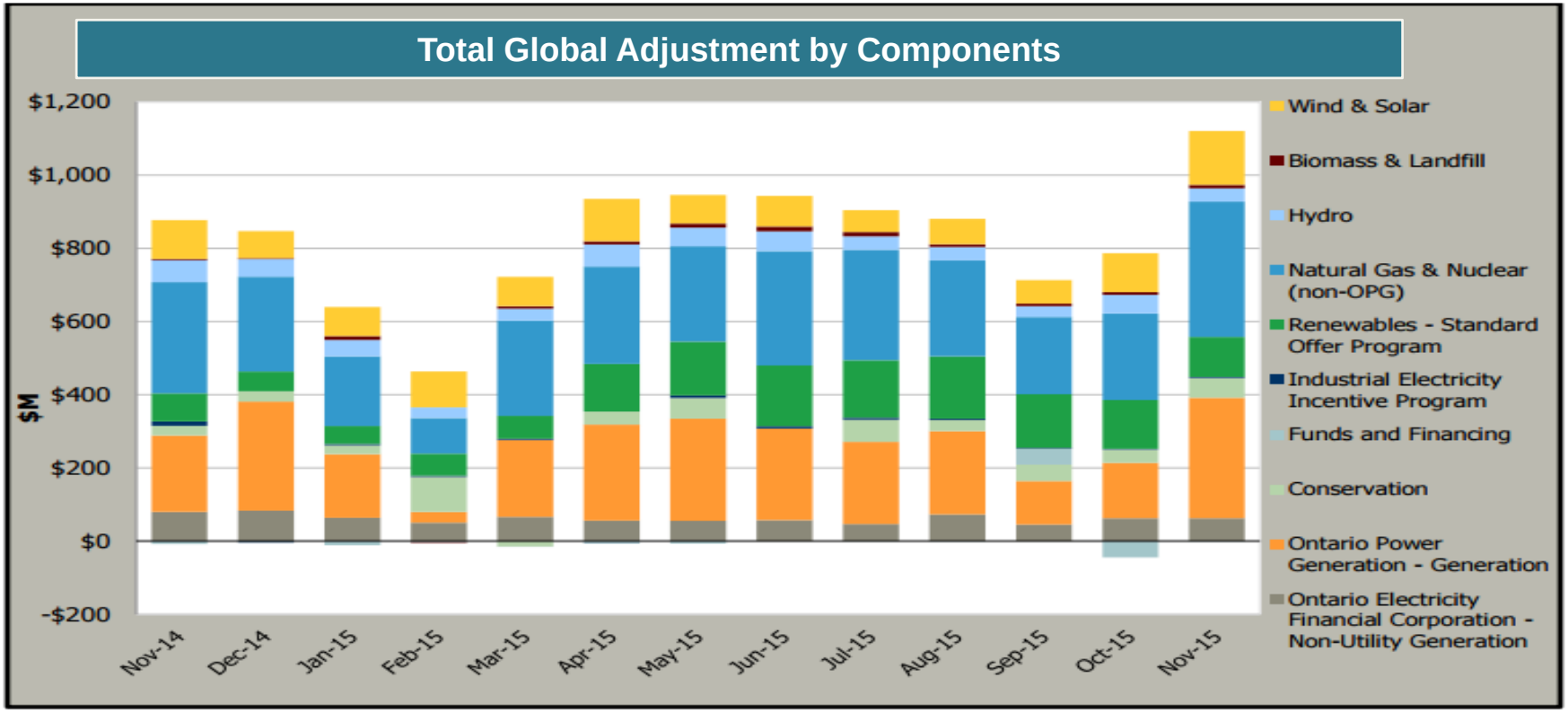

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

| | |
|---|---|
| **From:** | Salman Qadir |
| **To:** | John Kim |
| **Cc:** | Shajee Kathirgamanathan; Gavin He; Adam Prokop |
| **Subject:** | RE: Price Mitigation Deck |
| **Date:** | Tuesday, December 06, 2016 1:33:51 PM |
| **Attachments:** | Price Mitigation Proposals_Dec5-16_v11_CEFDmarkup_withSPFB&SIFB_v1.pptx |

Here is the latest draft. I have not moved that slide that we were creating to the end (after summary) yet (Slide 7).

Z:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016

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**From:** John Kim
**Sent:** Tuesday, December 06, 2016 10:57 AM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** FW: Price Mitigation Deck

Hi Salman,

Let's consolidate SPFB's too.

Thanks,

John.

---

**From:** Emily Kerr
**Sent:** Tuesday, December 06, 2016 10:56 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Price Mitigation Deck

Hi John,

I have included comments in the attached version of the price mitigation deck on slides 3, 4, 5, 8, 13, 14, 15, 20.

I will be out this afternoon, so could you combine with comments on the deck you will submit to Ron.

Emily

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement ~~GEIA~~ renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

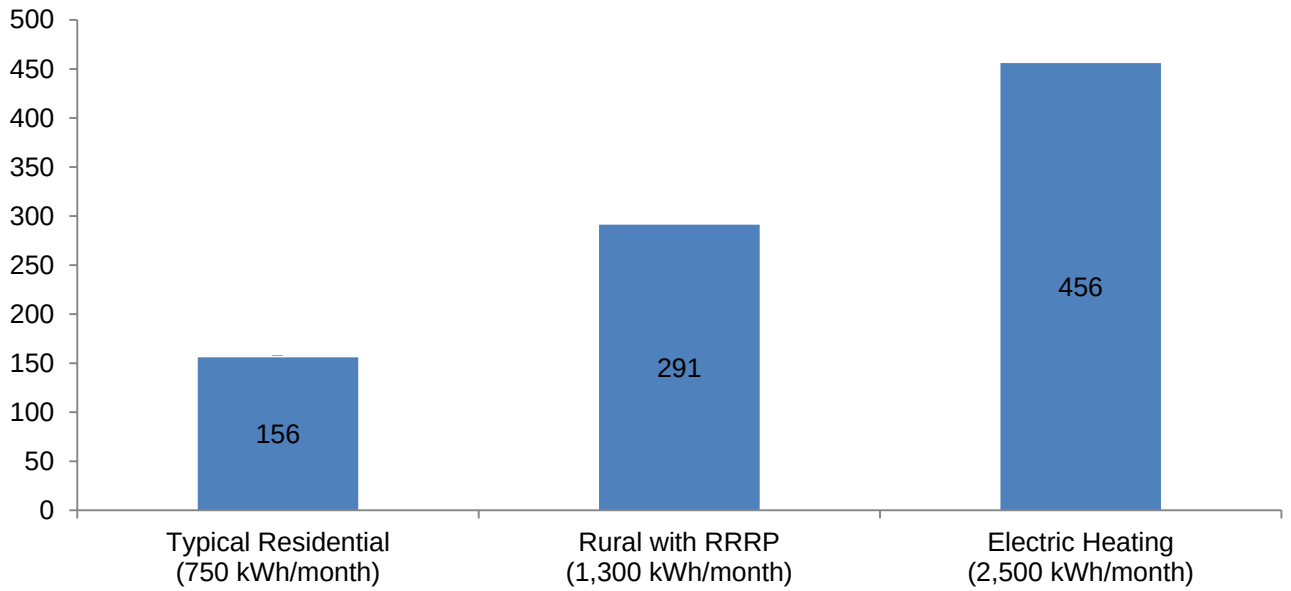
- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate before tax, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II) and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in costs; and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 ~~Long-Term Energy Plan (2013~~ LTEP~~)~~ forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

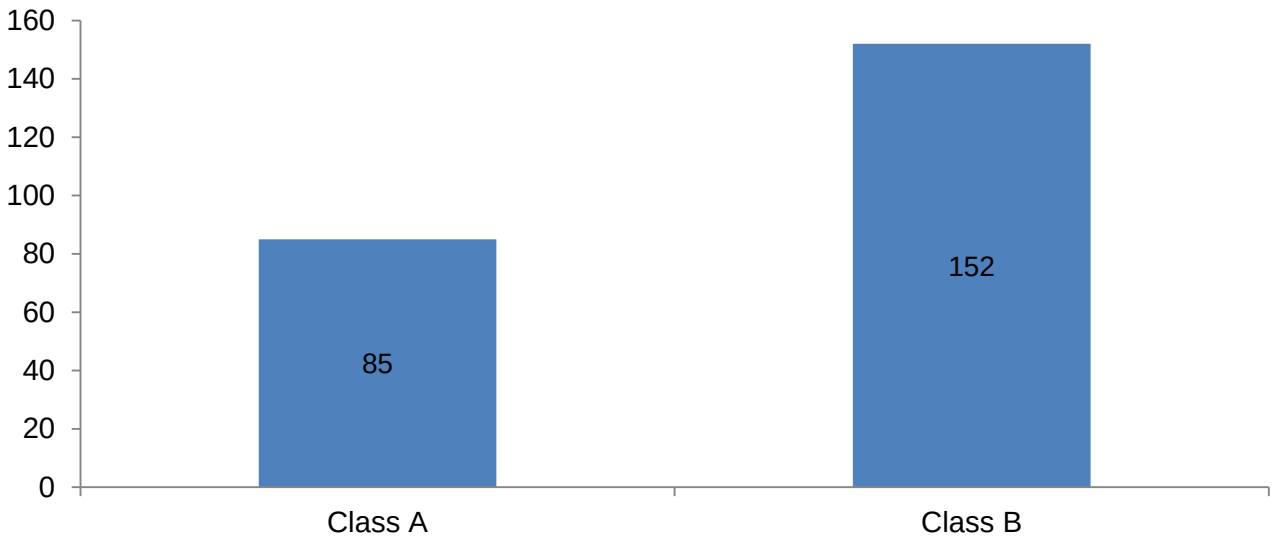



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,200* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,105** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from November LRC Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion.

SLIDE ADDED BY CEFD

# Taxpayer Funded Electricity Price Mitigation

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | | | |
| OREC | 300 | 1,200* | 1,200* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | 330 | 330 | 330 |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **TOTAL** | **1,195** | **2,105** | **2145** | **2156** | **2156** |
| 1. Electricity Market Renewal Initiative | | TBD | TBD | TBD | TBD |
| 2. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 2. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 3. Fund ICI through Tax Base | | 900 | 900 | 900 | 900 |
| **TOTAL** | **1195** | **3,421** | **3,482** | **3,507** | **3,521** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total** | | | | | | | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.

- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of $xx [placeholder for OFA] on the province.

- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.

- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $20 to $35 million annual fiscal pressure to the province [TBC by OPG / OFA].

- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESBP) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.

- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.

- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.

- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

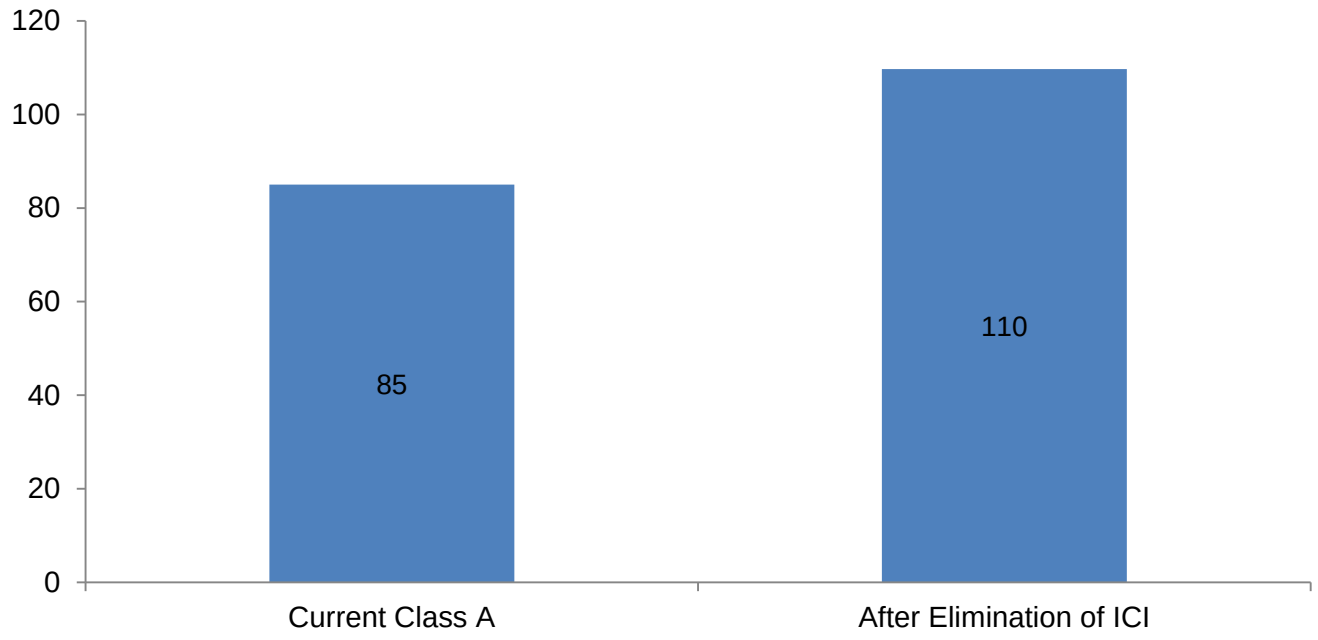
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

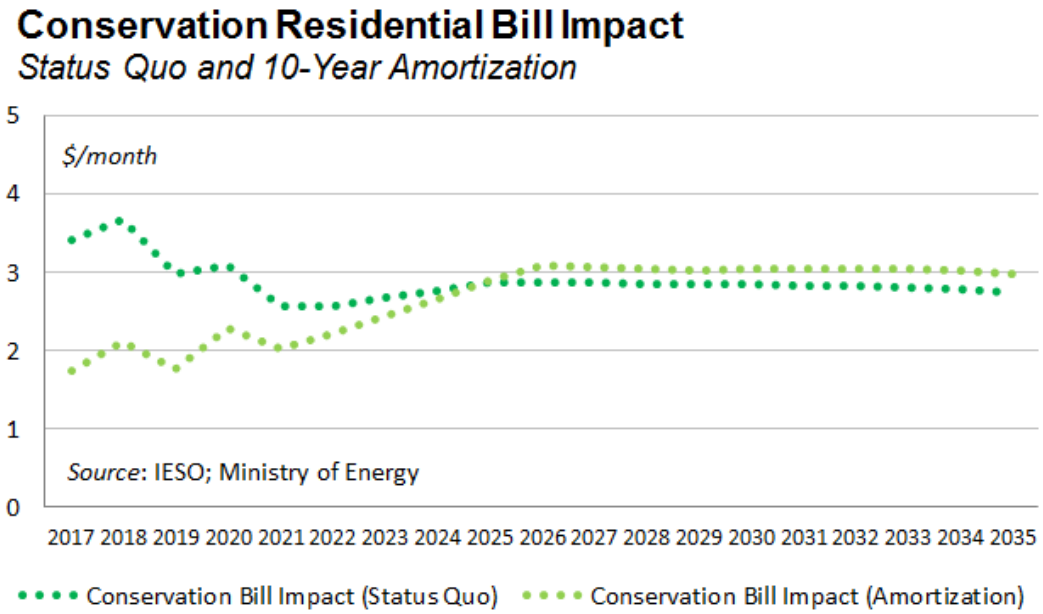
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

# Electricity Consumer Classes

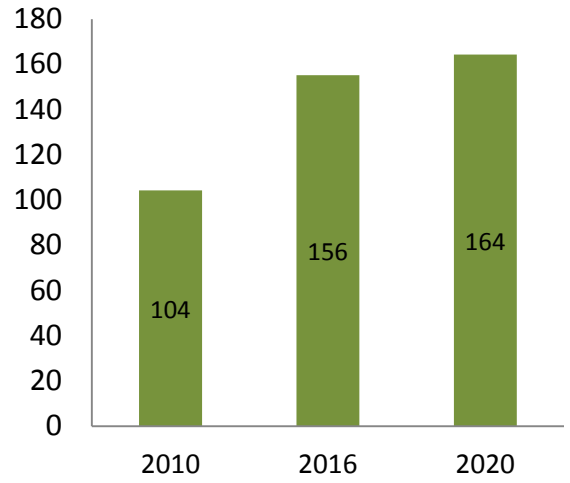
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

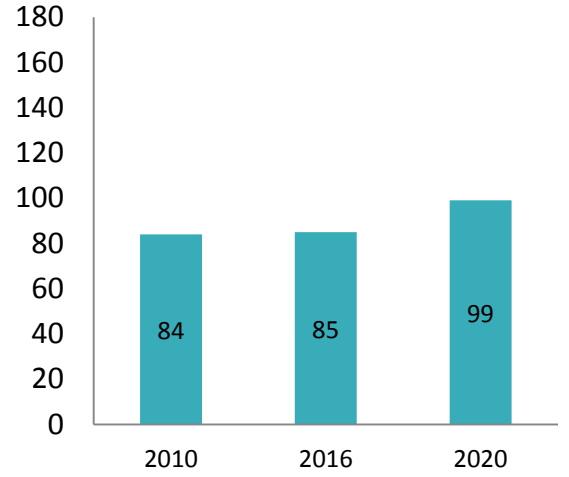
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

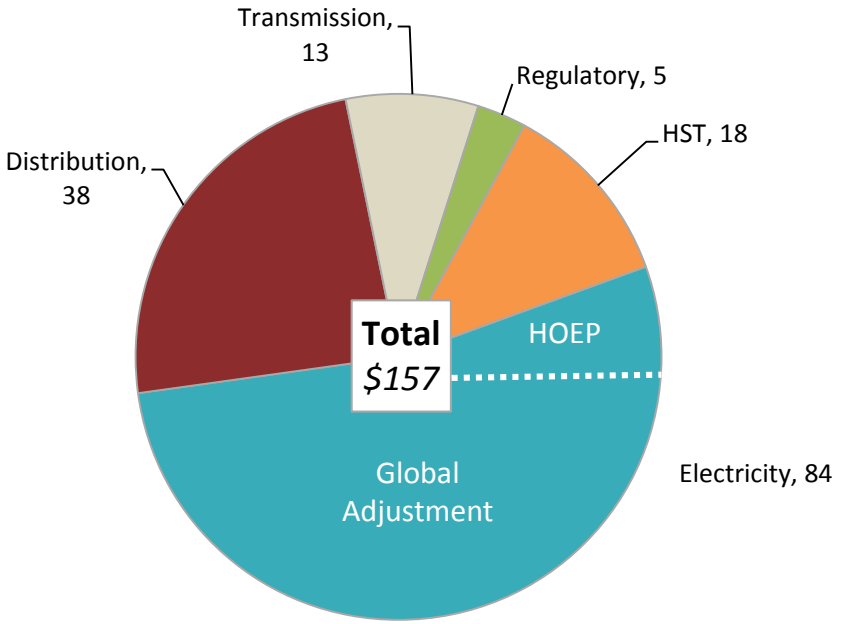
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



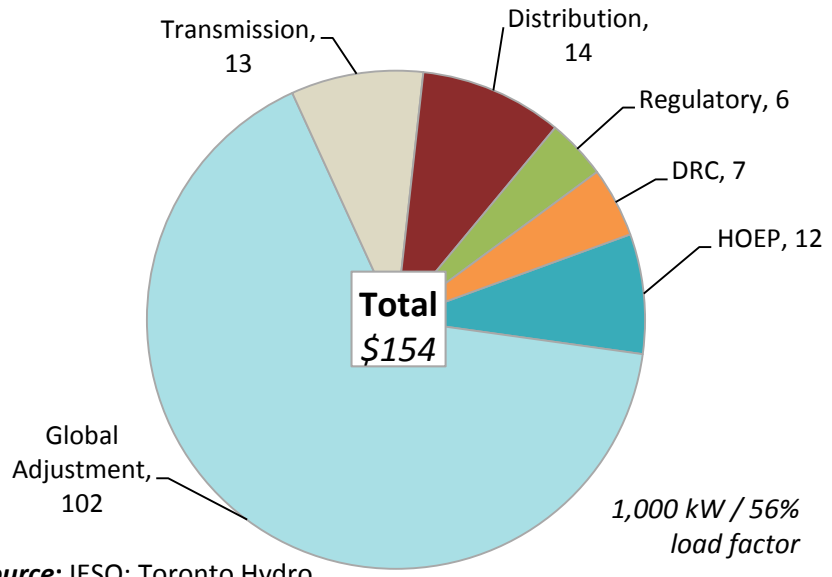

***Source*: OEB, Toronto Hydro**

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

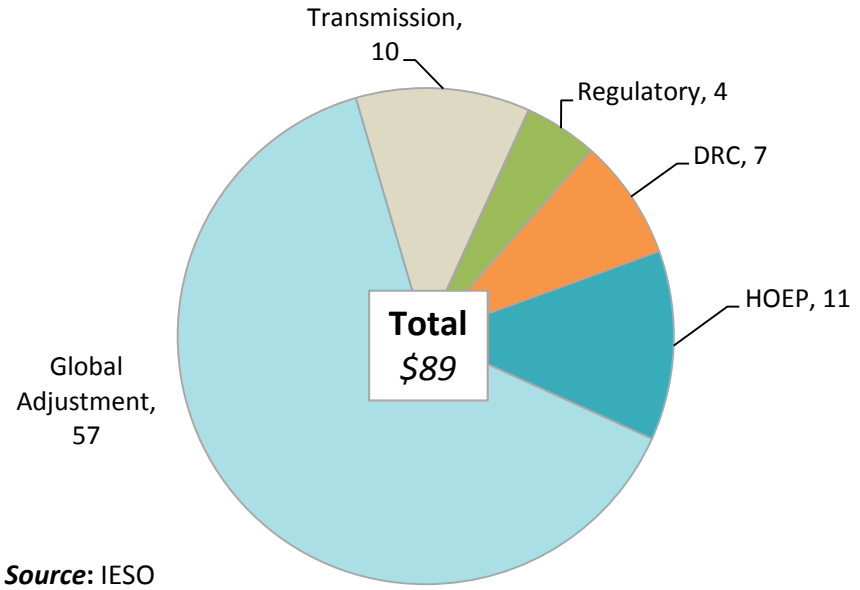
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



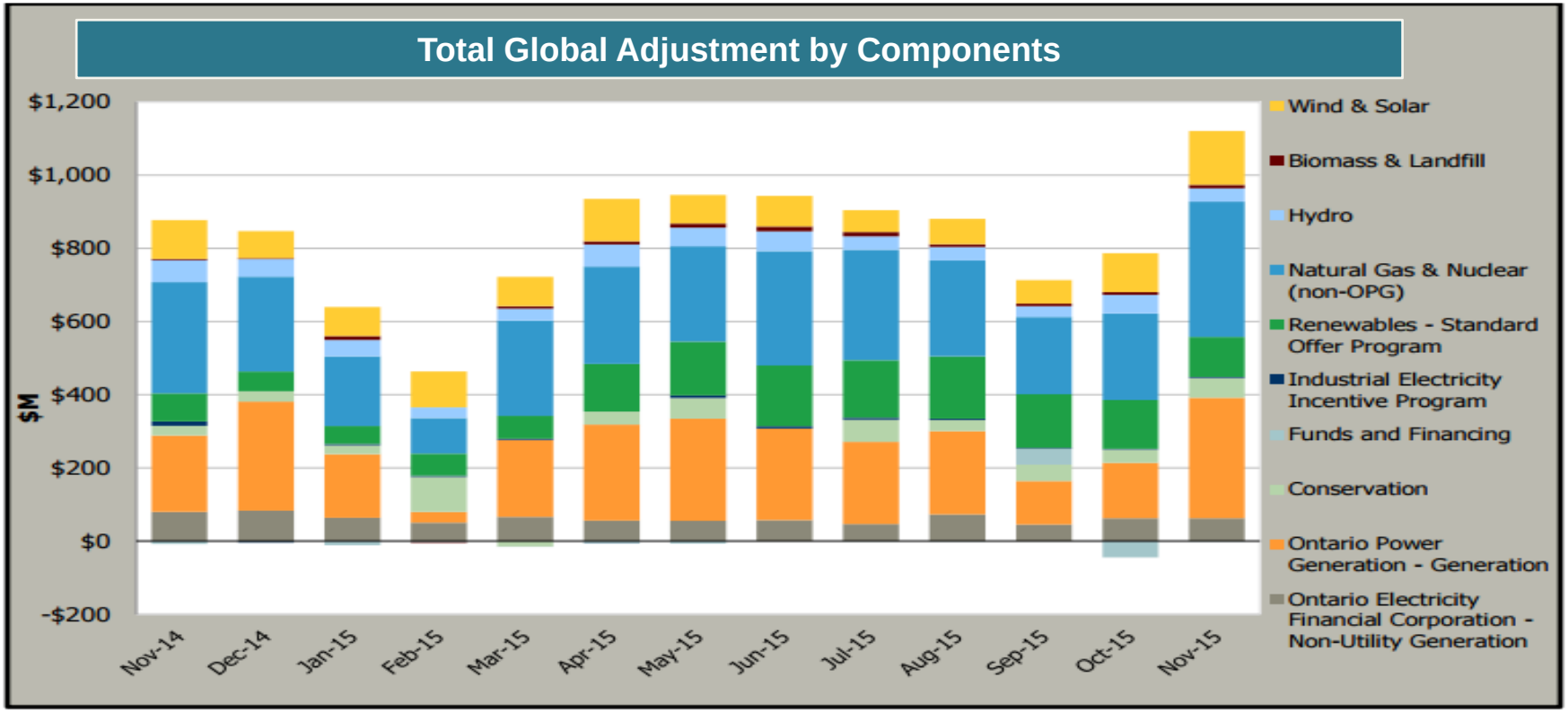

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

| | |
|---|---|
| **From:** | Francisco Chinchon |
| **To:** | John Kim |
| **Cc:** | Darren Scanlan |
| **Subject:** | RE: Price Mitigation Deck |
| **Date:** | Tuesday, December 06, 2016 2:19:00 PM |
| **Attachments:** | Price Mitigation Proposals_Dec5-16_v11_CEFDmarkup_withSPFBSIFB_v2_markup2.pptx |

I did a markup (purple) and moved things a bit.

---

**From:** John Kim
**Sent:** Tuesday, December 06, 2016 1:46 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Subject:** FW: Price Mitigation Deck

Latest attached too….a bit disjointed. Lol.

---

**From:** Salman Qadir
**Sent:** Tuesday, December 06, 2016 1:44 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: Price Mitigation Deck

Hi John,

V2 now incorporates all comments.

Salman

---

**From:** Salman Qadir
**Sent:** Tuesday, December 06, 2016 1:34 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: Price Mitigation Deck

Here is the latest draft. I have not moved that slide that we were creating to the end (after summary) yet (Slide 7).

Z:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016

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**From:** John Kim

**Sent:** Tuesday, December 06, 2016 10:57 AM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** FW: Price Mitigation Deck

Hi Salman,

Let's consolidate SPFB's too.

Thanks,

John.

---

**From:** Emily Kerr
**Sent:** Tuesday, December 06, 2016 10:56 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Price Mitigation Deck

Hi John,

I have included comments in the attached version of the price mitigation deck on slides 3, 4, 5, 8, 13, 14, 15, 20.

I will be out this afternoon, so could you combine with comments on the deck you will submit to Ron.

Emily

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector

## Working Draft

December 5, 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
  - Since 2003, the Province has invested more than $35 billion in over 16,000 megawatts (MW) of new and refurbished cleaner generation, including nuclear, natural gas and renewables.
  - Over the same period, Hydro One has invested $15.5 billion to enhance and renew its transmission and distribution systems.
  - As additional electricity generation comes online, nuclear units are refurbished and distribution and transmission investments are made, prices are forecast to continue to increase.

- Actions have been taken to drive down electricity costs, including deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., introduction of wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement ~~GEIA~~ renegotiation, decreasing FIT prices).

- Additional steps have been taken to increase cost effectiveness and improve efficiency by adopting new electricity market approaches, such as:
  - Enhancing competition between developers of large renewable projects through the Large Renewable Procurement (LRP) process to drive down price and secure clean, reliable generation for the province;
  - Directing IESO to end the process of negotiating new NUG contracts pending the development of a Capacity Auction (i.e., Market Renewal); and
  - Launching the first IESO Demand Response Auction (i.e., a competitive process through which demand-side resources are selected to be available to reduce their electricity consumption as needed).

# Context (Cont'd)

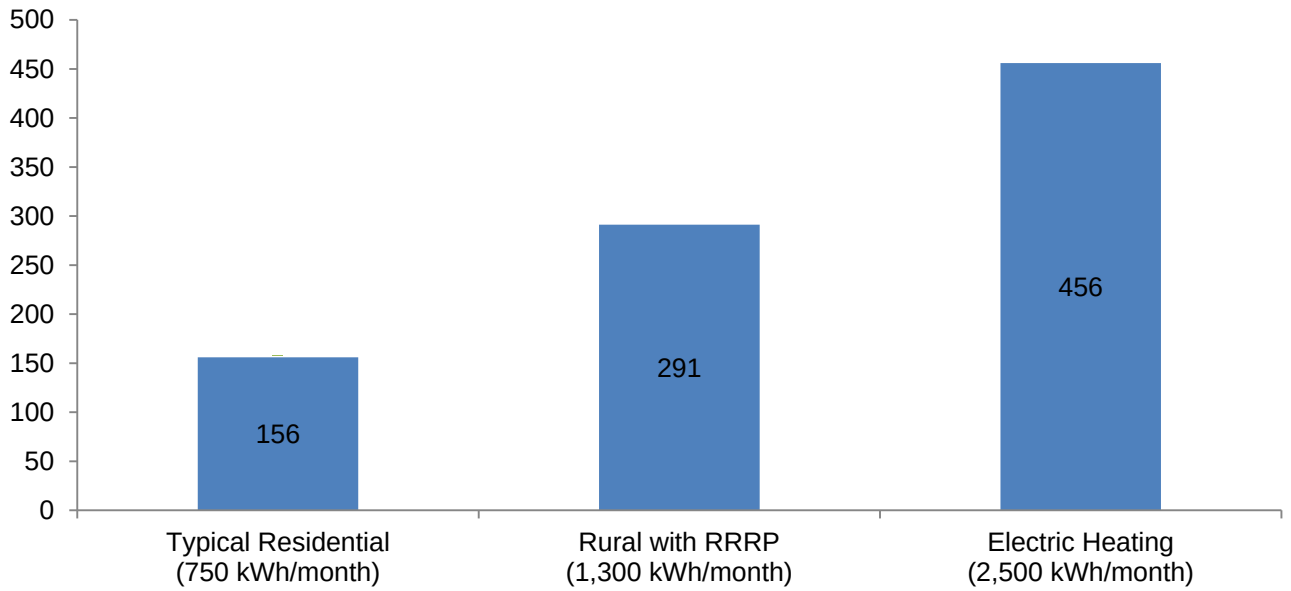
- Following the 2016 Throne Speech, a number of actions were announced to further reduce electricity costs, such as:
  - Providing an 8 per cent rebate before tax, equivalent to the provincial portion of HST, for approximately 5 million eligible electricity consumers including residences, small businesses and farms;
  - Increasing the amount of rate protection available to approximately 330,000 eligible rural customers living in low-density areas by updating the Rural or Remote Rate Protection (RRRP) program;
  - Lowering the Industrial Conservation Initiative (ICI) threshold to 1 MW and removing sector restrictions so that more consumers can benefit;
  - Suspending the second round of the Large Renewable Procurement (LRP II) and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in costs; and
  - Recycling a portion of cap and trade auction proceeds to keep rates affordable for industrial and commercial electricity consumers.
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured and the need for wholesale market renewal.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Current Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bills are currently below the 2013 ~~Long-Term Energy Plan (2013~~ LTEP~~)~~ forecasts ($159 / 750kWh)

**Residential Electricity Bills**
*in $/month*

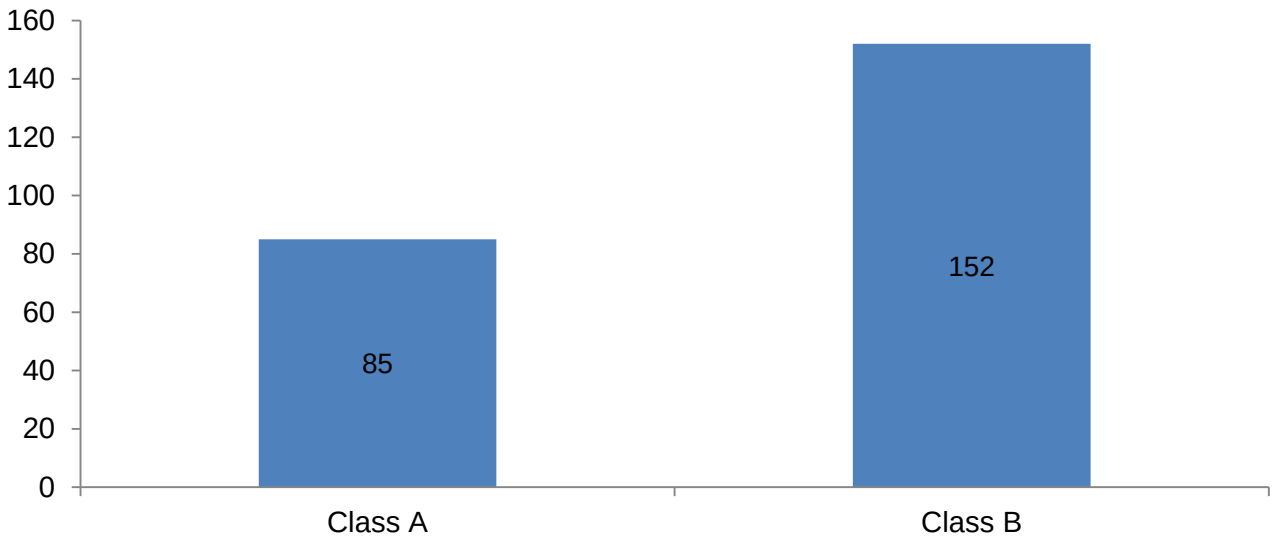



**Note**: Typical residential and electric heating shown above are based on Toronto Hydro; rural is based on connection to Hydro One as a R2 customer eligible to receive the Rural or Remote Rate Protection (RRRP) credit of $31.50.

# Current Electricity Prices – Industrial and Commercial

- While large industrial electricity consumers (i.e., Class A) rates are competitive with other jurisdictions, rates for commercial/small industrial consumers (i.e., Class B) are higher by comparison.
  - **Note:** Current industrial and commercial prices are below 2013 LTEP forecasts ($96 / MWh)

**Current All-In electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer. Class B reflects a 1 MW load operating at 56% load factor and connected to Toronto Hydro.

# Current Status on Taxpayer Funded Electricity Price Mitigation

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,200* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,105** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from November LRC Submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.1 billion and before considering any additional funding from the tax base.

# Proposed Initiatives – Overview

- The suite of proposed initiatives are intended to:
  - Transform how the electricity market operates in Ontario;
  - Re-set how government programs are funded (i.e., rate-base vs tax-base);
  - Provide system benefits (e.g., industrial load retention);
  - Lower the cost of electricity for residential and industrial consumers; and
  - Increase cost effectiveness and improve efficiency.

- The proposed initiatives include:
  1. Implement Market Renewal Initiatives
  2. Fund Electricity Support Programs Through The Tax-base
  3. Eliminate the Industrial Conservation Initiative (ICI)
  4. Amortize Conservation Program Costs
  5. LDC Efficiencies
  6. Rate Design Initiatives
  7. Reduced Cost of OPG Borrowing
  8. End Debt Retirement Charge (DRC) Early for Commercial/Small Industrial Class B Electricity Consumers
  9. Dedicate Departure Tax
  10. Cancel/Adjust Renewable Energy Procurements

- The proposed initiatives provide opportunities to reduce electricity costs for residential and industrial consumers while at the same time transforming the province's electricity market and yielding benefits for the electricity system.

# Proposed Initiatives – Impacts

- Each of the proposed initiatives under consideration target different government programs and different parts of the electricity bill. The proposals impact different classes of electricity consumers to varying degrees.

| Proposal | Program / Initiative | Line on Bills | Who Benefits |
|---|---|---|---|
| 1. Implement Market Renewal Initiatives | Market Renewal | Electricity, Global Adjustment, Regulatory | Market Renewal: All electricity consumers |
| 2. Fund Electricity Support Programs Through The Tax-base | OESP, RRRP | Regulatory | All electricity consumers evenly |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | ICI | Electricity, Global Adjustment | Only Class B electricity consumers (i.e., residential) **Note:** Will have a negative impact on Industrial consumers. |
| 4. Amortize Conservation Program Costs | Amortization | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 5. LDC Efficiencies | Distribution efficiencies | Delivery | All embedded consumers |
| 6. Rate Design Initiatives | Rate structures | Electricity, Global Adjustment | Rate Design Initiatives: Participating electricity consumers |
| 7. Reduced Cost of OPG Borrowing | n/a | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |
| 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers | Debt Retirement Charge (DRC) | DRC | Class B consumers (i.e., small business and commercial consumers, etc) |
| 9. Dedicate Departure Tax | Departure Tax | TBD | TBD |
| 10. Cancel/Adjust Renewable Energy Procurements | FIT, LRP | Electricity, Global Adjustment | Class B electricity consumers and to a lesser extent Class A consumers |

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 1.58 | 1.59 | 1.60 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.18 | 2.30 | 2.31 | 2.45 | 2.48 | 2.51 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 4. Amortize Conservation Program Costs | 1.67 | 1.56 | 1.21 | 0.81 | 0.54 | 0.3 | Immediate |
| 5. LDC Efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total decrease on typical monthly bill** | **8.38** | **8.23** | **7.75** | **9.26** | **8.52** | **8.17** | |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| 1. Implement Market Renewal Initiatives | - | - | - | 2.11 | 2.12 | 2.13 | Longer-Term |
| 2. Fund Electricity Support Programs through the Tax-base | 2.91 | 3.06 | 3.17 | 3.27 | 3.33 | 3.38 | Immediate |
| 3. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 4. Amortize Conservation Program Costs | 1.15 | 1.08 | 0.84 | 0.56 | 0.37 | 0.25 | Immediate |
| 5. LDC Efficiencies | n/a | n/a | n/a | n/a | n/a | n/a | Near-Term |
| 6. Rate Design Initiatives* | - | - | - | - | - | - | Immediate |
| 7. Reduced Cost of OPG Borrowing | 0.10 | 0.10 | 0.10 | 0.15 | 0.15 | 0.15 | Immediate |
| 8. End DRC Early for Class B Electricity Consumers** | - | - | - | - | - | - | n/a |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| 10. Cancel / Adjust Renewable Energy Procurements | - | - | TBD | TBD | TBD | TBD | Longer-Term |
| **Total increase on industrial bill** | **19.96** | **18.97** | **18.34** | **17.14** | **14.45** | **13.7** | |

**Note:** Proposal 2 assumes OESP participation of 50% and 5-year maturity. Proposal 3 reflects the elimination of ICI, as opposed to moving ICI cost shift to the taxbase. The $1.75/MWh savings associated with Proposal 7 in 2018 accounts for the fact that under the status quo, DRC will be removed from bills in April 2018. *Savings estimates do not include changes related to rate design. ** Class B includes small-medium enterprises (SMEs).

# Fiscal Considerations

- Funding electricity support programs (i.e., OESP, RRRP, First Nations Delivery Rate) from the tax-base represents approximately $440 million on average annually.
- Ending the Debt Retirement Charge (DRC) for commercial and small industrial electricity consumers (i.e., Class B) early would represent an additional fiscal pressure of $xx [placeholder for OFA] on the province.
- If the Industrial Conservation Initiative were funded though the tax-base instead of being eliminated, this would represent a $900 million annual cost to the fiscal plan.
- Reducing OPG borrowing costs to the Province's cost of funds is expected to result in a $20 to $35 million annual fiscal pressure to the province [TBC by OPG / OFA].
- Fiscal impacts of allocating a portion of the departure tax to ratepayers will depend on the size of the allocation, as well as timing for the flow of value. The maximum, direct one-time impact is $2.6 billion, with potential ancillary impacts on residual stranded debt defeasance.
- A summary of the annual fiscal impacts of the proposed initiatives is presented in the next slide

SLIDE ADDED BY CEFD

# Proposed Taxpayer Funded Electricity Price Mitigation

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ~~OCEB~~ | – | – | | | |
| OREC | 300 | 1,200* | 1,200* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | 330 | 330 | 330 |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| TOTAL | **1,195** | **2,105** | **2145** | **2156** | **2156** |
| 1. Electricity Market Renewal Initiative | | TBD | TBD | TBD | TBD |
| 2. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 2. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 3. Fund ICI through Tax Base | | 900 | 900 | 900 | 900 |
| TOTAL | **1195** | **3,421** | **3,482** | **3,507** | **3,521** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.5 billion by 2020-21. That is a 67% increase from the current forecast for 2017-18.
- These amounts are were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# 1. Electricity Market Renewal Initiatives

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2020, leading to a reduction of:
  - About $1.60/month or about 1% at current retail prices for a typical residential bill; and
  - About $2/MWh or more than 2% at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.

# 2. Fund Electricity Support Programs Through the Tax-Base

- Propose to fund electricity support programs, including Ontario Electricity Support Program (OESBP) and Rural or Remote Electricity Rate Protection (RRRP), through the tax-base instead of a regulated charge. This would allow the OESP and the RRRP charges to be removed from the Regulatory line on electricity bills.

**Considerations**

*Consumer Impacts and implementation*

- Transitioning OESP and RRRP to the tax-base would reduce a typical residential bill by about $2.35/month by 2020, and delivering the First Nation rate reduction through tax base would avoid about $0.10/month for a potential total savings of $2.45/month by 2020). As all programs provide strong social benefits, there is precedent for funding these programs through the tax-base.

- To address concerns from low income electricity consumers improvements to OESP could be implemented by increasing credits (could be up to double the current credits)
  - Single low income consumer would see a change from $30 to $45/ month ($540/year):
  - Family of four with electric heat could see a credit of $82.50/month ($990/year); and
  - Would mean no impact on consumer bills and no change to current OESP charge.
- RRRP and OESP are included in the “Regulatory” line on bills. If RRRP and OESP were eliminated from bills, the Regulatory line would decrease; however, as the Regulatory line is the smallest line item component of invoices, there is risk the decrease may not be perceived by customers.

- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined.

- The non-rate mechanism to remove delivery charges from on-reserve First Nation customer monthly bills needs to be further explored.Funding RRRP and/or OESP with tax revenue would require amendments to existing legislation and regulations.

# 2. Fund Electricity Support Programs Through the Tax-Base (cont'd)

- Table below shows estimates of program costs up to 2020:

| Year | OESP | RRRP | First Nations Delivery Rate | TOTAL |
|---|---|---|---|---|
| 2017 | $106M | $292M | $18M | **$416M** |
| 2018 | $119M | $300M | $18M | **$437M** |
| 2019 | $127M | $306M | $18M | **$451M** |
| 2020 | $132M | $315M | $18M | **$465M** |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections below assume the program grows to 50% of eligible consumers by 2020 (also assumes 10% administration costs).

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 3. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

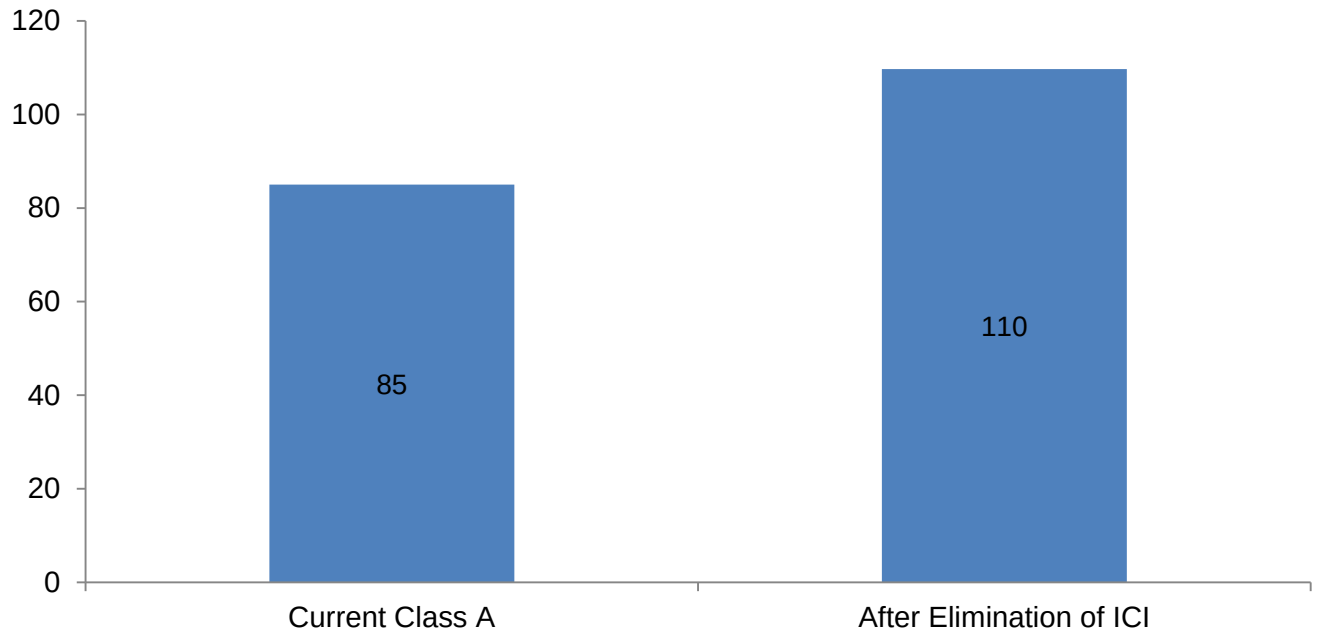
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# 3. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

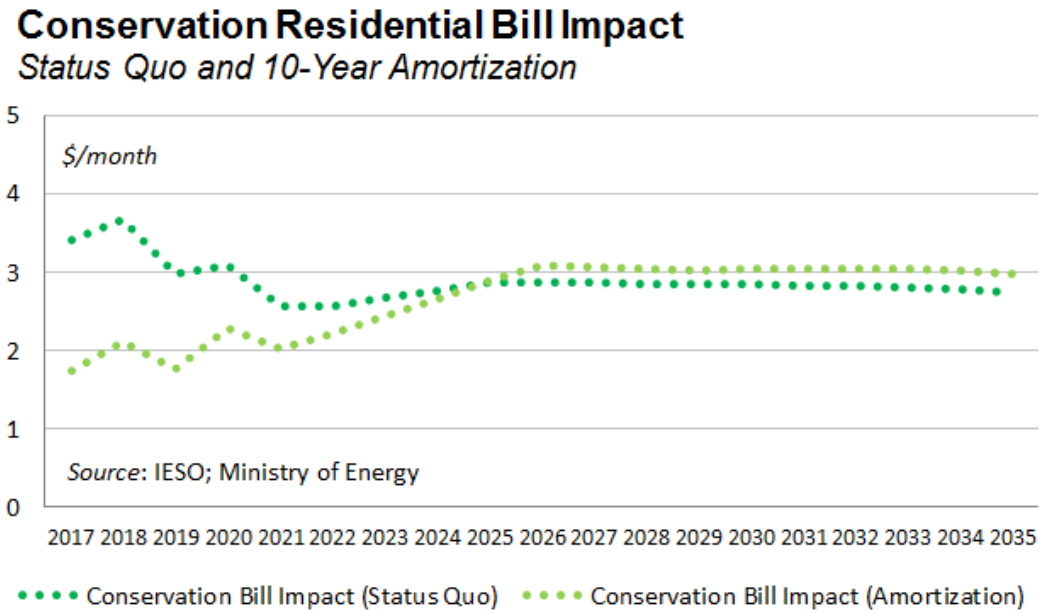
**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# 4. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized.
- Amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month at the outset. Over time, the benefit would decrease and turn into a cost, as interest charges begin to grow.




**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10-year borrowing rate of 3.0%.

# 4. Amortize Conservation Program Costs (cont'd)

## Considerations

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 4. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.

- Legislative amendments would be needed to allow recovery of loan interest charges from GA.

- If there is a desire to proceed:
  - Formal accounting advice will need to be sought from IESO's external auditor as well as the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
  - Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 5. LDC Efficiencies

- Consider opportunities for future LDC cost reductions and efficiencies through the regulatory framework.

**Considerations**

- The Ontario Energy Board has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.
- In addition, further changes to the departure and transfer tax regimes could be considered to provide a further incentive for LDC mergers and acquisitions.

# 6. Rate Design Initiatives

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.

- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro-November 2016 rates)

# 6. Rate Design Initiatives (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7. Reduced Cost of OPG Borrowing

- OPG currently borrows for corporate purposes from the OEFC
- Seek to reduce OPG's borrowing costs and pass on savings to ratepayers by:
  - Reducing or removing the spread that OEFC applies to OPG for any new corporate debt; or
  - Allowing OPG to refinance its existing debt at longer maturities through the OEFC in order to take advantage of the current, favourable interest rate environment.
- Assuming the full spread is removed from all OEFC debt, OPG borrowing costs could be reduced by 50-100 basis points, representing annual savings of about $20-$25 million, increasing to $30-$35 million, as OPG's outstanding OEFC debt rises from ~$3.3 billion in 2016 to ~$4.7 billion in 2020.
- OPG could apply to the OEB as part of its current rate application to flow this benefit to ratepayers.

**Considerations**

- Further work is required to determine potential OPG savings from these initiatives.
- Allowing OPG to refinance would have a negative fiscal impact on the Province.
- Spreads are expected to decline, reducing the relative impact of this change, given lower overall interest rates and reduced volatility.
- Providing OPG with greater access to longer term (20-30 year) debt may also reduce costs:
  - OPG's average term to maturity for OEFC debt is 5.7 years, as compared to 22.2 years for privately financed project debt. This contrasts with most corporations and government which have been working to extend average debt terms in order to take advantage of the low interest rate environment.
  - Longer terms would also better match to the life of OPG's assets.
  - Recently, OEFC has allowed OPG to apply for 50% of its financing requirements in the form of longer term (25-30 year debt). Moving closer to 100% would accelerate this transition.

# 8. End DRC Early for Commercial/Small Industrial Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.

**Considerations**

- Cost savings to ratepayers would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).
- These funds were paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. Repurposing may have an impact on the defeasance of this debt.

# 10. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period. [cost reductions from LRP I contract cancellations TBC]
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g., rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

**Cancel/Adjust Announced Procurements**

- Amendments to existing directions to the IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

**Cancel Existing LRP I Contracts**

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

[Placeholder for IESO: Cost calculation relative to OPO and associated bill impact]

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# 10. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

## Legal Analysis

- Under the *Electricity Act, 1998*, the Minister has the authority to amend previous directions without approval from Cabinet. Although an amendment to an existing direction would not require Cabinet approval, it is unlikely that a direction to cancel LRP I contracts could be considered as amending an existing direction. The previous LRP directions set out the broad policy framework that was reflected in the procurement, but the contracts themselves, once executed, are stand alone documents which the IESO had legal authority to execute. Revoking previous LRP directions does not affect that authority or have the effect of cancelling the procurement.
- As a result, any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements outside the LTEP process. However, there is a risk that such a directive could be subject to challenge.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights and the Minister would require clear legislative authority to interfere with those rights. This reasoning would likely apply equally to any direction or directive to IESO to cancel LRP I contracts.
- Previous advice has also flagged a moderately high risk that the Province could be liable for damages in tort for inducing a breach of contract if it issues a direction to IESO that interferes with vested contractual rights without clear statutory authority to do so. LRP I contract holders could also assert other claims, such as misfeasance in public office.
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis, including analysis of whether any statutory amendments would be required to provide clear authority to cancel the contracts. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

# Summary

- Reductions in electricity rates could be achieved by eliminating existing, planned or directed initiatives from the rate-base or shifting these costs to the tax-base.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

- As shown before the positive impact to residential ratepayers is very limited (between $8 and $9 per month) while the impact to the Province's fiscal position would be material (about $1.5 billion a year).

# Appendix

# Electricity Consumer Classes

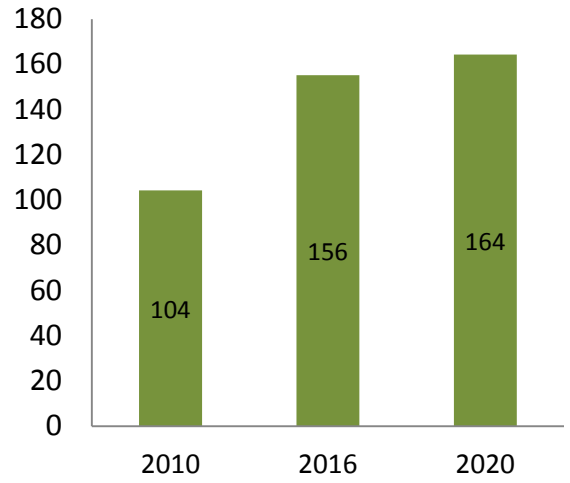
- In Ontario, there are three classes of electricity consumers:

| | Regulated Price Plan | Class B | Class A |
|---|---|---|---|
| **Consumer Types** | • Residential<br>• Small Business<br>• Farms | • Commercial<br>• Institutional<br>• Small industrial | • Large commercial<br>• Large industrial |
| **Load Size** | Below 0.05 MW | Between 0.05 MW and 1 MW | Above 1 MW |
| **Total Consumption** | 58 TWh | 57 TWh | 26 TWh |
| **Share of Consumption** | 41.1% | 40.4% | 18.4% |

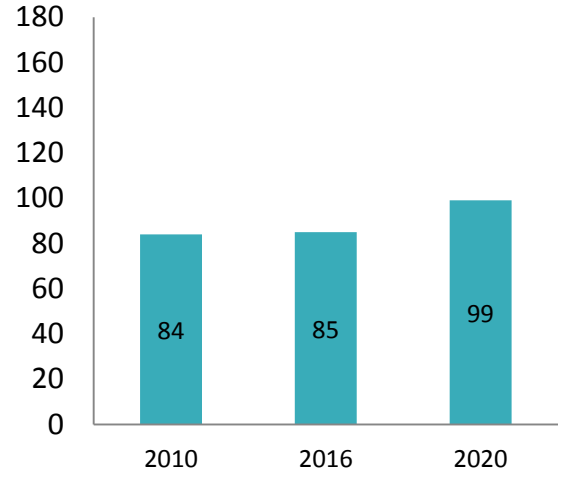
# Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates are forecast to continue to increase, with residential consumers paying an estimated 6% by 2020.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about $5/month for residential electricity consumers. Industrial electricity consumers are forecast to see an increase of 16% by and 2020.

**Typical Residential Bill (750/kWh per month)**




**Typical Class A (Industrial) Price ($/MWh)**




**Note:** 2016 represents year-to-date September 2016 for industrial. Cap and trade proceeds recycling is included for the industrial consumer for 2020.

# Rate Mitigation Levers

- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
  - **Tax-based Lever:**
    - Provide rebates funded from the tax-base or transfer items currently paid through the rate-base to the tax-base.
  - **Rate-based Lever:**
    - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
  - **Cap and Trade Proceeds Lever:**
    - Use cap and trade proceeds on initiatives that help reduce greenhouse gas (GHG) emissions from the electricity sector (e.g., recycling proceeds during off-peak periods) while providing benefits to some or all electricity consumers.

# Traditional Rate Mitigation Programs

- Ontario has implemented a number of rate-based programs to help residential and industrial electricity consumers:
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers
  - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.
- There are also tax-base programs to help manage electricity prices:
  - Rebate the provincial portion of the HST from the electricity bills of residential, small business and farms as of January 1, 2017.
  - Northern Industrial Electricity Rate Program (NIERP), in which participants receive a rebate of two cents per kilowatt hour. On average, industrial electricity prices can be reduced by up to 20%.
- While rate-based programs provide relief to certain electricity consumers, they shift other costs to remaining ratepayers (See Appendix for additional details).

# Driving Down Prices for Consumers

- Since 2013, a number of actions have been taken to drive down prices for consumers wherever possible:
  - Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
  - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
  - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million;
  - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
  - Suspending the second round of the Large Renewable Procurement (LRP II) process and the Energy-from-Waste Standard Offer Program to save up to $3.8 billion in electricity system costs relative to 2013 LTEP.

# Cost Shifts in the Electricity Sector – Current Programs

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in the Electricity Sector (Cont'd)

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in the Electricity Sector (Cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

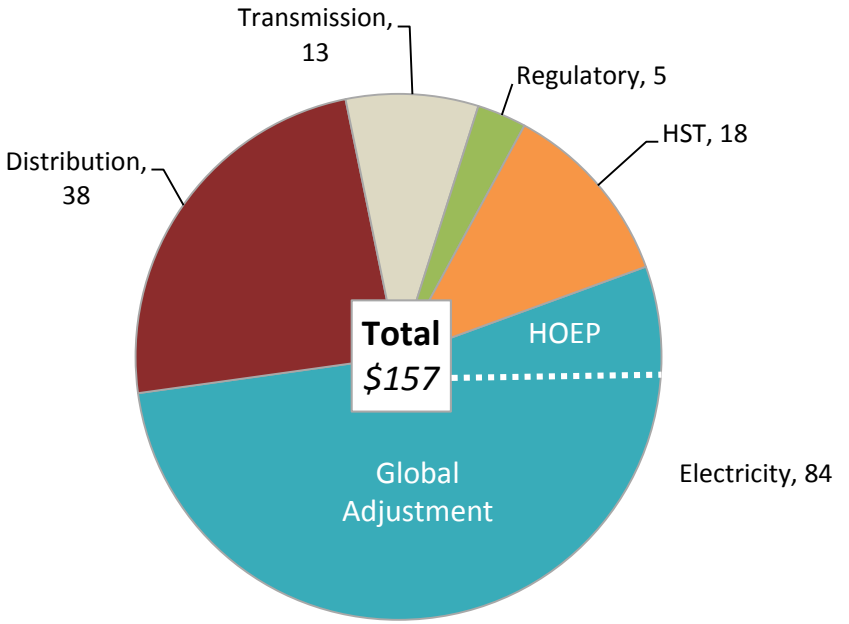
**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Residential Electricity Prices

- There are approximately 4.5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

**Typical Residential Monthly Bills ($)**

*As of November 1, 2016 (750 kWh/month)*



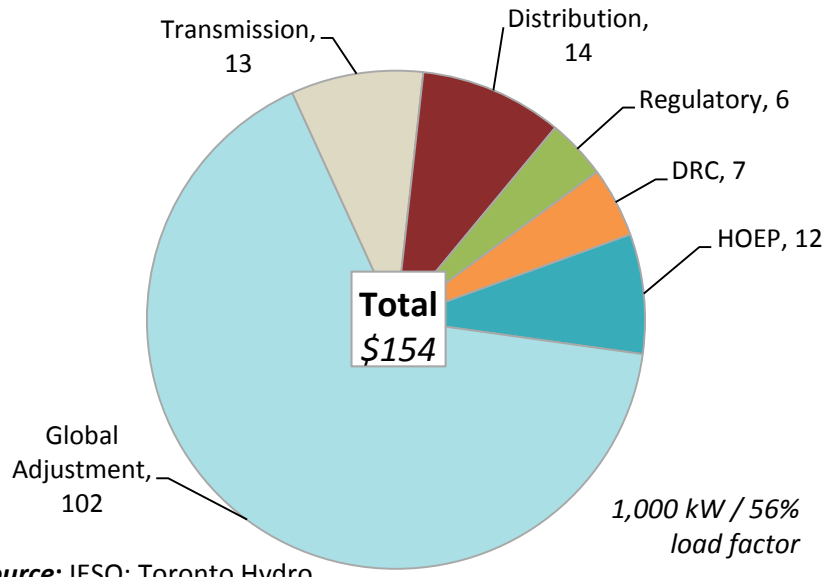

***Source*: OEB, Toronto Hydro**

# Commercial Electricity Prices

- There are approximately 55,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

**Typical Commercial Price ($/MWh)**

*YTD June 2016 (Non-RPP Class B)*




***Source*:** IESO; Toronto Hydro

- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

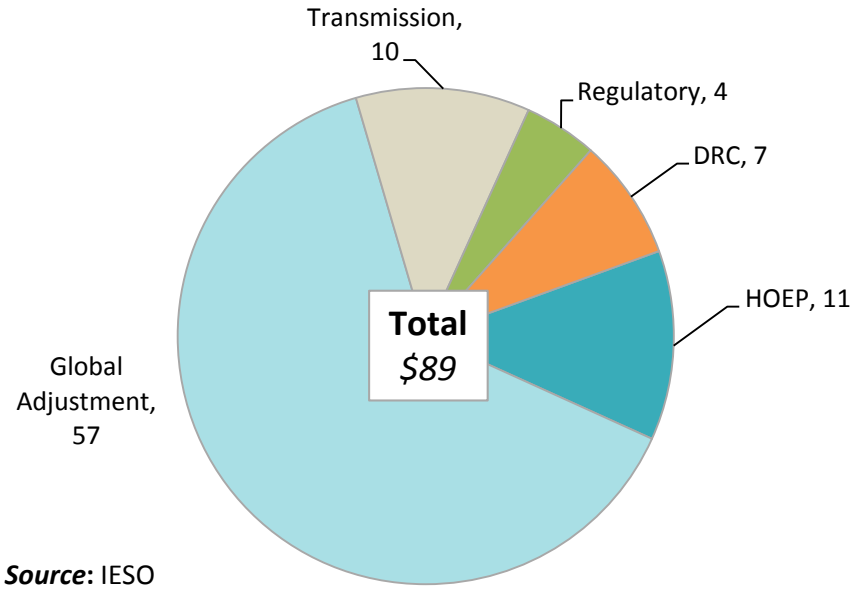
*** Note**: Most commercial consumers receive input tax credits for their HST.

# Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
  - ICI consumers reduce their electricity rates by 25% on average.

**Typical Large Industrial Price ($/MWh)**

*YTD June 2016*



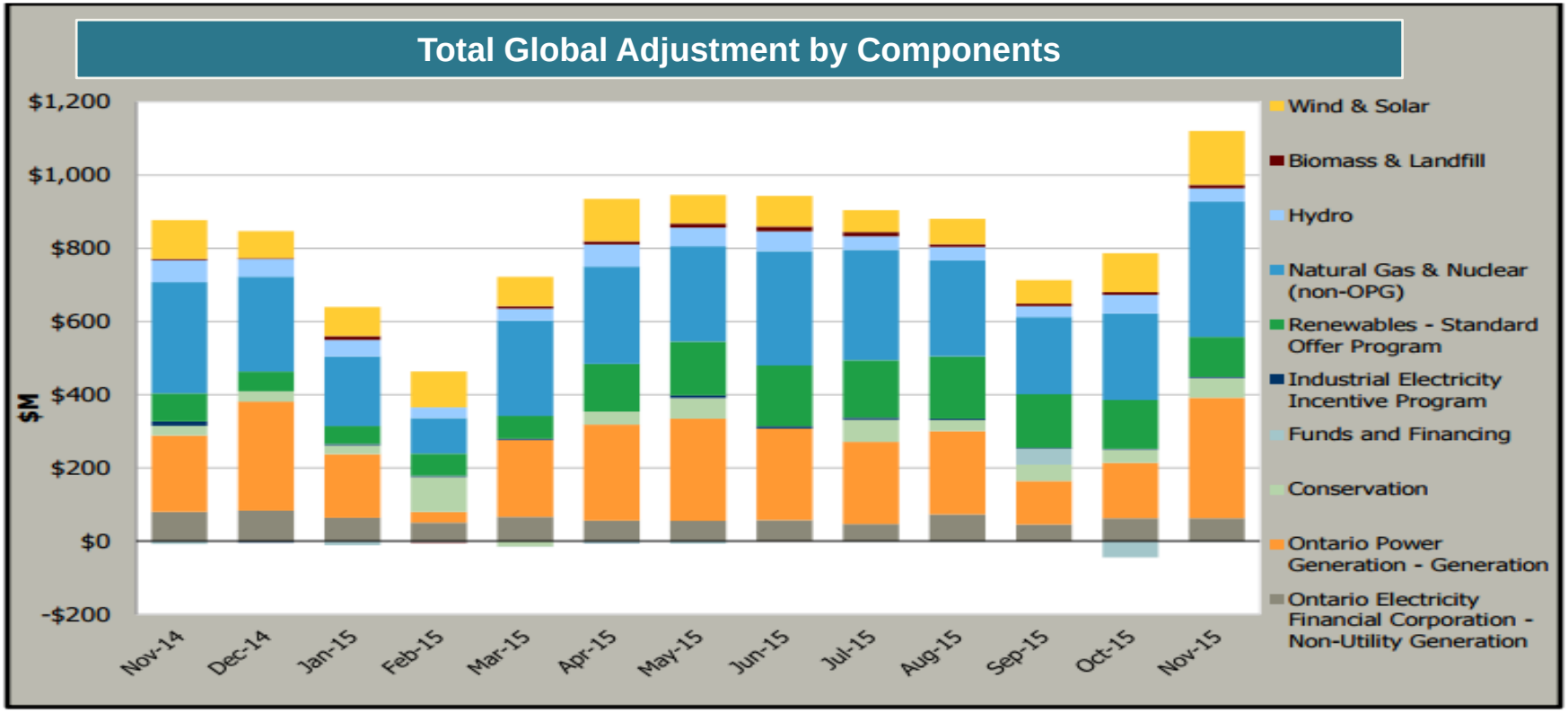

***Source*: IESO**

- Participants in NIERP receive a rebate of $20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to $69/MWh for these consumers. The program is funded through the tax base.

*** Note:** Industrial consumers receive input tax credits for their HST.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Cancel/Adjust Renewable Energy Procurements

# LRP I Pre-Construction Liability Limits

- All 16 successful LRP I developers accepted Optional Termination Provisions when the LRP I Contracts were executed in April 2016.
- If IESO chooses to enact the Optional Termination provision before a project has met all Key Development Milestones, IESO is required to pay pre-construction development costs up to the Pre Construction Liability Limit.
- Pre-construction development costs include costs incurred for feasibility studies, obtaining site access rights, work towards environmental approvals, business development plans, negotiation of contracts for design, equipment, construction and financing, reasonable overhead expenses, and other reasonable costs incurred.
- The Pre Construction Liability Limits are:
  - Non-Rooftop Solar: $250,000 plus $10.00/kW of Contract Capacity
  - Waterpower: $500,000 plus $20.00/kW of Contract Capacity
  - On-Shore Wind: $400,000 plus $2.00/kW of Contract Capacity
- According to the LRP I Optional Termination provision, the developer has a duty to take reasonable steps to mitigate losses, liabilities, costs and damages incurred as a result of the Optional Termination.
  - The IESO will not provide compensation for amounts which are attributable to a developer's failure to take reasonable steps to mitigate.

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon |
| **Cc:** | Gavin He; Darren Scanlan; Shajee Kathirgamanathan; John Kim |
| **Subject:** | RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Wednesday, January 11, 2017 9:58:47 AM |
| **Attachments:** | Rate Mitigation Proposals - Departure Tax (2017 01 10 v5).pptx |

Thanks Francisco.

Do you have a few minutes to discuss?

And I added in a purpose slide.

Ron

---

**From:** Francisco Chinchon
**Sent:** January-11-17 09:09
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Looks fine to me.

---

**From:** Ronald Kwan
**Sent:** Wednesday, January 11, 2017 5:40 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Francisco. I made a few more additions, as attached. I hope they make sense. The trillium trust discussion and some other edits respond to comments by Scott N.

Ron

---

**From:** Francisco Chinchon
**Sent:** January-10-17 8:29 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Looks good, just a few suggestions. I also confirmed the figures are ok.

On Jan 10, 2017, at 8:01 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Thanks Francisco.
>
> Ron
>
> ---
>
> **From:** Francisco Chinchon
> **Sent:** January-10-17 20:01
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
>
> I'll review now.
>
> On Jan 10, 2017, at 7:39 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> > Hi,
> >
> > I did a clean version too, if that helps with new markups.
> >
> > Ron
> >
> > ---
> >
> > **From:** Ronald Kwan
> > **Sent:** January-10-17 19:33
> > **To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
> > **Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> > **Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
> >
> > Hi,
> >
> > Thanks all.
> >
> > I moved some slides around and made some elaborations on the DT and DTB, as attached. Comments?
> >
> > Ron
> >
> > ---
> >
> > **From:** Francisco Chinchon
> > **Sent:** January-10-17 11:08
> > **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> > **Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan

<Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

Attached is a draft deck.

Thanks,

Francisco

---

**From:** Gavin He
**Sent:** Monday, January 09, 2017 5:37 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

FYI - DMO would like to receive the notes by EOD tomorrow.

Thanks,

Gavin He

---

**From:** Gavin He
**Sent:** Friday, January 6, 2017 10:32 AM
**To:** Francisco Chinchon; John Kim; Darren Scanlan; Shajee Kathirgamanathan
**Cc:** Ronald Kwan
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

Attached are the notes along with the request.

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, January 06, 2017 10:25 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Please see the request. Lease start drafting a thorough analysis.

Thanks,
Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 6, 2017 at 10:23:12 AM EST
> **To:** "David McLean (MOF)" <David.McLean@ontario.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, Gavin He <Gavin.He@ofina.on.ca>
> **Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Hi David,
>
> Yes, we can work on that for early next week.
>
> Ron
>
>> On Jan 6, 2017, at 10:20 AM, McLean, David (MOF) <David.McLean@ontario.ca> wrote:
>>
>> Hi Ron,
>>
>> The DM has asked if you and your team could build on the analysis contained in this note on the departure tax component. He'd like something thorough focused specifically on that proposal.

If possible, he'd like to see something as early as feasible next week. Is that doable?

Thanks,

Dave

-----Original Message-----

From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]

Sent: December 13, 2016 7:21 AM

To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)

Cc: McLean, David (MOF); Pearce, Christopher (MOF)

Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----

From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]

Sent: December-12-16 9:18 AM

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC)

<Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----

From: Thompson, Scott (MOF)

Sent: December 11, 2016 12:25 PM

To: McLean, David (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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From: Orsini, Steve (CAB)

Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)

To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)

Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: December-11-16 12:04 PM

To: Orsini, Steve (CAB)

Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

---

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

<Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx>

<Rate Mitigation Proposals - Departure Tax (2017 01 10 v3).pptx>

DRAFT

# Price Mitigation Proposal: Departure Tax

Corporate and Electricity Finance Division
January 10, 2017

# Purpose

- This presentation provides an overview of the departure tax paid by Hydro One related to the November 2015 initial public offering (IPO), the deferred tax benefit recognised by Hydro One in its 2015 annual financial statements as a result of the IPO and becoming taxable under the federal Income Tax Act and provincial Taxation Act.
- The departure tax and deferred tax benefit are being discussed in the context of potential electricity price mitigation options provided by the Ministry of Energy and of the Ontario Energy Board's review of Hydro One's transmission rate application and the treatment of the cash tax savings (deferral) for Hydro One transmission rates during the rate period related to the deferred tax benefit.
- A key question is what is the intended primary purpose of a departure tax option:
  a. To provide electricity price relief, and how large would it be?
  b. To reduce the risk of an adverse OEB decision for Hydro One that would reduce its value and going-forward financial results?
     a. How likely would an OEB decision on Hydro One rates be affected by a government decision to use departure tax revenues for the benefit of the electricity sector?
- If the primary purpose is to reduce the OEB risk and it is assessed that a departure tax dedication to the electricity sector would materially reduce the risk, what are potential options? Some examples include
  - Provide electricity price relief.
    - It would be one-time relief and/or relatively limited in price mitigation impact, with a significant fiscal cost.
  - Dedicate it to the Trillium Trust towards investments in electricity sector infrastructure.
    - If invested in Provincially-owned assets, would spread out the fiscal cost over the life of the asset, but price mitigation would be very limited.
  - Communicate that the departure tax has already been dedicated to the electricity sector to the Ontario Electricity Financial Corporation (OEFC) to help it manage and pay down its debt and other liabilities.
    - Reallocating the departure tax away from OEFC would increase stranded debt.

DRAFT

# Overview: Ministry of Energy and Price Mitigation

- In December 2016, the Ministry of Energy, as part of a suite of potential initiatives to mitigate the rising cost of electricity, has suggested for consideration the potential dedication to ratepayer price mitigation some or all of the $2.6 billion 'departure tax' (DT) payments in lieu of tax (PILs) made by Hydro One to the Ontario Electricity Financial Corporation (OEFC) in November 2015, arising from the Hydro One initial public offering (IPO), which would have a fiscal impact.

- The discussion of the departure tax is often discussed along with the deferred tax benefit that Hydro One recognised in its 2015 annual financial statements, following the IPO.

- While the departure tax and deferred tax benefit are related, they are also separate and distinct.
  - Both are tax-related and are calculated using the fair value of Hydro One assets (as estimated, in the case of the departure tax paid).
  - The departure tax arose from Hydro One's exit from the system of payments-in-lieu of taxes paid to the OEFC, as part of "truing-up" what Hydro One was required to pay OEFC under the PILs regime based on the fair value of its assets. Hydro One paid $2.6 bn in departure tax to OEFC, as well as an additional about $0.2 bn in PILs to OEFC as a result of exiting the PILs regime.
  - Hydro One recognised a $2.8 bn deferred tax benefit as a result of the IPO, including $1.2 bn in eliminating a previous deferred tax liability amount, and recording a $1.6 bn deferred tax asset, which relates to Hydro One's going-forward obligations under the normal corporate tax system and the Canada Revenue Agency based on the impact on its taxes of the "tax shield" provided by the fair value of its assets.
  - The size of the tax shield under the normal corporate tax regime relates to the fair value of assets for tax purposes that results in higher tax depreciation expenses from taxable income, and does not relate directly to the departure tax amount paid by Hydro One to OEFC.

# OEB Review of 2017-2018 Hydro One Transmission Rates: Deferred Tax Benefit & Departure Tax

- The Ontario Energy Board (OEB) is currently reviewing Hydro One's 2017-18 transmission rate application to determine whether the deferred tax benefit (DTB) recorded by Hydro One, as a result of entering the normal corporate tax regime following the IPO, should be allocated to the benefit of ratepayers rather than shareholders.
  - In its review, OEB staff flagged that Hydro One realized a deferred tax recovery that was triggered by the revaluation of the tax basis of its fixed assets at fair market value as it entered the corporate tax regime (due to the IPO).
- Since Hydro One made its departure tax (DT) payment, and did not seek recovery from ratepayers for this payment, Hydro One's position is that the DTB would receive similar treatment (i.e., not impact ratepayers, but would be to the benefit of shareholders, in part to ensure consistency in treatment).
  - A general regulatory principle would be for ratepayers to receive the benefit from assets that they funded through rates, and equity holders would receive the benefit from their investments.
  - The Province as sole shareholder of Hydro One, funded the departure tax payment by making a capital contribution of the same amount prior to the IPO.
- Note that the departure tax did not have a net fiscal benefit to the Province on consolidation of OEFC and Hydro One.
  - OEFC (and the Province upon consolidation) recorded a higher PILs revenue on receipt of the DT from Hydro One; however, this amount was offset by an equal reduction in provincial revenue from Hydro One's net income as a result of the DT payment (an expense to Hydro One).
  - There is no net 'departure tax benefit' to 'give back' or return to ratepayers, both because there was no net revenue impact and it was not funded by ratepayers.

# OEB Review of 2017-2018 Hydro One Transmission Rates: Departure Tax and Price Mitigation

- The Province using the departure tax amount for price mitigation has been cited as possibly reducing the risk of the OEB deciding to use Hydro One's deferred tax benefit to reduce Hydro One's rate ask in its current transmission rate application.
  - A fiscal risk is that the OEB may still decide to use some or all of the deferred tax amount to reduce Hydro One's rate request, while at the same time the Province uses the departure tax amount for price mitigation.
- Should the OEB decide to reverse the benefit of the DTB from Hydro One's shareholders to ratepayers, there would be significant impacts to the Province.
  - The Province would be subject to negative fiscal impacts based on how the OEB provides the benefit to ratepayers. For example, the OEB could determine that Hydro One's revenue requirement will be reduced over time by the cash tax savings from the DTB. This would negatively affect Hydro One's net income, and, therefore, reduce the Province's revenues upon consolidation of its proportionate share of Hydro One net income. (The Province's recorded increased revenues of ~$2.4B in 2015-16 due to the DTB.)
  - There would likely be a material decline in Hydro One's share price, as the overall company value would be negatively affected, given reduced net income and cash flows available to finance capital expenditures and pay dividends. Lower share prices would reduce future gains on sales as the Province moves forward on its path to sell down to the 40% ownership level in Hydro One.
  - The Province may also face criticism as it has already credited the Trillium Trust with the $2.4 billion DTB.

DRAFT

# Departure Tax and Price Mitigation: Ratepayer/Fiscal Impacts

- The following provides illustrative potential ratepayer and fiscal impacts from allocating the $2.6 billion departure tax to ratepayers.
- The impact to an individual ratepayers' electricity bill may not be very significant, unless used over a very short period of time. If the period that the departure tax amount is used to mitigate prices is increased, the annual ratepayer impact diminishes. In all cases, the annual negative fiscal impacts are significant.
  - As an illustrative scenario, if the $2.6 billion is allocated over 1 year and spread evenly over all Ontario consumption (vs targeted at some consumer classes), the benefit is estimated at about 1.85 cents / kWh.*
    - For a typical residential ratepayer consuming 750 kWh/month, this is estimated at $13.93/month (pre-tax), or less than 10% of a monthly bill.
  - Over a 5-year period or 10-year period, the benefit to a typical residential ratepayer is estimated at $2.79/month and $1.39/month, respectively. Industrial ratepayers are estimated to benefit by about 0.37 ¢/kWh and 0.185 ¢/kWh, respectively.
- Note that the electricity price relief would be temporary and would result in a spike in electricity bills following the conclusion of the mitigation initiative. This may introduce pressure to extend or replace the mitigation, resulting in additional fiscal impacts.

| Departure Tax Savings to Ratepayers | Allocation over 1 year | Allocation over 5 years | Allocation over 10 years |
|---|---|---|---|
| **Typical Residential Ratepayer (savings $/mth)** | $13.93 | $2.79 | $1.39 |
| **Savings: cents per kWh** | 1.85 | 0.37 | 0.185 |
| | | | |
| **Negative Fiscal Impact to the Province per annum** | $2.6 billion | $520 million | $260 million |

**Assumes total TWh supplied of 140 hours and monthly demand of 750 KWh per residential household*

# Key Fiscal Considerations

- Dedicating the departure tax to ratepayers would have a negative fiscal impact as the Province would record an expense of up to $2.6 bn related to this mitigation (up-front or over time, depending on how the amount is dedicated to ratepayers).
  - Note that the departure tax (DT) did not represent a fiscal or cash windfall to the Province.
    - **Fiscal:** OEFC (and the Province upon consolidation) recorded a higher PILs revenue on receipt of the DT from Hydro One; however, this amount was offset by an equal reduction in provincial revenue from Hydro One's net income as a result of the payment (an expense to Hydro One).
    - **Cash:** OEFC (and the Province upon consolidation) received the $2.6 billion in cash from Hydro One as a PILs payment, but the Province also made a $2.6 billion cash capital contribution to Hydro One to invest in additional common shares of the company and support Hydro One's departure tax payment.
    - **Timing**: The DT represents the upfront payment of PILs that Hydro One would have paid to OEFC in absence of exiting the PILs regime. In essence, it is a true up of past deferred PILs / future PILs payments rather than an incremental payment.
- An additional fiscal risk is that the OEB may still decide to allocate some or all of Hydro One's deferred tax benefit (DTB) to reduce Hydro One's rate request, even if the Province moves forward with the use of the DT amount as an electricity price mitigation tool.
  - Using the DT for price mitigation would likely be province-wide, for both Hydro One and non-Hydro One customers, while an OEB rate application decision, if applied to both its transmission and distribution businesses, would affect Hydro One`s rates and its customers.
  - Any use of the DTB by the OEB for Hydro One rate mitigation would result in a negative fiscal impact.
- Dedicating the DT to ratepayers could also put pressure on the Province to adopt a similar policy for all future DT payments (e.g., if a municipality sells its local distribution company to the private sector, it would be subject to a DT)
  - This would lead to additional negative fiscal and stranded debt impacts.

# Stranded Debt Considerations

- Reallocating the departure tax from OEFC to ratepayers would also cause the unfunded liability of OEFC (or "stranded debt") to increase by an equivalent amount.
  - It would be the first time since 2003-04 that OEFC's stranded debt would increase.
  - In fiscal 2015-16, OEFC's unfunded liability decreased by $3.7 billion, from $8.1 billion to $4.4 billion, primarily reflecting the impact of the Hydro One initial public offering (IPO). This was the largest annual paydown of stranded debt.
  - Going forward, OEFC would also forgo the interest expense savings from the debt that the departure tax amount would otherwise have paid down. This may affect its going-forward ability to continue to reduce stranded debt over time.
    - OEFC`s future results are also negatively affected by the loss of Hydro One PILs and reduced Provincial share of Hydro One net income.
    - OEFC Debt Retirement Charge revenue has also been reduced, with the end of the DRC for residential consumption as of January 1, 2016, and the now legislated full end to the DRC as of April 1, 2018.

# Implementation Considerations

- Additional legal discussion would be required regarding implementation, including the Province's authority to direct OEFC to make a payment to the Province to support rate mitigation.
  - For example, the Province may have to amend the objects of OEFC and implement a Minister's directive in order for OEFC to make the payment. Further legal analysis would be needed if the government is to proceed with this option.

- If the Province moves forward with a rate mitigation measure linked to funds received from the departure tax (DT), the government could consider implementing in such a way that it would not directly involve OEFC / increase stranded debt.
  - Rather than having funds transferred from OEFC to the Province (resulting in an expense to OEFC, which would increase stranded debt), the Province could alternatively borrow $2.6 billion to pay for the program from the CRF.
  - The Province would in effect be dedicating an "equivalent benefit" to ratepayers, while keeping the OEFC whole and demonstrating its commitment to reducing stranded debt.
  - The government could face criticism that it is "double counting" the DT cash (since it already made a $2.6 billion capital contribution in cash to Hydro One to facilitate the DT payment) and that the rate mitigation measure is not actually linked to the DT, but is a rate mitigation program funded by taxpayers.
  - Borrowing an additional $2.6 billion (or reducing OEFC's debt paydown by $2.6 billion) would also have associated on-going fiscal impacts from additional interest costs incurred. Net debt would also increase by $2.6 billion.

- The government could also decide to use only a portion of the DT payment for rate mitigation, rather than the entire $2.6 billion.
  - For example, the Province could dedicate the portion of the DT related to capital gains but allow OEFC to keep the portion related to recapturing past depreciation expense.
  - This decision would result in a smaller impact on electricity prices, especially if the amounts were allocated over-time, but would help mitigate negative fiscal impacts.
  - This decision would still face similar policy considerations as previously presented.

# Trillium Trust: Other Risk Mitigation on an Adverse OEB Decision

- The notion has also been raised for the Province to dedicate the departure tax amount to the Trillium Trust to fund electricity infrastructure to the benefit of ratepayers – in order to reduce the risk that the OEB will use some or all of Hydro One's deferred tax benefit to reduce its rate request.
  - This would be a policy shift, as the current policy is for the asset optimisation amounts to go to Moving Ontario Forward projects.
  - Adding energy infrastructure projects would be incremental.
  - There would also be a fiscal and Hydro One value impact over time.
    - As that infrastructure would not be funded by the rate base, there would be a displacement on the rate base growth side, which would affect share value and future net income.
    - The Province would have the expense (upfront or over time) of the electricity infrastructure spending without a future ratebase revenue stream.
  - The ratepayer mitigation impact may be small and deferred:
    - The timing of the impact could be spread out, both on the fiscal side (if the Province were to own the electricity infrastructure so it could amortise the cost over the life of the asset – note that such an action could be seen as contrary to the policy of bringing in private sector capital to fund electricity infrastructure that was part of the Asset Council's report) and the rate impact side, as the rate impact of displaced rate base growth would be deferred to when the assets come into service, and cost recovery would be over the life of the asset.

DRAFT

# Background: Departure Tax and Hydro One's Deferred Tax Benefit

# Departure Tax (DT)

- The "departure tax" is a result of Hydro One exiting the payments in lieu of tax (PILs) regime and entering the corporate tax regime as a result of the IPO in November 2015.
  - The PILs regime applies to tax-exempt electricity utilities in Ontario (e.g., Ontario Power Generation and municipally-owned local distribution companies, and it mirrors the regular tax system, creating a level playing field between publicly-owned and private sector firms.
  - PILS are paid to OEFC to help it manage and pay down electricity sector debt and other liabilities arising from the old Ontario Hydro.
  - Once a utility becomes less than 90% owned by the Province or municipality, its exemption from tax under the federal Income Tax Act and the Taxation Act (Ontario) ends.

- Due to exiting the PILs regime, Hydro One was deemed to have disposed of its assets immediately before it lost its tax exempt status for proceeds equal to the estimated fair market value of those assets at that time.
  - This results in an assessment of potential payments-in-lieu of tax for 'recapture' into taxable income previously claimed depreciation expense that reduced past PILs payable, if the fair value is greater than the depreciated value for tax purposes under the PILs regime.
  - It may also result in a potential taxable capital gain if the fair value is greater than the original value of the assets.
  - Together, this PILs payment is known as a 'departure tax'.
  - It should be noted that this payment is not incremental but rather a true up of the PILs Hydro One would have been expected to pay over time in absence of exiting the PILs regime.
  - The 'departure tax' is also not unique to the PILs regime, but mirrors provisions under the normal tax system when a taxable entity leaves the normal tax system.

- As a result of this deemed disposition, Hydro One was liable to make a DT PIL to OEFC of $2.6 billion. In order to facilitate Hydro One's payment and preserving the equity value of the company prior to the IPO, the Province made a $2.6 billion capital contribution into Hydro One and received new common shares of the company.

# Deferred Tax Benefit (DTB)

- Upon entering the corporate tax regime, Hydro One also revalued the tax basis of its fixed assets at fair market value and recognized eligible capital expenditures.
  - As a result of a higher revaluation of its fixed assets for tax purposes, Hydro One expects to be able to claim higher depreciation expenses for a period of time under the normal corporate tax system to reduce its taxable income and taxes payable.
  - Because of the elimination of the deferred tax liability under the PILs regime (on payment of the departure tax) and the 'tax shield' impact of the depreciation expense, Hydro One recorded $2.81 billion in a one-time non-cash DTB, which increased its net income by the same amount.
    - This DTB was comprised of an elimination of an about $1.2 billion deferred tax liability under the PILs regime, as Hydro One paid the departure tax, and a deferred tax asset recorded by Hydro One of about $1.6 billion.
  - The recording of a DTB contributed to Hydro One's net income in 2015.
    - The Province recognized a non-cash fiscal benefit of approximately $2.4 billion as a result, upon consolidation its proportionate share of 84% of Hydro One's net income on the Province's books.
- From the Province's perspective, allocating the DTB directly as a policy option for rate mitigation is not viable.
  - This benefit was recognized by Hydro One in connection with the IPO, and the Province, as no longer a sole shareholder, does not have the authority to direct the company to provide this benefit to ratepayers, rather than its shareholders.
  - Hydro One's board of directors has a fiduciary duty to act in the best interests of all Hydro One shareholders.
- A decision from the Province to allocate or transfer part or all of the related departure tax payment received by OEFC would not, however, preclude the OEB's ability with respect to Hydro One's rate application and the DTB recognized by Hydro One in 2015.

| | |
|---|---|
| **From:** | Francisco Chinchon |
| **To:** | Ronald Kwan |
| **Cc:** | Gavin He; Darren Scanlan; John Kim; Shajee Kathirgamanathan |
| **Subject:** | RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Monday, January 09, 2017 10:12:35 AM |

Works for us.

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**Sent:** Monday, January 09, 2017 10:12 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
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| **Date:** | Monday, January 09, 2017 9:38:34 AM |
| **Attachments:** | Electricity Price Mitigation Proposal- Departure Tax v3_markup.docx |

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**From:** Darren Scanlan
**Sent:** Friday, January 06, 2017 10:38 AM
**To:** Arie Jarczyn <Arie.Jarczyn@ofina.on.ca>; Wentao Shi <Wentao.Shi@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Arie, Wentao,

Please see below. Can you start on drafting a more thorough note on the departure tax proposal? I think we need to focus on how exactly the proposal would work, and what exactly it means to OEFC / Province and ratepayers. I know when we first received ENERGY's deck we did some analysis on the ratepayer impacts, so perhaps we can revisit that. Can you also work with Shajee on bullets on the implications for stranded debt?

Thanks,
Darren

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**Sent:** Friday, January 06, 2017 10:25 AM
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**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Please see the request. Lease start drafting a thorough analysis.

Thanks,
Ron

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> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 6, 2017 at 10:23:12 AM EST
> **To:** "David McLean (MOF)" <David.McLean@ontario.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, Gavin He <Gavin.He@ofina.on.ca>
> **Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
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> > Sent: December 13, 2016 7:21 AM
> > To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)
> > Cc: McLean, David (MOF); Pearce, Christopher (MOF)
> > Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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Sent: December-12-16 9:18 AM

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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Sent: December 11, 2016 12:25 PM

To: McLean, David (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)

To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)

Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity

Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: December-11-16 12:04 PM

To: Orsini, Steve (CAB)

Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

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<Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx>

*COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE*

**Electricity Price Mitigation Proposal: Dedication Departure Tax**

**Issue:** The Ministry of Energy, as part of a suite of proposed initiatives to mitigate the rising cost of electricity, has suggested for consideration the potential dedication of the Departure Tax payment from the Hydro One IPO, to ratepayers.

**Context: Departure Tax**

- In connection with the Hydro One IPO, Hydro One's exemption from tax under the federal Income Tax Act and the Taxation Act (Ontario) ceased to apply and Hydro One was deemed to have disposed of its assets immediately before it lost its tax exempt status for proceeds equal to the estimated fair market value of those assets at that time.

- As a result of this deemed disposition, Hydro One was liable to make a "departure tax" payment in lieu of tax under the Electricity Act in respect of the income and capital gain, to the OEFC. [In order to facilitate this], ~~P~~prior to the IPO, the Province, as shareholder of Hydro One, made a capital contribution into Hydro One and received new common shares of Hydro One Limited for a total of $2.6 billion. This provided Hydro One with funds that it used to pay the "departure tax" to OEFC.
    - This transaction was fiscally neutral to the Province as the Province consolidates both OEFC's revenue and Hydro One's net income on its books. (Please see the background section for an illustration of the departure tax)
    - OEFC (and the Province upon consolidation) recorded a higher payment in lieu of tax revenue due to the departure tax, but this amount was~~will be~~ offset by the reduction in Hydro One's net income as a result of the payment.

- On November 4, 2015, Hydro One paid OEFC the $2.6 billion "departure tax".

**Proposal Overview:**

- The Ministry of Energy has not provided specifics with regards to the potential implementation of electricity price mitigation measures through the dedication of the departure tax. The methodology noted below is the CEFD's assessment of the likely method of implementation.

- The dedication of the $2.6 billion in departure tax to the benefit of electricity ratepayers would likely involve the transfer of $2.6 billion from OEFC to the Province, resulting in an expense to the OEFC and revenue to the Province credited to the Consolidated Revenue Fund.
    - The Province would then direct $2.6 billion to ratepayers through the Ministry of Energy as a rate mitigation program, which would record an expense related to this new program
        - A decision as to the length of the mitigation measure would also need to be made by the government.
    - The measure could be highlighted as a separate line item on the ratepayers monthly bill, identifying the impact of the reduction to ratepayers from the departure tax payment.
    - Although, there would be implementation and communication challenges with such approach as for example on why non H1 customers are benefiting from the departure tax payment.

**Staff Comments**

**Impact to the Province ~~/~~and OEFC**

- Should the Ministry of Energy decide to dedicate the departure tax to ratepayers, there would be a significant negative fiscal impact of up to $2.6B.
  - The departure tax payment by Hydro One to the OEFC, was effectively a true-up for lower PILs payments from Hydro One in previous years – and therefore should not be viewed as a one-time $2.6B cash windfall for the Province, indeed, it was fiscally neutral.
  - ~~Since the Province already made a $2.6 billion B capital contribution prior to the IPO to Hydro One to fund the departure tax, any amount dedicated from the departure tax to ratepayers would result in a fiscal impact.~~

- ~~[EFB: Please insert a bullet about stranded debt, or feel free to edit this bullet]~~In moving forward with a proposal to dedicate the Departure Tax, the OEFC would record a $2.6B expense on its financial statements
  - Originally, these funds were paid to the OEFC with the purpose to be dedicated towards ~~the repayment of~~ reducing stranded debt. Re-allocating this amount may have an impact on the defeasance schedule of this debt.

- [The Province has removed the Debt Retirement Charge from residential electricity bills beginning January 1, 2016 and introduced legislation ending ~~indicated that it plans on removing~~ the Debt Retirement Charge (DRC) from ~~commercial, industrial and~~ all other electricity bills starting April 1, 2018.
  - ~~The decision to dedicate the departure tax which would cause stranded debt to increase may also make it more difficult for the Province to move forward with this policy initiative. EFB: Please review to ensure comfort with this point as well.~~]
  - Given the above, the measure would put the burden of paying down solely on taxpayers.

**Impact to Ratepayers:**

- CEFD staff have performed an initial analysis of the impact to residential and industrial ratepayers from the allocation of $2.6 billion from the departure tax to ratepayers. Overall the impact to ratepayers from this potential proposal is relatively minimal.
  - Assuming that the $2.6 billion is allocated over a 5 year period, the benefit to residential ratepayers is $2.76 per month and industrial ratepayers is $3.71 per MWh
  - Assuming that the $2.6 billion is allocated over a 10 year period the benefit to residential ratepayers is $1.39 per month and industrial ratepayers is $1.86 per MWh
  - Stakeholders could argue that the use of H1's departure tax payment as a mitigation tool should be for the benefit of H1's ratepayers only. This would only introduce an

**Commented [FC1]:** This is not accurate, the fiscally neutrality comes from the DT being an expense to H1 and revenue to OEFC.
The capital contribution was a balance sheet movement, the Province exchanged cash for shares.

**Commented [SK62]:** Tricky relationship between stranded debt and end of the residual stranded debt and debt retirement charge.

Happy to remove, however, announcement of April 1 2018 end date made in FES 2015; same time period as the IPO.

Clearly there was a consideration (coordination?) between the two policy initiatives.

implementation complexity and could create fiscal pressures to also benefit other ratepayers.

- The measure would create a precedent for future departure tax payments with the consequent fiscal pressure if other LDCs leave the PILs regime and have to pay departure tax.

| Departure Tax Savings to Ratepayers | Allocation over 5 years | Allocation over 10 years |
|---|---|---|
| **Residential Ratepayers (savings $/mth)** | **$2.76** | **$1.39** |
| **Industrial Ratepayers (savings $/MWh** | **$3.71** | **$1.86** |

***Assumes total TWh supplied of 140 hours and monthly demand of 750 KWh per residential household**

**Other Considerations:**

- Aside from the proposed implementation methodology cited above, which results in an expense to the OEFC and revenue to the Province, as an alternative, OEFC could use its existing cash on hand to retire $2.6 billion of existing debt that it currently has outstanding with the Province. (As of March 2016, OEFC had over $3.4 billion in cash and cash equivalents on its balance sheet).
  - This alternative would allow the Province to obtain $2.6 billion in funds without causing a direct fiscal impact to OEFC and negatively impacting stranded debt.

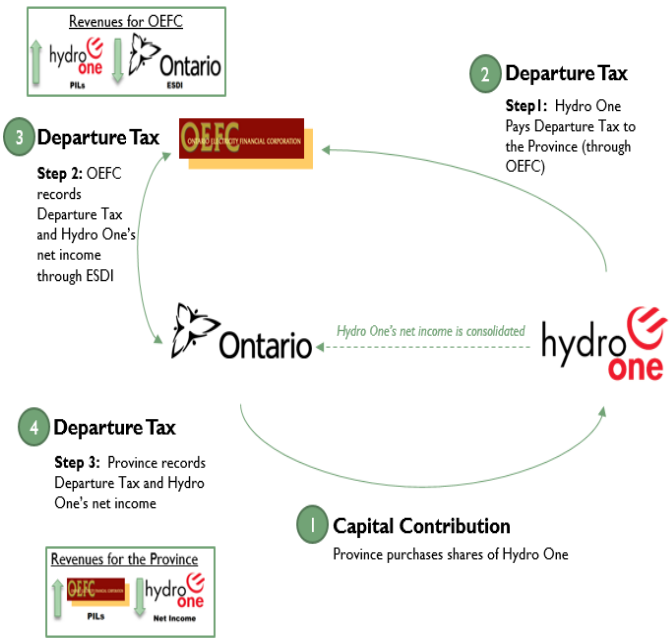
**Commented [FC3]:** This needs to be reworded. That said, there will always be a fiscal impact from spending the $2.6B as a mitigation program.

- It may however be a difficult communication exercise for the Province to link the receipt of $2.6 billion in cash ~~i~~from the retirement of outstanding debt held with the Province to a specific electricity price mitigation measure.

**Background**

*COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE*

**Departure Tax Fiscal Overview**

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4. **Departure Tax Payment (Step 3):** The Province records PILs (through consolidation of OEFC) and also records Hydro One's net income, which fell in Step 1. The end result is a fiscally neutral transaction.

**Strategic Investment and Finance Branch**
**January 6, 2017**

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | Darren Scanlan; Arie Jarczyn; Wentao Shi |
| **Cc:** | Francisco Chinchon; John Kim |
| **Subject:** | RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Friday, January 06, 2017 4:54:11 PM |
| **Attachments:** | Electricity Price Mitigation Proposal- Departure Tax v3.docx |

Hi Arie, Wentao, Darren,

Please see attached note on the departure tax proposal.

Note: I'm a little hesitant on the DRC relationship with stranded debt. I can go either way, hence the square brackets; happy to omit.

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

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**Other Considerations:**

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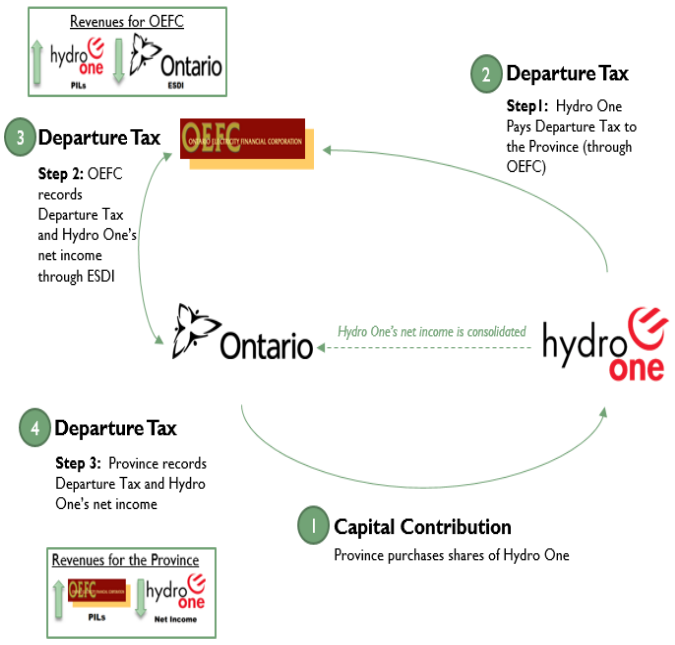
**Background**

**Departure Tax Fiscal Overview**

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**January 6, 2017**

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| **To:** | Francisco Chinchon; John Kim; Darren Scanlan; Shajee Kathirgamanathan |
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| **Date:** | Friday, January 06, 2017 10:32:02 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx |

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Thanks,
Gavin He

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**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Please see the request. Lease start drafting a thorough analysis.

Thanks,
Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 6, 2017 at 10:23:12 AM EST
> **To:** "David McLean (MOF)" <David.McLean@ontario.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, Gavin He <Gavin.He@ofina.on.ca>
> **Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Hi David,
>
> Yes, we can work on that for early next week.
>
> Ron
>
> On Jan 6, 2017, at 10:20 AM, McLean, David (MOF)

<David.McLean@ontario.ca> wrote:

Hi Ron,

The DM has asked if you and your team could build on the analysis contained in this note on the departure tax component. He'd like something thorough focused specifically on that proposal.

If possible, he'd like to see something as early as feasible next week. Is that doable?

Thanks,

Dave

-----Original Message-----

From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]

Sent: December 13, 2016 7:21 AM

To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)

Cc: McLean, David (MOF); Pearce, Christopher (MOF)

Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----

From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]

Sent: December-12-16 9:18 AM

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF)

<Ryan.Birks@ontario.ca>

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----

From: Thompson, Scott (MOF)

Sent: December 11, 2016 12:25 PM

To: McLean, David (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

---

From: Orsini, Steve (CAB)

Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)

To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)

Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: December-11-16 12:04 PM

To: Orsini, Steve (CAB)

Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

---

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

<Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx>

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its deck.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

Energy's proposals generally involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value, including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |
| **E**nd the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

<u>OESP & RRRP (Total of about $0.4 to 0.45 Billion/year</u>):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

<u>Fund Conservation Programs through the Tax-Base</u>:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**December 12, 2016**

| | |
|---|---|
| **From:** | Francisco Chinchon |
| **To:** | Shajee Kathirgamanathan |
| **Cc:** | John Kim; Ronald Kwan |
| **Subject:** | RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Friday, December 23, 2016 12:02:08 PM |
| **Attachments:** | Price-Mitigation - CEFD Slides-Dec6-2016_v7_markup.pptx |

Thanks, I made some tweaks.

---

**From:** Shajee Kathirgamanathan
**Sent:** Friday, December 23, 2016 11:57 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi,

I made a few edits to provide additional context and spruced up the chart.

Please see v7 attached. Also found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016\Price-Mitigation - CEFD Slides-Dec6-2016_v7.pptx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Friday, December 23, 2016 10:32 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Francisco. I'll update the deck to reflect your comments.

Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

**From:** Francisco Chinchon
**Sent:** Friday, December 23, 2016 9:56 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Shajee,

My two cents and in the context of Scott's comments:

1. DRC should stay in the deck but you may want to provide further context as for example that removing it for residential users was a policy decision to help mitigate rate pressures rather than based on defeasance as per the initial concepts.

2. With respect to the fiscal contributions from OPG, H1 you may want to add context on how OPG and H1 are commercial business corporations expected to produce a return in exchange for the risk the shareholder assumes. Also that there is an opportunity cost on having capital allocated to them. I recognize this may be more of a controversial point (depending on how people see things) but is technically correct to flag if people are somehow challenging the returns or earnings the Province obtains from its commercial enterprises.

Thanks,

Francisco

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, December 22, 2016 6:34 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Ron.

I found a similar file, but began from 2011-12 onwards to be consistent with the table we were developing. In Slide 16, I added a revised chart.

Please see file attached, also found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016\Price-Mitigation - CEFD Slides-Dec6-2016_v6.pptx

Also per Scott's comments below, I left the option open to use the DRC as a fiscal benefit, as

opposed to the DRC ending as a rate mitigation measure (fiscal cost). That's indicated by Option 1 or 2 in the top right corner of the chart.

Happy to update the OEFC Board Orientation file as well to reflect this revision. And please advise if you'd like years going back to 1999-2000.

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Ronald Kwan
**Sent:** Thursday, December 22, 2016 6:08 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi,

I think you had been previously working on updating slide 9 of the attached.

S:\Users\CEF\Hydro 2016\OEFC\Board\December\Orientation\Archive

Ron

---

**From:** Shajee Kathirgamanathan
**Sent:** December-22-16 14:23
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Sure. Might need to confirm which chart, will take a look first.

Thanks

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

**From:** Ronald Kwan
**Sent:** Thursday, December 22, 2016 1:54 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FyI Shajee.

Can you update the chart. I believe you had a run at it last month.

Need to add new scenarios, though.

Ron

Begin forwarded message:

> **From:** "Nelms, Scott (ENERGY)" <Scott.Nelms@ontario.ca>
> **Date:** December 22, 2016 at 1:41:45 PM EST
> **To:** "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>
> **Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Thanks Ron. Do you mind sharing those out year forecasts? Latest OEFC board materials that I have seen only forecast this fiscal.
>
> The table in your presentation also goes back to 2011-12, so assume that the all-in fiscal impact of the electricity sector might have been very different. Might be interesting to show the evolution from a net positive to net drain, as you describe below. Your comment around DRC is a good one. I wondered in the table whether it might be helpful to show DRC revenues (rather than "ending DRC"). That will show the decline, but that it is still a positive to the Province even out to 2017-18.
>
> However, take my comments with a grain of salt as I am outside my area of expertise.
>
> Thanks again for sharing,
> Scott
>
> -----Original Message-----
> From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
> Sent: December 21, 2016 5:11 PM
> To: Nelms, Scott (ENERGY); Kennedy, Nancy (MOF)
> Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
>
> Hi Scott,

Thanks.

On your comment as you may recall, we used to do that roll-up (initially when Serge was ADM), but that would also include all the OEFC expenses too. And not all the GRC is OEFC related, but helps with MNR and its costs, so not completely straightforward.

Post-DRC, and post much lower Hydro One net income to the Province and lost PILs, as Nancy may recall from some OEFC board presentations (Serge likely missed those Board presentations), OEFC may be close to flat.

Ron

-----Original Message-----
From: Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
Sent: December-21-16 16:55
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

I have not seen a draft since last week. Likely same version you last saw Ron. I did have a chance to speak with folks who are more in the know on this and I can confirm that none of the OPG options are likely to show up in the next iteration.

One suggestion on the note, Ron: if you are going to show all the existing fiscal pressures, it may be helpful to also show the fiscal benefits from the electricity system (OPG/H1 revenues, PILs, GRC etc.).

Thanks,
Scott

-----Original Message-----
From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: December 21, 2016 4:14 PM
To: Kennedy, Nancy (MOF); Nelms, Scott (ENERGY)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Nancy, Scott,

As discussed yesterday, I have not seen any iterations of an Energy deck or other materials on price mitigation options since early last week, when the DMO shared a "bootleg" copy. We sent back some comments on that deck to the Deputy, as attached.

Also attached, for your information, are some comments and a deck we did for the Deputy the previous week, in advance of the Major Projects Committee meeting

that week. I had understood that the Deputy shared back the comments with Energy DMO at that time.

As discussed yesterday, CEFD is looking forward to being able to input into the contemplation of potential initiatives. Having said that, staff availability over the next couple weeks will be very limited.

Ron

-----Original Message-----
From: Ronald Kwan
Sent: December-13-16 07:21
To: Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>
Cc: David McLean (MOF) <David.McLean@ontario.ca>; Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----
From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
Sent: December-12-16 9:18 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----
From: Thompson, Scott (MOF)
Sent: December 11, 2016 12:25 PM
To: McLean, David (MOF)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx _____

From: Orsini, Steve (CAB)
Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)
To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)
Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----
From: Imbrogno, Serge (ENERGY)
Sent: December-11-16 12:04 PM
To: Orsini, Steve (CAB)
Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

---

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DRAFT

# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

DRAFT

# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost [about $1.3 – 1.9 plus bn per year in new fiscal costs].
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 billion in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time), with the total tax-based costs rising to about $3.3-3.9 plus billion in 2017-18, if Energy`s proposals are adopted.
  - These existing mitigation costs are not presented in Energy's deck.
  - Not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

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Option 1

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion.

# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

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Option 2

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[2] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,450** | **895** | **1,705** |

1. 2016-17, 2017-18 based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge

NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $900 million.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $1.7 billion.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

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# Energy's Proposals

Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded. They could be upwards of $2 bn/year, (plus the departure tax), which is not included in the fiscal plan, which would challenge the path to balance.

- OESP & RRRP (Total of about $0.4 Bn/yr): This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI -- About $900+ M/yr): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes that about 30% price increase (from $85/MWh to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
  - As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $100 million).

- Departure Tax: As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.
  - This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
  - Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

- Other fiscal cost risks (Total of about $0.8+ Bn):
  - Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
  - Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
  - Lowering of the debt interest paid by OPG (about $30 – 70 million/yr between 2017 and 2021),

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# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
  - These targeted, low-income measures were introduced after the HST was introduced.
  - The OESP provides a larger, targeted and on-bill relief to qualifying consumers.

- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
  - As with the prior OCEB cap, provides a rough incentive for conservation and correlation to larger homes. A higher cap in winter may help with space-heating issue.
  - May be challenging to implement.

- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

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# Proposed Taxpayer Funded Electricity Price Mitigation Option 1
(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | | | |
| 8. Other | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,305** | **3,901** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

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# Proposed Taxpayer Funded Electricity Price Mitigation Option 2

(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **895** | **1,705** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | | | |
| 8. Other | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,105** | **3,501** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

Option 1

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | Removing the DRC from residential users was a policy decision to help mitigate residential rate pressures – particularly in the context of the end of OCEB – rather than based on defeasance as per the original conception of the DRC and therefore came at a fiscal cost.<br>~~The government removed the DRC from residential electricity users' bills as of January 1, 2016.~~ This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

# Background on Taxpayer-funded Electricity Price Mitigation

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Option 2

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
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1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

# Timeline: Taxpayer-funded Electricity Price Mitigation

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Option 1

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

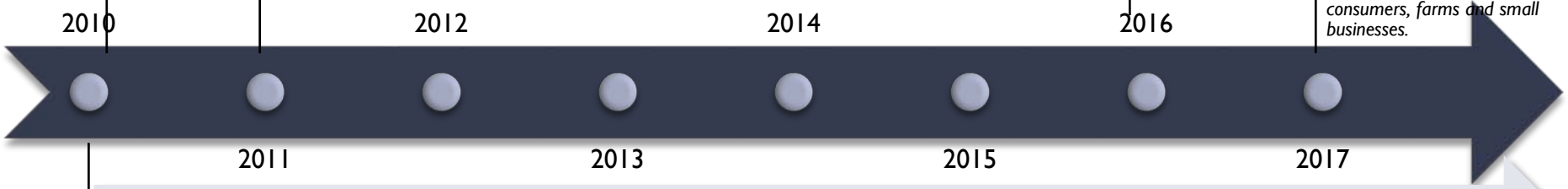
*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*Removing the DRC from residential users was a policy decision to help mitigate residential rate pressures rather than based on defeasance as per the original conception of the DRC. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*




**History of Northern Industrial Electricity Price Relief**

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

# Timeline: Taxpayer-funded Electricity Price Mitigation

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Option 2

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

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**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

**History of Northern Industrial Electricity Price Relief**

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*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

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**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

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# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Note: The Province has invested capital locked into OPG and Hydro One. As business corporations these entities are expected to provide a ~~with the expectation that as commercial corporations, the Province would receive a~~ risk-adjusted return that help the Province deliver on its priorities and commitments.~~in exchange for these investments.~~
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

# Potential Fiscal Impact to the Electricity Sector

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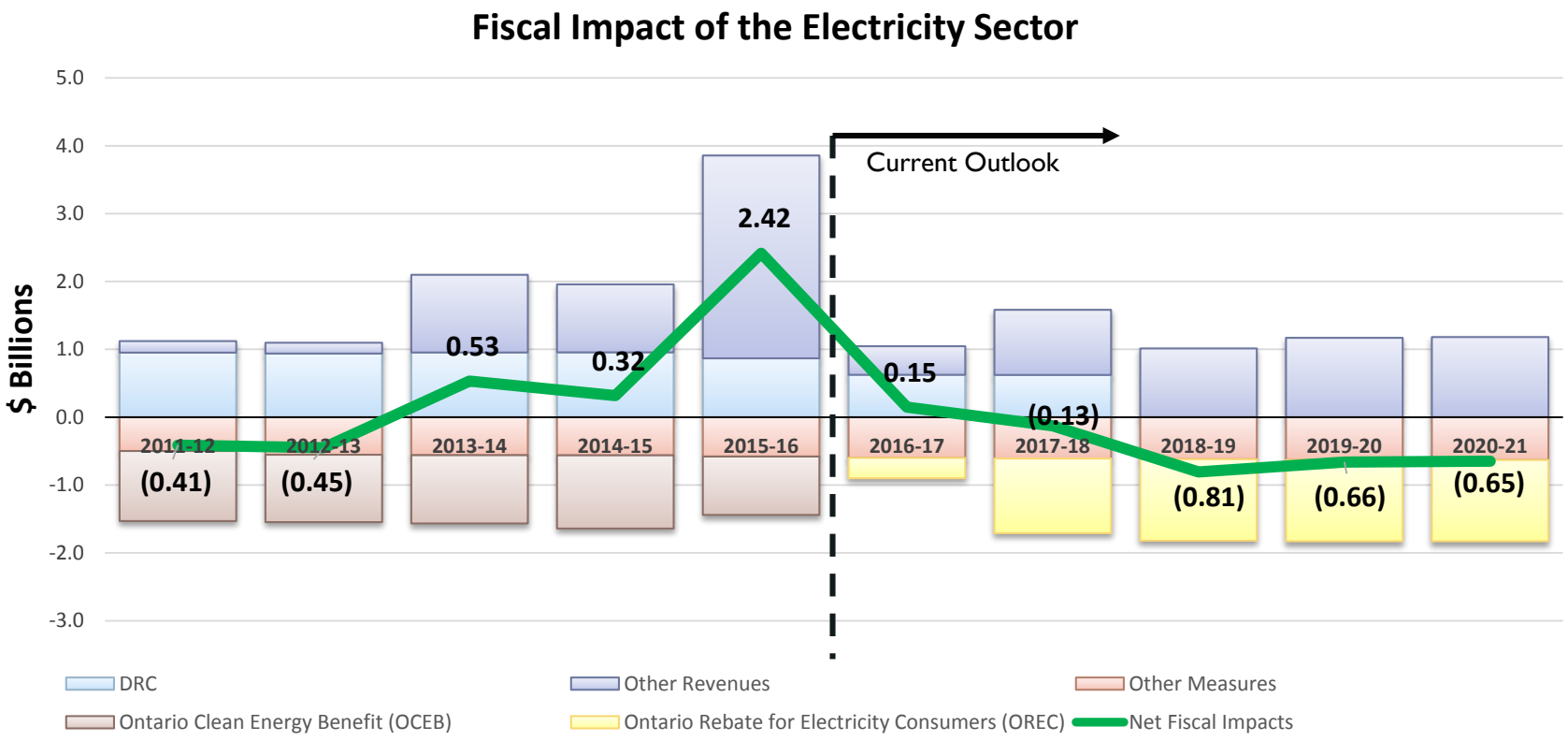
Option 2

- The below chart provides an overview of the fiscal impact from the electricity sector




Other Revenues include payments in lieu of taxes (PILs), and property tax PILs in the case of Hydro One, directed to the OEFC. The provincial portion of these taxes would be a fiscal benefit to the Province, regardless of company ownership.

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | Francisco Chinchon |
| **Cc:** | John Kim; Ronald Kwan |
| **Subject:** | RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Friday, December 23, 2016 11:57:16 AM |
| **Attachments:** | Price-Mitigation - CEFD Slides-Dec6-2016_v7.pptx |

Hi,

I made a few edits to provide additional context and spruced up the chart.

Please see v7 attached. Also found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016\Price-Mitigation - CEFD Slides-Dec6-2016_v7.pptx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Friday, December 23, 2016 10:32 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Francisco. I'll update the deck to reflect your comments.

Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Francisco Chinchon
**Sent:** Friday, December 23, 2016 9:56 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Shajee,

My two cents and in the context of Scott's comments:

1. DRC should stay in the deck but you may want to provide further context as for example that removing it for residential users was a policy decision to help mitigate rate pressures rather than based on defeasance as per the initial concepts.

2. With respect to the fiscal contributions from OPG, H1 you may want to add context on how OPG and H1 are commercial business corporations expected to produce a return in exchange for the risk the shareholder assumes. Also that there is an opportunity cost on having capital allocated to them. I recognize this may be more of a controversial point (depending on how people see things) but is technically correct to flag if people are somehow challenging the returns or earnings the Province obtains from its commercial enterprises.

Thanks,

Francisco

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, December 22, 2016 6:34 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Ron.

I found a similar file, but began from 2011-12 onwards to be consistent with the table we were developing. In Slide 16, I added a revised chart.

Please see file attached, also found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016\Price-Mitigation - CEFD Slides-Dec6-2016_v6.pptx

Also per Scott's comments below, I left the option open to use the DRC as a fiscal benefit, as opposed to the DRC ending as a rate mitigation measure (fiscal cost). That's indicated by Option 1 or 2 in the top right corner of the chart.

Happy to update the OEFC Board Orientation file as well to reflect this revision. And please advise if you'd like years going back to 1999-2000.

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Ronald Kwan
**Sent:** Thursday, December 22, 2016 6:08 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi,

I think you had been previously working on updating slide 9 of the attached.

S:\Users\CEF\Hydro 2016\OEFC\Board\December\Orientation\Archive

Ron

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**From:** Shajee Kathirgamanathan
**Sent:** December-22-16 14:23
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Sure. Might need to confirm which chart, will take a look first.

Thanks

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Ronald Kwan
**Sent:** Thursday, December 22, 2016 1:54 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FyI Shajee.

Can you update the chart. I believe you had a run at it last month.

Need to add new scenarios, though.

Ron

Begin forwarded message:

> **From:** "Nelms, Scott (ENERGY)" <Scott.Nelms@ontario.ca>
> **Date:** December 22, 2016 at 1:41:45 PM EST
> **To:** "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>
> **Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Thanks Ron. Do you mind sharing those out year forecasts? Latest OEFC board materials that I have seen only forecast this fiscal.
>
> The table in your presentation also goes back to 2011-12, so assume that the all-in fiscal impact of the electricity sector might have been very different. Might be interesting to show the evolution from a net positive to net drain, as you describe below. Your comment around DRC is a good one. I wondered in the table whether it might be helpful to show DRC revenues (rather than "ending DRC"). That will show the decline, but that it is still a positive to the Province even out to 2017-18.
>
> However, take my comments with a grain of salt as I am outside my area of expertise.
>
> Thanks again for sharing,
> Scott
>
> -----Original Message-----
> From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
> Sent: December 21, 2016 5:11 PM
> To: Nelms, Scott (ENERGY); Kennedy, Nancy (MOF)
> Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
>
> Hi Scott,
>
> Thanks.
>
> On your comment as you may recall, we used to do that roll-up (initially when Serge was ADM), but that would also include all the OEFC expenses too. And not all the GRC is OEFC related, but helps with MNR and its costs, so not completely straightforward.
>
> Post-DRC, and post much lower Hydro One net income to the Province and lost PILs, as Nancy may recall from some OEFC board presentations (Serge likely

missed those Board presentations), OEFC may be close to flat.

Ron

-----Original Message-----
From: Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
Sent: December-21-16 16:55
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

I have not seen a draft since last week. Likely same version you last saw Ron. I did have a chance to speak with folks who are more in the know on this and I can confirm that none of the OPG options are likely to show up in the next iteration.

One suggestion on the note, Ron: if you are going to show all the existing fiscal pressures, it may be helpful to also show the fiscal benefits from the electricity system (OPG/H1 revenues, PILs, GRC etc.).

Thanks,
Scott

-----Original Message-----
From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: December 21, 2016 4:14 PM
To: Kennedy, Nancy (MOF); Nelms, Scott (ENERGY)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Nancy, Scott,

As discussed yesterday, I have not seen any iterations of an Energy deck or other materials on price mitigation options since early last week, when the DMO shared a "bootleg" copy. We sent back some comments on that deck to the Deputy, as attached.

Also attached, for your information, are some comments and a deck we did for the Deputy the previous week, in advance of the Major Projects Committee meeting that week. I had understood that the Deputy shared back the comments with Energy DMO at that time.

As discussed yesterday, CEFD is looking forward to being able to input into the contemplation of potential initiatives. Having said that, staff availability over the next couple weeks will be very limited.

Ron

-----Original Message-----
From: Ronald Kwan
Sent: December-13-16 07:21
To: Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>
Cc: David McLean (MOF) <David.McLean@ontario.ca>; Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----
From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
Sent: December-12-16 9:18 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----
From: Thompson, Scott (MOF)
Sent: December 11, 2016 12:25 PM
To: McLean, David (MOF)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx _____
From: Orsini, Steve (CAB)
Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)
To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)
Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----
From: Imbrogno, Serge (ENERGY)
Sent: December-11-16 12:04 PM
To: Orsini, Steve (CAB)
Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

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This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

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# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

DRAFT

# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost [about $1.3 – 1.9 plus bn per year in new fiscal costs].
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 billion in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time), with the total tax-based costs rising to about $3.3-3.9 plus billion in 2017-18, if Energy`s proposals are adopted.
  - These existing mitigation costs are not presented in Energy's deck.
  - Not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

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Option 1

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion.

# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

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Option 2

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[2] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,450** | **895** | **1,705** |

1. 2016-17, 2017-18 based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge

NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $900 million.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $1.7 billion.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

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# Energy's Proposals

Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded. They could be upwards of $2 bn/year, (plus the departure tax), which is not included in the fiscal plan, which would challenge the path to balance.

- OESP & RRRP (Total of about $0.4 Bn/yr): This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI -- About $900+ M/yr): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes that about 30% price increase (from $85/MWh to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
  - As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $100 million).

- Departure Tax: As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.
  - This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
  - Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

- Other fiscal cost risks (Total of about $0.8+ Bn):
  - Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
  - Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
  - Lowering of the debt interest paid by OPG (about $30 – 70 million/yr between 2017 and 2021),

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# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
  - These targeted, low-income measures were introduced after the HST was introduced.
  - The OESP provides a larger, targeted and on-bill relief to qualifying consumers.

- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
  - As with the prior OCEB cap, provides a rough incentive for conservation and correlation to larger homes. A higher cap in winter may help with space-heating issue.
  - May be challenging to implement.

- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

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# Proposed Taxpayer Funded Electricity Price Mitigation Option 1
(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | | | |
| 8. Other | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,305** | **3,901** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

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# Proposed Taxpayer Funded Electricity Price Mitigation Option 2

(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **895** | **1,705** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | | | |
| 8. Other | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,105** | **3,501** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

Option 1

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | Removing the DRC from residential users was a policy decision to help mitigate residential rate pressures – particularly in the context of the end of OCEB – rather than based on defeasance as per the original conception of the DRC. ~~The government removed the DRC from residential electricity users' bills as of January 1, 2016.~~ This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

# Background on Taxpayer-funded Electricity Price Mitigation

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Option 2

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

# Timeline: Taxpayer-funded Electricity Price Mitigation

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Option 1

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

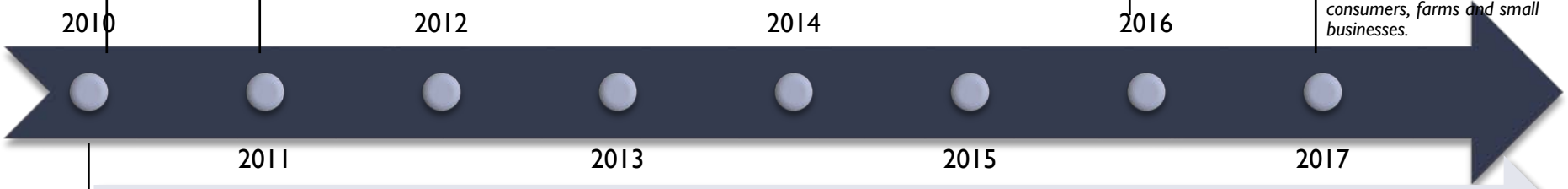
*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*Removing the DRC from residential users was a policy decision to help mitigate residential rate pressures rather than based on defeasance as per the original conception of the DRC. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*




**History of Northern Industrial Electricity Price Relief**

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

# Timeline: Taxpayer-funded Electricity Price Mitigation

DRAFT

Option 2

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

**History of Northern Industrial Electricity Price Relief**

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

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**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

DRAFT

# Potential Fiscal Impact to the Electricity Sector

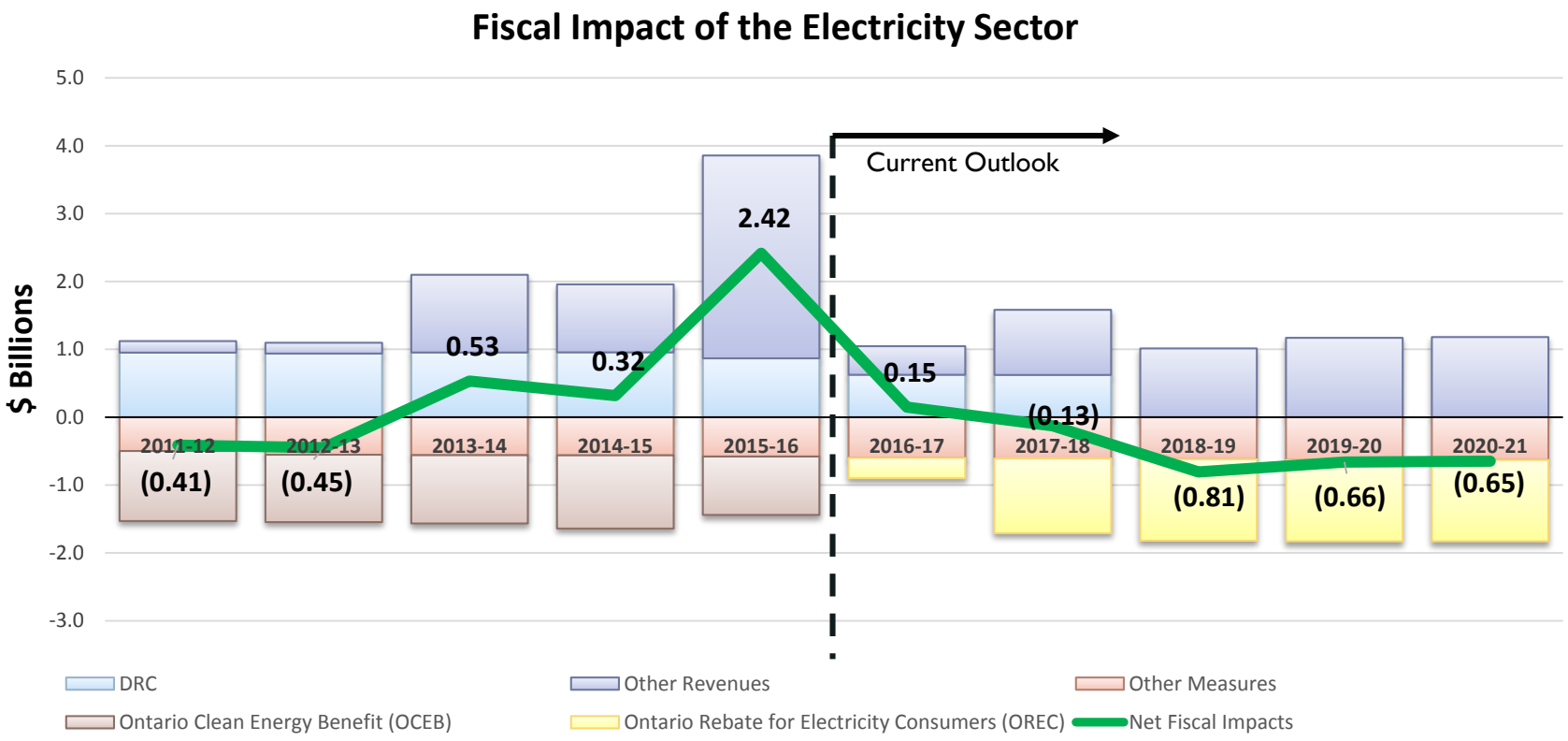
- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Note: The Province has invested capital into OPG and Hydro One with the expectation that as commercial corporations, the Province would receive a risk-adjusted return in exchange for these investments.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

# Potential Fiscal Impact to the Electricity Sector

DRAFT

Option 2

- The below chart provides an overview of the fiscal impact from the electricity sector




Other Revenues include payments in lieu of taxes (PILs), and property tax PILs in the case of Hydro One, directed to the OEFC. The provincial portion of these taxes would be a fiscal benefit to the province, regardless of company ownership.

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | Francisco Chinchon |
| **Cc:** | John Kim; Ronald Kwan |
| **Subject:** | RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Friday, December 23, 2016 10:31:36 AM |

Thanks Francisco. I'll update the deck to reflect your comments.

Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Francisco Chinchon
**Sent:** Friday, December 23, 2016 9:56 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Shajee,

My two cents and in the context of Scott's comments:

1. DRC should stay in the deck but you may want to provide further context as for example that removing it for residential users was a policy decision to help mitigate rate pressures rather than based on defeasance as per the initial concepts.

2. With respect to the fiscal contributions from OPG, H1 you may want to add context on how OPG and H1 are commercial business corporations expected to produce a return in exchange for the risk the shareholder assumes. Also that there is an opportunity cost on having capital allocated to them. I recognize this may be more of a controversial point (depending on how people see things) but is technically correct to flag if people are somehow challenging the returns or earnings the Province obtains from its commercial enterprises.

Thanks,

Francisco

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, December 22, 2016 6:34 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>

**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Ron.

I found a similar file, but began from 2011-12 onwards to be consistent with the table we were developing. In Slide 16, I added a revised chart.

Please see file attached, also found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016\Price-Mitigation - CEFD Slides-Dec6-2016_v6.pptx

Also per Scott's comments below, I left the option open to use the DRC as a fiscal benefit, as opposed to the DRC ending as a rate mitigation measure (fiscal cost). That's indicated by Option 1 or 2 in the top right corner of the chart.

Happy to update the OEFC Board Orientation file as well to reflect this revision. And please advise if you'd like years going back to 1999-2000.

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Ronald Kwan
**Sent:** Thursday, December 22, 2016 6:08 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi,

I think you had been previously working on updating slide 9 of the attached.

S:\Users\CEF\Hydro 2016\OEFC\Board\December\Orientation\Archive

Ron

---

**From:** Shajee Kathirgamanathan
**Sent:** December-22-16 14:23

**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Sure. Might need to confirm which chart, will take a look first.

Thanks

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Ronald Kwan
**Sent:** Thursday, December 22, 2016 1:54 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FyI Shajee.

Can you update the chart. I believe you had a run at it last month.

Need to add new scenarios, though.

Ron

Begin forwarded message:

> **From:** "Nelms, Scott (ENERGY)" <Scott.Nelms@ontario.ca>
> **Date:** December 22, 2016 at 1:41:45 PM EST
> **To:** "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>
> **Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Thanks Ron. Do you mind sharing those out year forecasts? Latest OEFC board materials that I have seen only forecast this fiscal.
>
> The table in your presentation also goes back to 2011-12, so assume that the all-in fiscal impact of the electricity sector might have been very different. Might be interesting to show the evolution from a net positive to net drain, as you describe below. Your comment around DRC is a good one. I wondered in the table whether it might be helpful to show DRC revenues (rather than "ending DRC"). That will show the decline, but that it is still a positive to the Province even out to 2017-18.

However, take my comments with a grain of salt as I am outside my area of expertise.

Thanks again for sharing,
Scott

-----Original Message-----
From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: December 21, 2016 5:11 PM
To: Nelms, Scott (ENERGY); Kennedy, Nancy (MOF)
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Scott,

Thanks.

On your comment as you may recall, we used to do that roll-up (initially when Serge was ADM), but that would also include all the OEFC expenses too. And not all the GRC is OEFC related, but helps with MNR and its costs, so not completely straightforward.

Post-DRC, and post much lower Hydro One net income to the Province and lost PILs, as Nancy may recall from some OEFC board presentations (Serge likely missed those Board presentations), OEFC may be close to flat.

Ron

-----Original Message-----
From: Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
Sent: December-21-16 16:55
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

I have not seen a draft since last week. Likely same version you last saw Ron. I did have a chance to speak with folks who are more in the know on this and I can confirm that none of the OPG options are likely to show up in the next iteration.

One suggestion on the note, Ron: if you are going to show all the existing fiscal pressures, it may be helpful to also show the fiscal benefits from the electricity system (OPG/H1 revenues, PILs, GRC etc.).

Thanks,
Scott

-----Original Message-----

From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: December 21, 2016 4:14 PM
To: Kennedy, Nancy (MOF); Nelms, Scott (ENERGY)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Nancy, Scott,

As discussed yesterday, I have not seen any iterations of an Energy deck or other materials on price mitigation options since early last week, when the DMO shared a "bootleg" copy. We sent back some comments on that deck to the Deputy, as attached.

Also attached, for your information, are some comments and a deck we did for the Deputy the previous week, in advance of the Major Projects Committee meeting that week. I had understood that the Deputy shared back the comments with Energy DMO at that time.

As discussed yesterday, CEFD is looking forward to being able to input into the contemplation of potential initiatives. Having said that, staff availability over the next couple weeks will be very limited.

Ron

-----Original Message-----
From: Ronald Kwan
Sent: December-13-16 07:21
To: Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>
Cc: David McLean (MOF) <David.McLean@ontario.ca>; Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----
From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
Sent: December-12-16 9:18 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC)

<Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----
From: Thompson, Scott (MOF)
Sent: December 11, 2016 12:25 PM
To: McLean, David (MOF)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx _____
From: Orsini, Steve (CAB)
Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)
To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)
Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----
From: Imbrogno, Serge (ENERGY)
Sent: December-11-16 12:04 PM
To: Orsini, Steve (CAB)
Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

_____

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies.

Thank you.

| | |
|---|---|
| **From:** | Francisco Chinchon |
| **To:** | Ronald Kwan |
| **Cc:** | Gavin He; Darren Scanlan; Shajee Kathirgamanathan; John Kim |
| **Subject:** | RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Wednesday, January 11, 2017 9:08:52 AM |

Looks fine to me.

---

**From:** Ronald Kwan
**Sent:** Wednesday, January 11, 2017 5:40 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Francisco. I made a few more additions, as attached. I hope they make sense. The trillium trust discussion and some other edits respond to comments by Scott N.

Ron

---

**From:** Francisco Chinchon
**Sent:** January-10-17 8:29 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Looks good, just a few suggestions. I also confirmed the figures are ok.

On Jan 10, 2017, at 8:01 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Thanks Francisco.
>
> Ron
>
> ---
>
> **From:** Francisco Chinchon
> **Sent:** January-10-17 20:01
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
>
> I'll review now.

On Jan 10, 2017, at 7:39 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

Hi,

I did a clean version too, if that helps with new markups.

Ron

---

**From:** Ronald Kwan
**Sent:** January-10-17 19:33
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi,

Thanks all.

I moved some slides around and made some elaborations on the DT and DTB, as attached. Comments?

Ron

---

**From:** Francisco Chinchon
**Sent:** January-10-17 11:08
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

Attached is a draft deck.

Thanks,

Francisco

**From:** Gavin He
**Sent:** Monday, January 09, 2017 5:37 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

FYI - DMO would like to receive the notes by EOD tomorrow.

Thanks,

Gavin He

---

**From:** Gavin He
**Sent:** Friday, January 6, 2017 10:32 AM
**To:** Francisco Chinchon; John Kim; Darren Scanlan; Shajee Kathirgamanathan
**Cc:** Ronald Kwan
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

Attached are the notes along with the request.

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, January 06, 2017 10:25 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Please see the request. Lease start drafting a thorough analysis.

Thanks,
Ron

Begin forwarded message:

**From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Date:** January 6, 2017 at 10:23:12 AM EST
**To:** "David McLean (MOF)" <David.McLean@ontario.ca>
**Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, Gavin He <Gavin.He@ofina.on.ca>
**Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**

Hi David,

Yes, we can work on that for early next week.

Ron

> On Jan 6, 2017, at 10:20 AM, McLean, David (MOF) <David.McLean@ontario.ca> wrote:
>
> Hi Ron,
>
> The DM has asked if you and your team could build on the analysis contained in this note on the departure tax component. He'd like something thorough focused specifically on that proposal.
>
> If possible, he'd like to see something as early as feasible next week. Is that doable?
>
> Thanks,
>
> Dave
>
> -----Original Message-----
>
> From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
>
> Sent: December 13, 2016 7:21 AM
>
> To: Thompson, Scott (MOF); Mayman,

Gadi (OFA); Schuurman, Tim (MOF)

Cc: McLean, David (MOF); Pearce, Christopher (MOF)

Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

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-----Original Message-----

From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]

Sent: December-12-16 9:18 AM

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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-----Original Message-----

From: Thompson, Scott (MOF)

Sent: December 11, 2016 12:25 PM

To: McLean, David (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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From: Orsini, Steve (CAB)

Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)

To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)

Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: December-11-16 12:04 PM

To: Orsini, Steve (CAB)

Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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Serge

---

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<Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx>

<Rate Mitigation Proposals - Departure Tax (2017 01 10 v3).pptx>

**From:** Francisco Chinchon
**To:** Shajee Kathirgamanathan
**Cc:** John Kim; Ronald Kwan
**Subject:** RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx
**Date:** Friday, December 23, 2016 9:55:41 AM

---

Hi Shajee,

My two cents and in the context of Scott's comments:

1. DRC should stay in the deck but you may want to provide further context as for example that removing it for residential users was a policy decision to help mitigate rate pressures rather than based on defeasance as per the initial concepts.

2. With respect to the fiscal contributions from OPG, H1 you may want to add context on how OPG and H1 are commercial business corporations expected to produce a return in exchange for the risk the shareholder assumes. Also that there is an opportunity cost on having capital allocated to them. I recognize this may be more of a controversial point (depending on how people see things) but is technically correct to flag if people are somehow challenging the returns or earnings the Province obtains from its commercial enterprises.

Thanks,

Francisco

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**From:** Shajee Kathirgamanathan
**Sent:** Thursday, December 22, 2016 6:34 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Ron.

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Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Ronald Kwan
**Sent:** Thursday, December 22, 2016 6:08 PM
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S:\Users\CEF\Hydro 2016\OEFC\Board\December\Orientation\Archive

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Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

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FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

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From: Orsini, Steve (CAB)
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To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)
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| | |
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| **Subject:** | RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Thursday, December 22, 2016 6:33:43 PM |
| **Attachments:** | Price-Mitigation - CEFD Slides-Dec6-2016_v6.pptx |

Thanks Ron.

I found a similar file, but began from 2011-12 onwards to be consistent with the table we were developing. In Slide 16, I added a revised chart.

Please see file attached, also found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016\Price-Mitigation - CEFD Slides-Dec6-2016_v6.pptx

Also per Scott's comments below, I left the option open to use the DRC as a fiscal benefit, as opposed to the DRC ending as a rate mitigation measure (fiscal cost). That's indicated by Option 1 or 2 in the top right corner of the chart.

Happy to update the OEFC Board Orientation file as well to reflect this revision. And please advise if you'd like years going back to 1999-2000.

Thanks,
Shajee

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DRAFT

# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

DRAFT

# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost [about $1.3 – 1.9 plus bn per year in new fiscal costs].
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 billion in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time), with the total tax-based costs rising to about $3.3-3.9 plus billion in 2017-18, if Energy`s proposals are adopted.
  - These existing mitigation costs are not presented in Energy's deck.
  - Not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

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Option 1

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion.

# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

DRAFT

Option 2

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[2] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,450** | **895** | **1,705** |

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- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $900 million.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $1.7 billion.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

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# Energy's Proposals

Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded. They could be upwards of $2 bn/year, (plus the departure tax), which is not included in the fiscal plan, which would challenge the path to balance.

- OESP & RRRP (Total of about $0.4 Bn/yr): This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI -- About $900+ M/yr): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes that about 30% price increase (from $85/MWh to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
  - As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $100 million).

- Departure Tax: As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.
  - This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
  - Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

- Other fiscal cost risks (Total of about $0.8+ Bn):
  - Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
  - Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
  - Lowering of the debt interest paid by OPG (about $30 – 70 million/yr between 2017 and 2021),

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# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
  - These targeted, low-income measures were introduced after the HST was introduced.
  - The OESP provides a larger, targeted and on-bill relief to qualifying consumers.

- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
  - As with the prior OCEB cap, provides a rough incentive for conservation and correlation to larger homes. A higher cap in winter may help with space-heating issue.
  - May be challenging to implement.

- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

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# Proposed Taxpayer Funded Electricity Price Mitigation Option 1
(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
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| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | | | |
| 8. Other | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,305** | **3,901** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

DRAFT

# Proposed Taxpayer Funded Electricity Price Mitigation Option 2

(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **895** | **1,705** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | | | |
| 8. Other | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,105** | **3,501** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
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- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# Appendix

# Background on Taxpayer-funded Electricity Price Mitigation

DRAFT

Option 1

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | The government removed the DRC from residential electricity users' bills as of January 1, 2016. This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

# Background on Taxpayer-funded Electricity Price Mitigation

DRAFT

Option 2

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
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1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

# Timeline: Taxpayer-funded Electricity Price Mitigation

DRAFT

Option 1

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

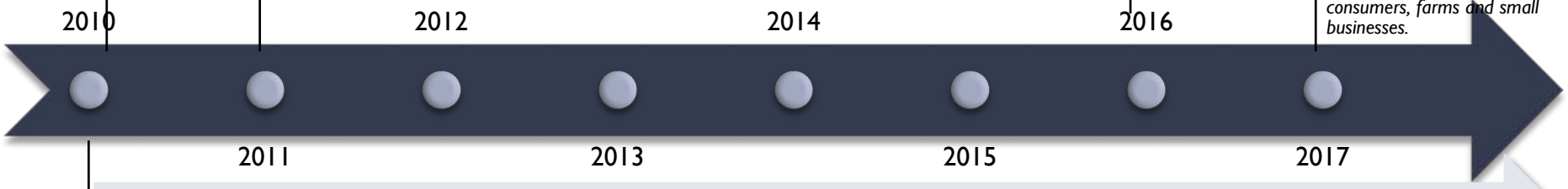
*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*The government removed the DRC from residential electricity users' bills beginning on January 1, 2016. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*




**History of Northern Industrial Electricity Price Relief**

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

# Timeline: Taxpayer-funded Electricity Price Mitigation

DRAFT

Option 2

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

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*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

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**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

DRAFT

# Potential Fiscal Impact to the Electricity Sector

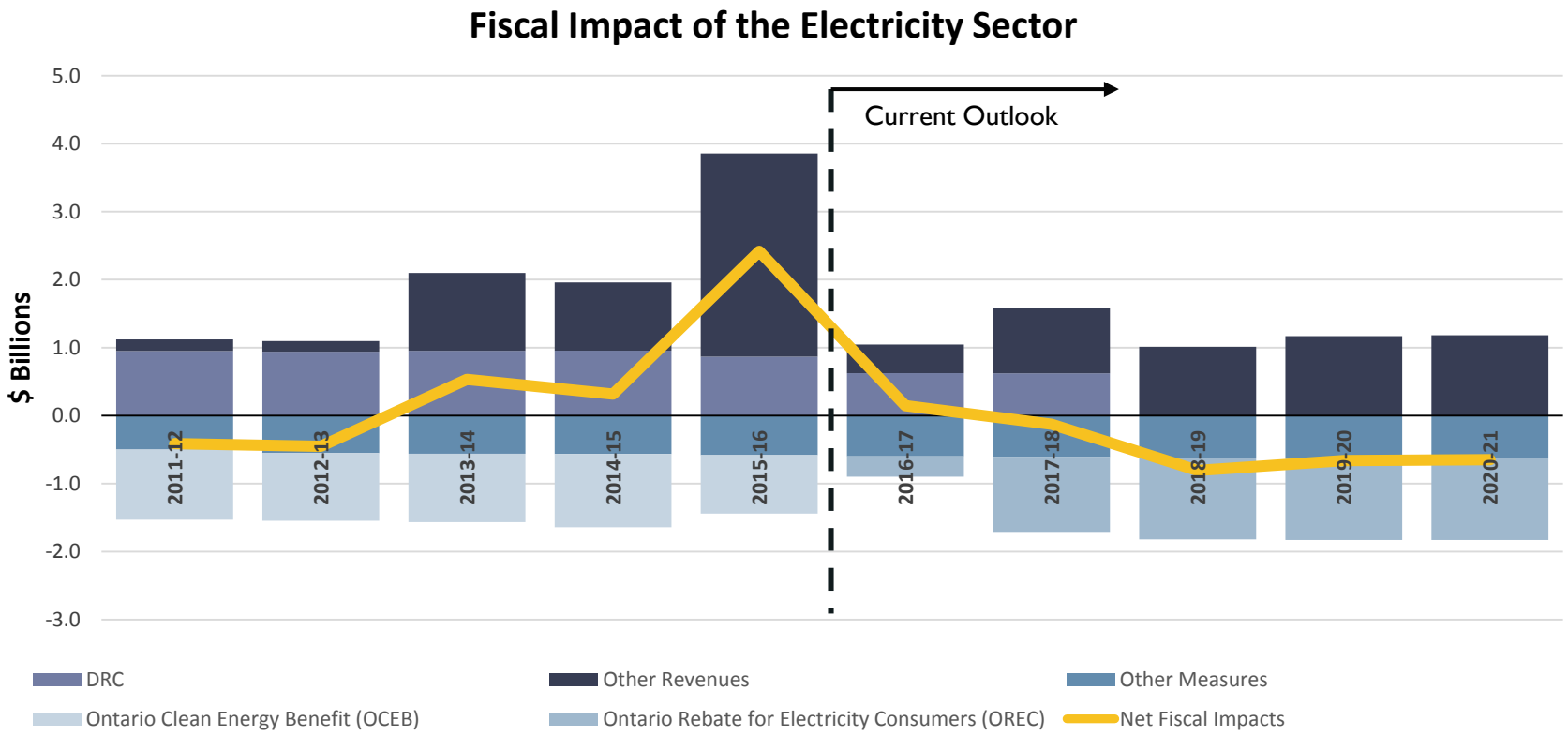
- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

# Potential Fiscal Impact to the Electricity Sector

DRAFT

Option 2

- The below chart provides an overview of the fiscal impact from the electricity sector



| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Shajee Kathirgamanathan |
| **Cc:** | Francisco Chinchon; John Kim |
| **Subject:** | RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Thursday, December 22, 2016 6:07:31 PM |
| **Attachments:** | Fiscal Interactions of the Electricity Sector v2.pptx |

Hi,

I think you had been previously working on updating slide 9 of the attached.

S:\Users\CEF\Hydro 2016\OEFC\Board\December\Orientation\Archive

Ron

---

**From:** Shajee Kathirgamanathan
**Sent:** December-22-16 14:23
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Sure. Might need to confirm which chart, will take a look first.

Thanks

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Ronald Kwan
**Sent:** Thursday, December 22, 2016 1:54 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FyI Shajee.

Can you update the chart. I believe you had a run at it last month.

Need to add new scenarios, though.

Ron

Begin forwarded message:

**From:** "Nelms, Scott (ENERGY)" <Scott.Nelms@ontario.ca>
**Date:** December 22, 2016 at 1:41:45 PM EST
**To:** "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>
**Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**

Thanks Ron. Do you mind sharing those out year forecasts? Latest OEFC board materials that I have seen only forecast this fiscal.

The table in your presentation also goes back to 2011-12, so assume that the all-in fiscal impact of the electricity sector might have been very different. Might be interesting to show the evolution from a net positive to net drain, as you describe below. Your comment around DRC is a good one. I wondered in the table whether it might be helpful to show DRC revenues (rather than "ending DRC"). That will show the decline, but that it is still a positive to the Province even out to 2017-18.

However, take my comments with a grain of salt as I am outside my area of expertise.

Thanks again for sharing,
Scott

-----Original Message-----
From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: December 21, 2016 5:11 PM
To: Nelms, Scott (ENERGY); Kennedy, Nancy (MOF)
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Scott,

Thanks.

On your comment as you may recall, we used to do that roll-up (initially when Serge was ADM), but that would also include all the OEFC expenses too. And not all the GRC is OEFC related, but helps with MNR and its costs, so not completely straightforward.

Post-DRC, and post much lower Hydro One net income to the Province and lost PILs, as Nancy may recall from some OEFC board presentations (Serge likely missed those Board presentations), OEFC may be close to flat.

Ron

-----Original Message-----
From: Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
Sent: December-21-16 16:55

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

I have not seen a draft since last week. Likely same version you last saw Ron. I did have a chance to speak with folks who are more in the know on this and I can confirm that none of the OPG options are likely to show up in the next iteration.

One suggestion on the note, Ron: if you are going to show all the existing fiscal pressures, it may be helpful to also show the fiscal benefits from the electricity system (OPG/H1 revenues, PILs, GRC etc.).

Thanks,
Scott

-----Original Message-----
From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: December 21, 2016 4:14 PM
To: Kennedy, Nancy (MOF); Nelms, Scott (ENERGY)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Nancy, Scott,

As discussed yesterday, I have not seen any iterations of an Energy deck or other materials on price mitigation options since early last week, when the DMO shared a "bootleg" copy. We sent back some comments on that deck to the Deputy, as attached.

Also attached, for your information, are some comments and a deck we did for the Deputy the previous week, in advance of the Major Projects Committee meeting that week. I had understood that the Deputy shared back the comments with Energy DMO at that time.

As discussed yesterday, CEFD is looking forward to being able to input into the contemplation of potential initiatives. Having said that, staff availability over the next couple weeks will be very limited.

Ron

-----Original Message-----
From: Ronald Kwan
Sent: December-13-16 07:21
To: Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>
Cc: David McLean (MOF) <David.McLean@ontario.ca>; Christopher Pearce

(MOI) <Christopher.Pearce@ontario.ca>
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----
From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
Sent: December-12-16 9:18 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----
From: Thompson, Scott (MOF)
Sent: December 11, 2016 12:25 PM
To: McLean, David (MOF)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx _____
From: Orsini, Steve (CAB)
Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)
To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)
Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----
From: Imbrogno, Serge (ENERGY)
Sent: December-11-16 12:04 PM
To: Orsini, Steve (CAB)
Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

---

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

# Electricity Sector Fiscal Interactions

## Corporate and Electricity Finance Division

December xx, 2016

# Purpose

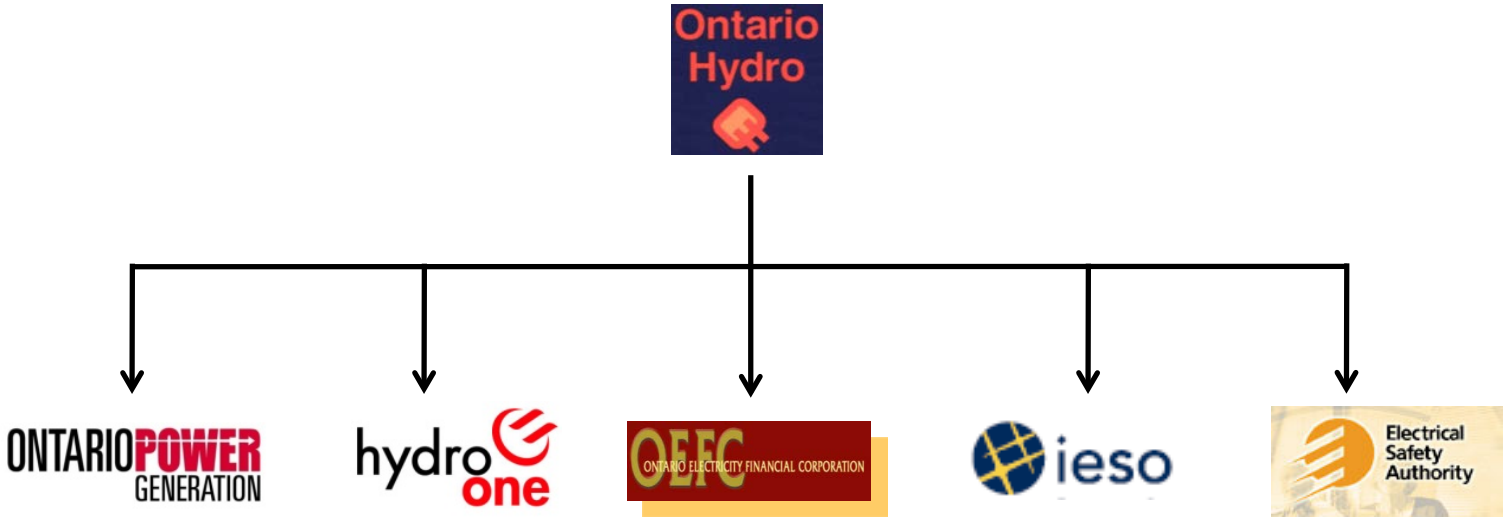
- To provide a financial background on Ontario's electricity sector and its role in the fiscal plan by discussing
  - Ontario Hydro restructuring, stranded debt and residual stranded debt
  - Key interactions between the fiscal plan and the electricity sector

# Key Points

- The electricity sector has a significant impact on the Province's fiscal position
- The Province's electricity sector agencies are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.
  - Ontario Electricity Financial Corporation (OEFC), an agency of the Ministry of Finance, is consolidated line-by-line into the Province's accounts
    - OEFC receives certain revenues from within the electricity sector, including the Debt Retirement Charge (DRC), to manage the debt and liabilities of the old Ontario Hydro, including the stranded debt and residual stranded debt
    - The Minister of Finance also has authority under the Electricity Act with respect to the DRC

# Ontario Hydro Financial Restructuring, Stranded Debt, and Residual Stranded Debt

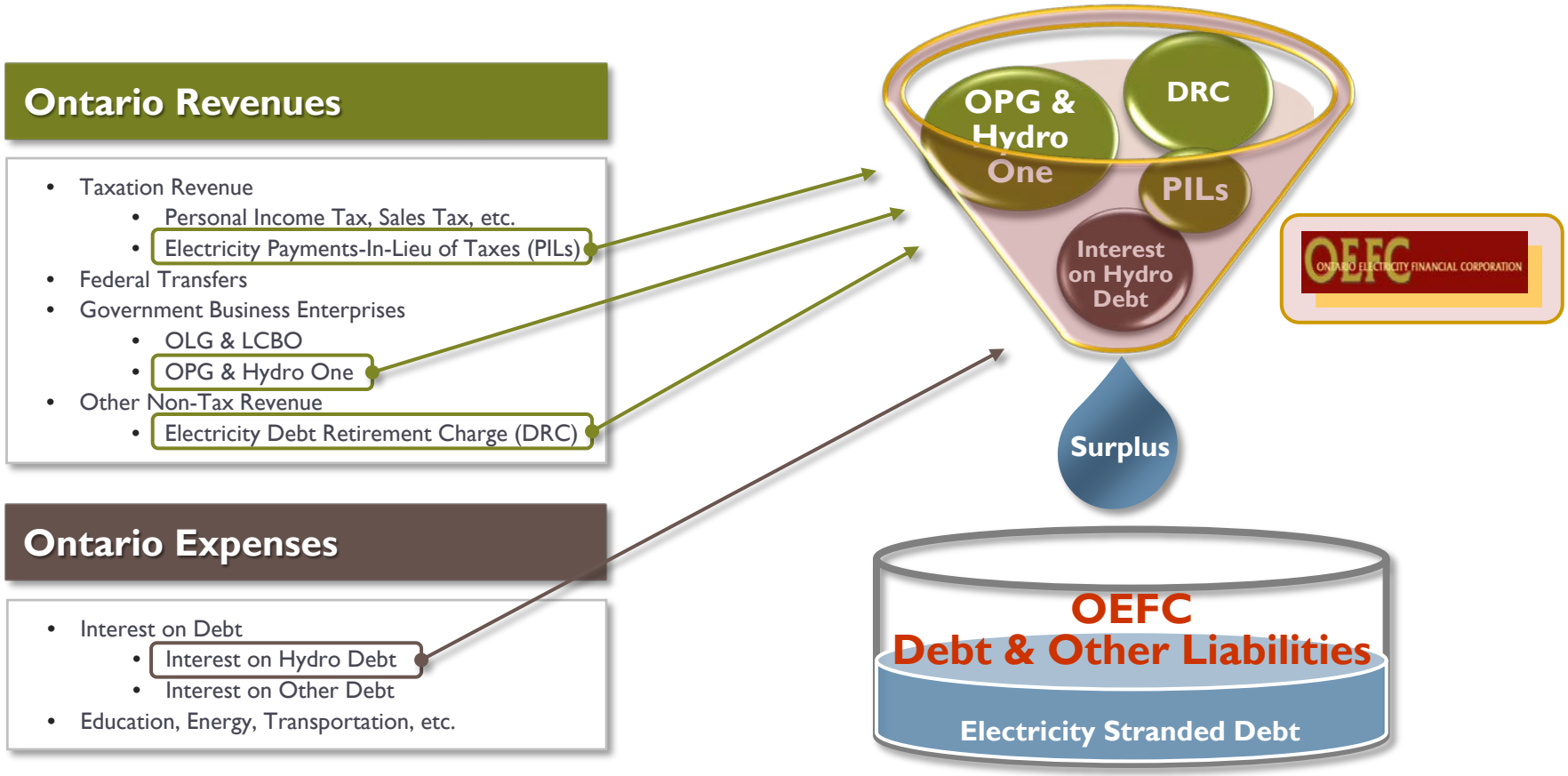
# Ontario Hydro Successor Entities




- Ontario Hydro was restructured into five successor companies on April 1, 1999
  - Ontario Electricity Financial Corporation (OEFC) was established as the legal continuation of Ontario Hydro, managing its debt and other liabilities and is an agency of the Ministry of Finance
  - Ontario Power Generation (OPG), Hydro One, and Independent Electricity System Operator (IESO) acquired Ontario Hydro assets (i.e., OEFC assets) by issuing $17.2 billion in debt to OEFC
- As part of the restructuring, the Province became the sole shareholder of OPG and Hydro One through a debt-for-equity swap, assuming $5.1 Bn and $3.8 Bn of their debt owed to OEFC respectively, in exchange for the shares in the companies

# Electricity Sector Revenues: Part of a "Closed System" via OEFC

- OEFC manages certain dedicated Provincial electricity sector revenues and expenses, and services and pays down its electricity debt to reduce the stranded debt and residual stranded debt of the electricity sector



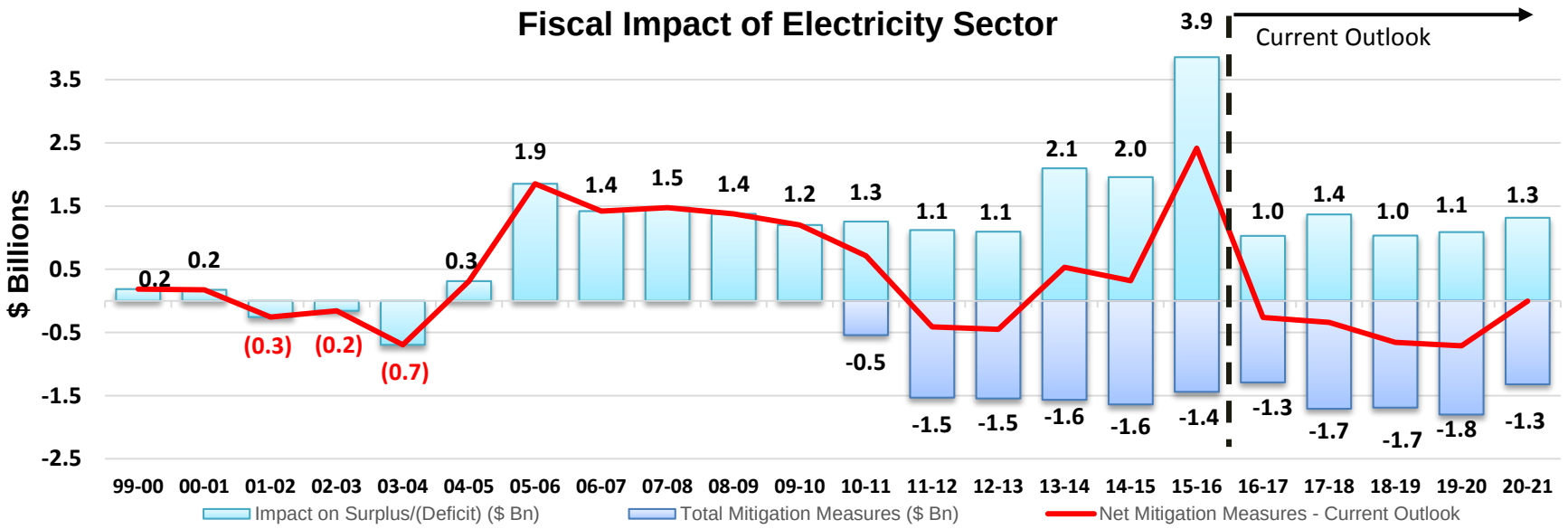
# Fiscal Interactions with the Electricity Sector

# Consolidation of the Electricity Sector

- Each of the Province's electricity sector agencies and corporations is consolidated into the government's financial statements, and directly affects the Province's surplus/deficit position
  - OPG and Hydro One financial (related to the Province's ownership) results have a dollar-for-dollar impact on the Province and are consolidated on a "modified equity basis"
    - Net incomes consolidated as Provincial revenue
    - Equity consolidated as Provincial asset on the balance sheet
  - OEFC, an agency of the Ministry of Finance, is consolidated line-by-line into the Province's accounts, including payments-in-lieu of taxes from OPG, Hydro One and municipal electricity utilities, the Debt Retirement Charge, and OEFC interest costs
  - Other electricity sector entities (Ontario Energy Board – OEB, Ontario Power Authority – OPA, Independent Electricity System Operator – IESO) are consolidated line-by-line through the Ministry of Energy as Government Organizations
    - Regulated and operated on a cost-recovery basis from the ratebase with no significant fiscal impact

# Fiscal Impact of the Electricity Sector [To Be Updated]

- Since reforms in 2004, the electricity sector agencies (OPG, Hydro One, OEFC, including DRC revenue) have had a positive fiscal impact, and OEFC's unfunded liability has decreased by more than $10 billion
- Since 2010-11, the positive impact of these agencies has been offset with spending on electricity price mitigation, namely the Ontario Clean Energy Benefit (OCEB) which provides 10 per cent off the total bill for residential, farm, small business, and other small eligible consumers for the first 3,000 kWh of monthly electricity consumption until December 31, 2015
  - The chart below reflects the start of the Ontario Rebate for Electricity Consumers in 2016-17, which provides an 8% rebate equal to the provincial portion of HST to about 5 million residential consumers, small businesses, and farms.
- ~~Out-year outlook is subject to risks and uncertainty on, for example, performance and regulatory decisions~~




** Excludes impact of HST and other HST mitigation measures. Note the 2014 Budget Plan assumes a reduced OCEB program in 2015-16.*

# Appendix

# Province's Income Statement: Revenues

| Revenue ($ Millions) | 2015-16 |
|---|---|
| Government Business Enterprises | |
| Ontario Lottery and Gaming Corporation | 1,995 |
| Liquor Control Board of Ontario | 1,831 |
| Ontario Power Generation Inc. | 463 |
| Hydro One Inc. | 256 |
| | 4,812 |
| Other Non-tax Revenue | |
| Sales and Rentals | 2,102 |
| Vehicle and Driver Registration Fees | 1,565 |
| Electricity Debt Retirement Charge | 859 |
| Power Supply Contract Recoveries | 875 |
| Other Fees and Licences | 743 |
| Royalties | 274 |
| independent Electricity System Operation revenue | 221 |
| Net Reduction of Power Purchase Contract Liability | 172 |
| Local Services Realignment | 125 |
| Miscellaneous Other Non-Tax Revenue | 1,857 |
| | 8,793 |
| Taxation Revenue | |
| Personal Income Tax | 31,141 |
| Sales Tax | 23,455 |
| Corporations Tax | 11,428 |
| Education Property Tax | 5,839 |
| Employer Health Tax | 5,649 |
| Ontario Health Premium | 3,453 |
| Gasoline Tax | 2,459 |
| Land Transfer Tax | 2,118 |
| Tobacco Tax | 1,226 |
| Fuel Tax | 751 |
| Beer and Wine Tax | 582 |
| Electricity Payments-In-Lieu of Taxes | 3,247 |
| Other Taxes | 470 |
| **Total Taxation** | **91,818** |

OPG and Hydro One net income is consolidated as income from investment in government enterprises

Debt Retirement Charge collected from consumers - shows impact of end of DRC on residential as at Jan 1, 2016

Proceeds from sale of NUG power under power purchase contracts

Draw down of NUG liability

Includes revenues of:
IESO $240 M (Calendar 2015)
OEB $49M

OEFC's payments-in-lieu of taxes from OPG, Hydro One, and MEUs consolidated as taxation revenue

# Province's Income Statement: Expenses

| Total Expense<br>As at March 31 ($ Millions) | 2015-16 |
|---|---|
| Ministry Expense | |
| Economic Development, Employment and Infrastructure/Research and Innovation | 1,134 |
| Education | 24,998 |
| Teachers' Pension | 1,590 |
| Energy | 1,232 |
| Environment | 503 |
| Executive Offices | 37 |
| Finance | 951 |
| Interest on Debt | 10,967 |
| Municipal Partnership Fund | 513 |
| Power Supply Contract Costs | 875 |
| Government Services and consumer Services | 608 |
| Health and Long-Term Care | 51,067 |
| Labour | 304 |
| Municipal Affairs and Housing | 1,088 |
| Natural Resources | 819 |
| Northern Development, and Mines | 701 |
| Northern Industrial Electricity Rate Program | 108 |

**Includes expenditures of:**
**IESO $212M (Calendar 2015)**
**OEB $ 49M**

**Includes OEFC interest expense of $1,319 M**

**Cost of NUG power purchases (fully offset by revenue from NUG power sales)**

**NIER program cost**

# Province's Balance Sheet

| **Province of Ontario**<br>**Consolidated Statement of Financial Position**<br>**As at March 31 ($ Millions)** | **2016** |
|---|---|
| Liabilities | |
| Accounts Payable and Accrued Liabilities | **19,361** |
| Debt | **327,413** |
| Other Long-Term Financing | **14,145** |
| Deferred Revenue and Capital Contributions | **10,779** |
| Pension and Other Employee Future Benefits | **12,107** |
| Other Liabilities | **4,905** |
| | **388,710** |
| Financial Assets | |
| Cash and Cash Equivalents | **13,600** |
| Investments | **21,765** |
| Accounts Receivable | **11,059** |
| Loans Receivable | **11,545** |
| Other Assets | **1,936** |
| Investment in Government Business Enterprises | **23,572** |
| | **83,477** |
| **Net Debt** | **(305,233)** |
| Non-Financial Assets | |
| Tangible Capital Assets | **102,536** |
| **Accumulated Deficit** | **(202,697)** |

**Includes OEFC's debt of $24,345 Millions**

**Includes OEFC liability for Power Purchase Contracts $307 Millions**

**Includes Provincial investment in OPG ($13,005M) and Hydro One ($8,347M), totalling $21,352M (original investment of $8,885M, plus retained earnings, and adjustments for ONFA funds and as related to Hydro One asset optimization in 2015-16)**

**Assets and liabilities of IESO, OPA and OEB are consolidated line-by-line in the Balance Sheet**

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | Ronald Kwan |
| **Cc:** | Francisco Chinchon; John Kim |
| **Subject:** | RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Thursday, December 22, 2016 2:22:43 PM |

Sure. Might need to confirm which chart, will take a look first.

Thanks

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

**From:** Ronald Kwan
**Sent:** Thursday, December 22, 2016 1:54 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FyI Shajee.

Can you update the chart. I believe you had a run at it last month.

Need to add new scenarios, though.

Ron

Begin forwarded message:

> **From:** "Nelms, Scott (ENERGY)" <Scott.Nelms@ontario.ca>
> **Date:** December 22, 2016 at 1:41:45 PM EST
> **To:** "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>
> **Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Thanks Ron. Do you mind sharing those out year forecasts? Latest OEFC board materials that I have seen only forecast this fiscal.
>
> The table in your presentation also goes back to 2011-12, so assume that the all-in fiscal impact of the electricity sector might have been very different. Might be interesting to show the evolution from a net positive to net drain, as you describe below. Your comment around DRC is a good one. I wondered in the table whether it might be helpful to show DRC revenues (rather than "ending DRC"). That will show the decline, but that it is still a positive to the Province even out to

2017-18.

However, take my comments with a grain of salt as I am outside my area of expertise.

Thanks again for sharing,
Scott

-----Original Message-----
From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: December 21, 2016 5:11 PM
To: Nelms, Scott (ENERGY); Kennedy, Nancy (MOF)
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Scott,

Thanks.

On your comment as you may recall, we used to do that roll-up (initially when Serge was ADM), but that would also include all the OEFC expenses too. And not all the GRC is OEFC related, but helps with MNR and its costs, so not completely straightforward.

Post-DRC, and post much lower Hydro One net income to the Province and lost PILs, as Nancy may recall from some OEFC board presentations (Serge likely missed those Board presentations), OEFC may be close to flat.

Ron

-----Original Message-----
From: Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
Sent: December-21-16 16:55
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

I have not seen a draft since last week. Likely same version you last saw Ron. I did have a chance to speak with folks who are more in the know on this and I can confirm that none of the OPG options are likely to show up in the next iteration.

One suggestion on the note, Ron: if you are going to show all the existing fiscal pressures, it may be helpful to also show the fiscal benefits from the electricity system (OPG/H1 revenues, PILs, GRC etc.).

Thanks,
Scott

-----Original Message-----
From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: December 21, 2016 4:14 PM
To: Kennedy, Nancy (MOF); Nelms, Scott (ENERGY)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Nancy, Scott,

As discussed yesterday, I have not seen any iterations of an Energy deck or other materials on price mitigation options since early last week, when the DMO shared a "bootleg" copy. We sent back some comments on that deck to the Deputy, as attached.

Also attached, for your information, are some comments and a deck we did for the Deputy the previous week, in advance of the Major Projects Committee meeting that week. I had understood that the Deputy shared back the comments with Energy DMO at that time.

As discussed yesterday, CEFD is looking forward to being able to input into the contemplation of potential initiatives. Having said that, staff availability over the next couple weeks will be very limited.

Ron

-----Original Message-----
From: Ronald Kwan
Sent: December-13-16 07:21
To: Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>
Cc: David McLean (MOF) <David.McLean@ontario.ca>; Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----
From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
Sent: December-12-16 9:18 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang

<Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----
From: Thompson, Scott (MOF)
Sent: December 11, 2016 12:25 PM
To: McLean, David (MOF)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx _____
From: Orsini, Steve (CAB)
Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)
To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)
Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----
From: Imbrogno, Serge (ENERGY)
Sent: December-11-16 12:04 PM
To: Orsini, Steve (CAB)
Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

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message, including any attachments, without reading them, and destroy all copies. Thank you.

**From:** Ronald Kwan
**To:** Francisco Chinchon
**Cc:** Gavin He; Darren Scanlan; Shajee Kathirgamanathan; John Kim
**Subject:** RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx
**Date:** Wednesday, January 11, 2017 5:39:53 AM
**Attachments:** Rate Mitigation Proposals - Departure Tax (2017 01 10 v4).pptx
Rate Mitigation Proposals - Departure Tax (2017 01 10 v3_markup2).pptx

---

Thanks Francisco. I made a few more additions, as attached. I hope they make sense. The trillium trust discussion and some other edits respond to comments by Scott N.

Ron

---

**From:** Francisco Chinchon
**Sent:** January-10-17 8:29 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Looks good, just a few suggestions. I also confirmed the figures are ok.

On Jan 10, 2017, at 8:01 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Thanks Francisco.
>
> Ron
>
> ---
>
> **From:** Francisco Chinchon
> **Sent:** January-10-17 20:01
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
>
> I'll review now.
>
> On Jan 10, 2017, at 7:39 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> > Hi,
> >
> > I did a clean version too, if that helps with new markups.
> >
> > Ron

**From:** Ronald Kwan
**Sent:** January-10-17 19:33
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi,

Thanks all.

I moved some slides around and made some elaborations on the DT and DTB, as attached. Comments?

Ron

---

**From:** Francisco Chinchon
**Sent:** January-10-17 11:08
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

Attached is a draft deck.

Thanks,

Francisco

---

**From:** Gavin He
**Sent:** Monday, January 09, 2017 5:37 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan

<Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

FYI - DMO would like to receive the notes by EOD tomorrow.

Thanks,

Gavin He

---

**From:** Gavin He
**Sent:** Friday, January 6, 2017 10:32 AM
**To:** Francisco Chinchon; John Kim; Darren Scanlan; Shajee Kathirgamanathan
**Cc:** Ronald Kwan
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

Attached are the notes along with the request.

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, January 06, 2017 10:25 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Please see the request. Lease start drafting a thorough analysis.

Thanks,
Ron

Begin forwarded message:

**From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>

**Date:** January 6, 2017 at 10:23:12 AM EST
**To:** "David McLean (MOF)" <David.McLean@ontario.ca>
**Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, Gavin He <Gavin.He@ofina.on.ca>
**Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**

Hi David,

Yes, we can work on that for early next week.

Ron

> On Jan 6, 2017, at 10:20 AM, McLean, David (MOF) <David.McLean@ontario.ca> wrote:
>
> Hi Ron,
>
> The DM has asked if you and your team could build on the analysis contained in this note on the departure tax component. He'd like something thorough focused specifically on that proposal.
>
> If possible, he'd like to see something as early as feasible next week. Is that doable?
>
> Thanks,
>
> Dave
>
> -----Original Message-----
>
> From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
>
> Sent: December 13, 2016 7:21 AM
>
> To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)
>
> Cc: McLean, David (MOF); Pearce, Christopher (MOF)
>
> Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----

From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]

Sent: December-12-16 9:18 AM

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----

From: Thompson, Scott (MOF)

Sent: December 11, 2016 12:25 PM

To: McLean, David (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

---

From: Orsini, Steve (CAB)

Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)

To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)

Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: December-11-16 12:04 PM

To: Orsini, Steve (CAB)

Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

---

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<Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx>

<Rate Mitigation Proposals - Departure Tax (2017 01 10 v3).pptx>

DRAFT

# Price Mitigation Proposal: Departure Tax

Corporate and Electricity Finance Division
January 10, 2017

DRAFT

# Overview: Ministry of Energy and Price Mitigation

- In December 2016, the Ministry of Energy, as part of a suite of potential initiatives to mitigate the rising cost of electricity, has suggested for consideration the potential dedication to ratepayer price mitigation some or all of the $2.6 billion 'departure tax' (DT) payments in lieu of tax (PILs) made by Hydro One to the Ontario Electricity Financial Corporation (OEFC) in November 2015, arising from the Hydro One initial public offering (IPO), which would have a fiscal impact.

- The discussion of the departure tax is often discussed along with the deferred tax benefit that Hydro One recognised in its 2015 annual financial statements, following the IPO.

- While the departure tax and deferred tax benefit are related, they are also separate and distinct.
  - Both are tax-related and are calculated using the fair value of Hydro One assets (as estimated, in the case of the departure tax paid).
  - The departure tax arose from Hydro One's exit from the system of payments-in-lieu of taxes paid to the OEFC, as part of "truing-up" what Hydro One was required to pay OEFC under the PILs regime based on the fair value of its assets. Hydro One paid $2.6 bn in departure tax to OEFC, as well as an additional about $0.2 bn in PILs to OEFC as a result of exiting the PILs regime.
  - Hydro One recognised a $2.8 bn deferred tax benefit as a result of the IPO, including $1.2 bn in eliminating a previous deferred tax liability amount, and recording a $1.6 bn deferred tax asset, which relates to Hydro One's going-forward obligations under the normal corporate tax system and the Canada Revenue Agency based on the impact on its taxes of the "tax shield" provided by the fair value of its assets.
  - The size of the tax shield under the normal corporate tax regime relates to the fair value of assets for tax purposes that results in higher tax depreciation expenses from taxable income, and does not relate directly to the departure tax amount paid by Hydro One to OEFC.

# OEB Review of 2017-2018 Hydro One Transmission Rates: Deferred Tax Benefit & Departure Tax

- The Ontario Energy Board (OEB) is currently reviewing Hydro One's 2017-18 transmission rate application to determine whether the deferred tax benefit (DTB) recorded by Hydro One, as a result of entering the normal corporate tax regime following the IPO, should be allocated to the benefit of ratepayers rather than shareholders.
  - In its review, OEB staff flagged that Hydro One realized a deferred tax recovery that was triggered by the revaluation of the tax basis of its fixed assets at fair market value as it entered the corporate tax regime (due to the IPO).
- Since Hydro One made its departure tax (DT) payment, and did not seek recovery from ratepayers for this payment, Hydro One's position is that the DTB would receive similar treatment (i.e., not impact ratepayers, but would be to the benefit of shareholders, in part to ensure consistency in treatment).
  - A general regulatory principle would be for ratepayers to receive the benefit from assets that they funded through rates, and equity holders would receive the benefit from their investments.
  - The Province as sole shareholder of Hydro One, funded the departure tax payment by making a capital contribution of the same amount prior to the IPO.
- Note that the departure tax did not have a net fiscal benefit to the Province on consolidation of OEFC and Hydro One.
  - OEFC (and the Province upon consolidation) recorded a higher PILs revenue on receipt of the DT from Hydro One; however, this amount was offset by an equal reduction in provincial revenue from Hydro One's net income as a result of the DT payment (an expense to Hydro One).
  - There is no net 'departure tax benefit' to 'give back' or return to ratepayers, both because there was no net revenue impact and it was not funded by ratepayers.

# OEB Review of 2017-18 Hydro One Transmission Rates: Departure Tax and Price Mitigation

- The Province using the departure tax amount for price mitigation has been cited as possibly reducing the risk of the OEB deciding to use Hydro One's deferred tax benefit to reduce Hydro One's rate ask in its current transmission rate application.
  - A fiscal risk is that the OEB may still decide to use some or all of the deferred tax amount to reduce Hydro One's rate request, while at the same time the Province uses the departure tax amount for price mitigation.
- Should the OEB decide to reverse the benefit of the DTB from Hydro One's shareholders to ratepayers, there would be significant impacts to the Province.
  - The Province would be subject to negative fiscal impacts based on how the OEB provides the benefit to ratepayers. For example, the OEB could determine that Hydro One's revenue requirement will be reduced over time by the cash tax savings from the DTB. This would negatively affect Hydro One's net income, and, therefore, reduce the Province's revenues upon consolidation of its proportionate share of Hydro One net income. (The Province's recorded increased revenues of ~$2.4B in 2015-16 due to the DTB.)
  - There would likely be a material decline in Hydro One's share price, as the overall company value would be negatively affected, given reduced net income and cash flows available to finance capital expenditures and pay dividends. Lower share prices would reduce future gains on sales as the Province moves forward on its path to sell down to the 40% ownership level in Hydro One.
  - The Province may also face criticism as it has already credited the Trillium Trust with the $2.4 billion DTB.

DRAFT

# Departure Tax and Price Mitigation: Ratepayer/Fiscal Impacts

- The following provides illustrative potential ratepayer and fiscal impacts from allocating the $2.6 billion departure tax to ratepayers.
- The impact to an individual ratepayers' electricity bill may not be very significant, unless used over a very short period of time. If the period that the departure tax amount is used to mitigate prices is increased, the annual ratepayer impact diminishes. In all cases, the annual negative fiscal impacts are significant.
  - As an illustrative scenario, if the $2.6 billion is allocated over 1 year and spread evenly over all Ontario consumption (vs targeted at some consumer classes), the benefit is estimated at about 1.85 cents / kWh.*
    - For a typical residential ratepayer consuming 750 kWh/month, this is estimated at $13.93/month (pre-tax), or less than 10% of a monthly bill.
  - Over a 5-year period or 10-year period, the benefit to a typical residential ratepayer is estimated at $2.79/month and $1.39/month, respectively. Industrial ratepayers are estimated to benefit by about 0.37 ¢/kWh and 0.185 ¢/kWh, respectively.
- Note that the electricity price relief would be temporary and would result in a spike in electricity bills following the conclusion of the mitigation initiative. This may introduce pressure to extend or replace the mitigation, resulting in additional fiscal impacts.

| Departure Tax Savings to Ratepayers | Allocation over 1 year | Allocation over 5 years | Allocation over 10 years |
|---|---|---|---|
| **Typical Residential Ratepayer (savings $/mth)** | $13.93 | $2.79 | $1.39 |
| **Savings: cents per kWh** | 1.85 | 0.37 | 0.185 |
| | | | |
| **Negative Fiscal Impact to the Province per annum** | $2.6 billion | $520 million | $260 million |

**Assumes total TWh supplied of 140 hours and monthly demand of 750 KWh per residential household*

# Key Fiscal Considerations

- Dedicating the departure tax to ratepayers would have a negative fiscal impact as the Province would record an expense of up to $2.6 bn related to this mitigation (up-front or over time, depending on how the amount is dedicated to ratepayers).
  - Note that the departure tax (DT) did not represent a fiscal or cash windfall to the Province.
    - **Fiscal:** OEFC (and the Province upon consolidation) recorded a higher PILs revenue on receipt of the DT from Hydro One; however, this amount was offset by an equal reduction in provincial revenue from Hydro One's net income as a result of the payment (an expense to Hydro One).
    - **Cash:** OEFC (and the Province upon consolidation) received the $2.6 billion in cash from Hydro One as a PILs payment, but the Province also made a $2.6 billion cash capital contribution to Hydro One to invest in additional common shares of the company and support Hydro One's departure tax payment.
    - **Timing**: The DT represents the upfront payment of PILs that Hydro One would have paid to OEFC in absence of exiting the PILs regime. In essence, it is a true up of past deferred PILs / future PILs payments rather than an incremental payment.
- An additional fiscal risk is that the OEB may still decide to allocate some or all of Hydro One's deferred tax benefit (DTB) to reduce Hydro One's rate request, even if the Province moves forward with the use of the DT amount as an electricity price mitigation tool.
  - Using the DT for price mitigation would likely be province-wide, for both Hydro One and non-Hydro One customers, while an OEB rate application decision, if applied to both its transmission and distribution businesses, would affect Hydro One`s rates and its customers.
  - Any use of the DTB by the OEB for Hydro One rate mitigation would result in a negative fiscal impact.
- Dedicating the DT to ratepayers could also put pressure on the Province to adopt a similar policy for all future DT payments (e.g., if a municipality sells its local distribution company to the private sector, it would be subject to a DT)
  - This would lead to additional negative fiscal and stranded debt impacts.

# Stranded Debt Considerations

- Reallocating the departure tax from OEFC to ratepayers would also cause the unfunded liability of OEFC (or "stranded debt") to increase by an equivalent amount.
  - It would be the first time since 2003-04 that OEFC's stranded debt would increase.
  - In fiscal 2015-16, OEFC's unfunded liability decreased by $3.7 billion, from $8.1 billion to $4.4 billion, primarily reflecting the impact of the Hydro One initial public offering (IPO). This was the largest annual paydown of stranded debt.
  - Going forward, OEFC would also forgo the interest expense savings from the debt that the departure tax amount would otherwise have paid down. This may affect its going-forward ability to continue to reduce stranded debt over time.
    - OEFC`s future results are also negatively affected by the loss of Hydro One PILs and reduced Provincial share of Hydro One net income.
    - OEFC Debt Retirement Charge revenue has also been reduced, with the end of the DRC for residential consumption as of January 1, 2016, and the now legislated full end to the DRC as of April 1, 2018.

# Implementation Considerations

- Additional legal discussion would be required regarding implementation, including the Province's authority to direct OEFC to make a payment to the Province to support rate mitigation.
  - For example, the Province may have to amend the objects of OEFC and implement a Minister's directive in order for OEFC to make the payment. Further legal analysis would be needed if the government is to proceed with this option.

- If the Province moves forward with a rate mitigation measure linked to funds received from the departure tax (DT), the government could consider implementing in such a way that it would not directly involve OEFC / increase stranded debt.
  - Rather than having funds transferred from OEFC to the Province (resulting in an expense to OEFC, which would increase stranded debt), the Province could alternatively borrow $2.6 billion to pay for the program from the CRF.
  - The Province would in effect be dedicating an "equivalent benefit" to ratepayers, while keeping the OEFC whole and demonstrating its commitment to reducing stranded debt.
  - The government could face criticism that it is "double counting" the DT cash (since it already made a $2.6 billion capital contribution in cash to Hydro One to facilitate the DT payment) and that the rate mitigation measure is not actually linked to the DT, but is a rate mitigation program funded by taxpayers.
  - Borrowing an additional $2.6 billion (or reducing OEFC's debt paydown by $2.6 billion) would also have associated on-going fiscal impacts from additional interest costs incurred. Net debt would also increase by $2.6 billion.

- The government could also decide to use only a portion of the DT payment for rate mitigation, rather than the entire $2.6 billion.
  - For example, the Province could dedicate the portion of the DT related to capital gains but allow OEFC to keep the portion related to recapturing past depreciation expense.
  - This decision would result in a smaller impact on electricity prices, especially if the amounts were allocated over-time, but would help mitigate negative fiscal impacts.
  - This decision would still face similar policy considerations as previously presented.

# Trillium Trust: Other Risk Mitigation on an Adverse OEB Decision

- The notion has also been raised for the Province to dedicate the departure tax amount to the Trillium Trust to fund electricity infrastructure to the benefit of ratepayers – in order to reduce the risk that the OEB will use some or all of Hydro One's deferred tax benefit to reduce its rate request.
  - This would be a policy shift, as the current policy is for the asset optimisation amounts to go to Moving Ontario Forward projects.
  - Adding energy infrastructure projects would be incremental.
  - There would also be a fiscal and Hydro One value impact over time.
    - As that infrastructure would not be funded by the rate base, there would be a displacement on the rate base growth side, which would affect share value and future net income.
    - The Province would have the expense (upfront or over time) of the electricity infrastructure spending without a future ratebase revenue stream.
  - The ratepayer mitigation impact may be small and deferred:
    - The timing of the impact could be spread out, both on the fiscal side (if the Province were to own the electricity infrastructure so it could amortise the cost over the life of the asset – note that such an action could be seen as contrary to the policy of bringing in private sector capital to fund electricity infrastructure that was part of the Asset Council's report) and the rate impact side, as the rate impact of displaced rate base growth would be deferred to when the assets come into service, and cost recovery would be over the life of the asset.

DRAFT

# Background: Departure Tax and Hydro One's Deferred Tax Benefit

# Departure Tax (DT)

- The "departure tax" is a result of Hydro One exiting the payments in lieu of tax (PILs) regime and entering the corporate tax regime as a result of the IPO in November 2015.
  - The PILs regime applies to tax-exempt electricity utilities in Ontario (e.g., Ontario Power Generation and municipally-owned local distribution companies, and it mirrors the regular tax system, creating a level playing field between publicly-owned and private sector firms.
  - PILS are paid to OEFC to help it manage and pay down electricity sector debt and other liabilities arising from the old Ontario Hydro.
  - Once a utility becomes less than 90% owned by the Province or municipality, its exemption from tax under the federal Income Tax Act and the Taxation Act (Ontario) ends.

- Due to exiting the PILs regime, Hydro One was deemed to have disposed of its assets immediately before it lost its tax exempt status for proceeds equal to the estimated fair market value of those assets at that time.
  - This results in an assessment of potential payments-in-lieu of tax for 'recapture' into taxable income previously claimed depreciation expense that reduced past PILs payable, if the fair value is greater than the depreciated value for tax purposes under the PILs regime.
  - It may also result in a potential taxable capital gain if the fair value is greater than the original value of the assets.
  - Together, this PILs payment is known as a 'departure tax'.
  - It should be noted that this payment is not incremental but rather a true up of the PILs Hydro One would have been expected to pay over time in absence of exiting the PILs regime.
  - The 'departure tax' is also not unique to the PILs regime, but mirrors provisions under the normal tax system when a taxable entity leaves the normal tax system.

- As a result of this deemed disposition, Hydro One was liable to make a DT PIL to OEFC of $2.6 billion. In order to facilitate Hydro One's payment and preserving the equity value of the company prior to the IPO, the Province made a $2.6 billion capital contribution into Hydro One and received new common shares of the company.

# Deferred Tax Benefit (DTB)

- Upon entering the corporate tax regime, Hydro One also revalued the tax basis of its fixed assets at fair market value and recognized eligible capital expenditures.
  - As a result of a higher revaluation of its fixed assets for tax purposes, Hydro One expects to be able to claim higher depreciation expenses for a period of time under the normal corporate tax system to reduce its taxable income and taxes payable.
  - Because of the elimination of the deferred tax liability under the PILs regime (on payment of the departure tax) and the 'tax shield' impact of the depreciation expense, Hydro One recorded $2.81 billion in a one-time non-cash DTB, which increased its net income by the same amount.
    - This DTB was comprised of an elimination of an about $1.2 billion deferred tax liability under the PILs regime, as Hydro One paid the departure tax, and a deferred tax asset recorded by Hydro One of about $1.6 billion.
  - The recording of a DTB contributed to Hydro One's net income in 2015.
    - The Province recognized a non-cash fiscal benefit of approximately $2.4 billion as a result, upon consolidation its proportionate share of 84% of Hydro One's net income on the Province's books.
- From the Province's perspective, allocating the DTB directly as a policy option for rate mitigation is not viable.
  - This benefit was recognized by Hydro One in connection with the IPO, and the Province, as no longer a sole shareholder, does not have the authority to direct the company to provide this benefit to ratepayers, rather than its shareholders.
  - Hydro One's board of directors has a fiduciary duty to act in the best interests of all Hydro One shareholders.
- A decision from the Province to allocate or transfer part or all of the related departure tax payment received by OEFC would not, however, preclude the OEB's ability with respect to Hydro One's rate application and the DTB recognized by Hydro One in 2015.

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# Price Mitigation Proposal: Departure Tax

Corporate and Electricity Finance Division
January 10, 2017

# Overview: Ministry of Energy and Price Mitigation

- In December 2016, the Ministry of Energy, as part of a suite of potential initiatives to mitigate the rising cost of electricity, has suggested for consideration the potential dedication to ratepayer price mitigation some or all of the $2.6 billion 'departure tax' (DT) payments in lieu of tax (PILs) made by Hydro One to the Ontario Electricity Financial Corporation (OEFC) in November 2015, arising from the Hydro One initial public offering (IPO), which would have a fiscal impact.

- The discussion of the departure tax is often discussed along with the deferred tax benefit that Hydro One recognised in its 2015 annual financial statements, following the IPO.

- While the departure tax and deferred tax benefit are related, they are also separate and distinct.
  - Both are tax-related and are calculated using the fair value of Hydro One assets (as estimated, in the case of the departure tax paid).
  - The departure tax arose from Hydro One's exit from the system of payments-in-lieu of taxes paid to the OEFC, as part of "truing-up" what Hydro One was required to pay OEFC under the PILs regime based on the fair value of its assets. Hydro One paid $2.6 bn in departure tax to OEFC, as well as an additional about $0.2 bn in PILs to OEFC as a result of exiting the PILs regime.
  - Hydro One recognised a $2.8 bn deferred tax benefit as a result of the IPO, including $1.2 bn in eliminating a previous deferred tax liability amount, and recording a $1.6 bn deferred tax asset, which relates to Hydro One's going-forward obligations under the normal corporate tax system and the Canada Revenue Agency based on the impact on its taxes of the "tax shield" provided by the fair value of its assets.
  - The size of the tax shield under the normal corporate tax regime relates to the fair value of assets for tax purposes that results in higher tax depreciation expenses from taxable income, and does not relate directly to the departure tax amount paid by Hydro One to OEFC.

# OEB Review of 2017-2018 Hydro One Transmission Rates: Deferred Tax Benefit & Departure Tax

- The Ontario Energy Board (OEB) is currently reviewing Hydro One's 2017-18 transmission rate application to determine whether the deferred tax benefit (DTB) recorded by Hydro One, as a result of entering the normal corporate tax regime following the IPO, should be allocated to the benefit of ratepayers rather than shareholders.
  - In its review, OEB staff flagged that Hydro One realized a deferred tax recovery that was triggered by the revaluation of the tax basis of its fixed assets at fair market value as it entered the corporate tax regime (due to the IPO).
- Since Hydro One made its departure tax (DT) payment, and did not seek recovery from ratepayers for this payment, Hydro One's position is that the DTB would receive similar treatment (i.e., not impact ratepayers, but would be to the benefit of shareholders, in part to ensure consistency in treatment).
  - A general regulatory principle would be for ratepayers to receive the benefit from assets that they funded through rates, and equity holders would receive the benefit from their investments.
  - The Province as sole shareholder of Hydro One, funded the departure tax payment by making a capital contribution of the same amount prior to the IPO.
- Note that the departure tax did not have a net fiscal benefit to the Province on consolidation of OEFC and Hydro One.
  - OEFC (and the Province upon consolidation) recorded a higher PILs revenue on receipt of the DT from Hydro One; however, this amount was offset by an equal reduction in provincial revenue from Hydro One's net income as a result of the DT payment (an expense to Hydro One).
  - There is no net 'departure tax benefit' to 'give back' or return to ratepayers, both because there was no net revenue impact and it was not funded by ratepayers.

# OEB Review of 2017-18 Hydro One Transmission Rates: Departure Tax and Price Mitigation

- The Province using the departure tax amount for price mitigation has been cited as possibly reducing the risk of the OEB deciding to use Hydro One's deferred tax benefit to reduce Hydro One's rate ask in its current transmission rate application.
  - A fiscal risk is that the OEB may still decide to use some or all of the deferred tax amount to reduce Hydro One's rate request, while at the same time the Province uses the departure tax amount for price mitigation.
- Should the OEB decide to reverse the benefit of the DTB from Hydro One's shareholders to ratepayers, there would be significant impacts to the Province.
  - The Province would be subject to negative fiscal impacts based on how the OEB provides the benefit to ratepayers. For example, the OEB could determine that Hydro One's revenue requirement will be reduced over time by the cash tax savings from the DTB. This would negatively affect Hydro One's net income, and, therefore, reduce the Province's revenues upon consolidation of its proportionate share of Hydro One net income. (The Province's recorded increased revenues of ~$2.4B in 2015-16 due to the DTB.)
  - There would likely be a material decline in Hydro One's share price, as the overall company value would be negatively affected, given reduced net income and cash flows available to finance capital expenditures and pay dividends. Lower share prices would reduce future gains on sales as the Province moves forward on its path to sell down to the 40% ownership level in Hydro One.
  - The Province may also face criticism as it has already credited the Trillium Trust with the $2.4 billion DTB.

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# Departure Tax and Price Mitigation: Ratepayer/Fiscal Impacts

- The following provides illustrative potential ratepayer and fiscal impacts from allocating the $2.6 billion departure tax to ratepayers.
- The impact to an individual ratepayers' electricity bill may not be very significant, unless used over a very short period of time. If the period that the departure tax amount is used to mitigate prices is increased, the annual ratepayer impact diminishes. In all cases, the annual negative fiscal impacts are significant.
  - As an illustrative scenario, if the $2.6 billion is allocated over 1 year and spread evenly over all Ontario consumption (vs targeted at some consumer classes), the benefit is estimated at about 1.85 cents / kWh.*
    - For a typical residential ratepayer consuming 750 kWh/month, this is estimated at $13.93/month (pre-tax), or less than 10% of a monthly bill.
  - Over a 5-year period or 10-year period, the benefit to a typical residential ratepayer is estimated at $2.79/month and $1.39/month, respectively. Industrial ratepayers are estimated to benefit by about 0.37 ¢/kWh and 0.185 ¢/kWh, respectively.
- Note that the electricity price relief would be temporary and would result in a spike in electricity bills following the conclusion of the mitigation initiative. This may introduce pressure to extend or replace the mitigation, resulting in additional fiscal impacts.

| Departure Tax Savings to Ratepayers | Allocation over 1 year | Allocation over 5 years | Allocation over 10 years |
|---|---|---|---|
| **Typical Residential Ratepayer (savings $/mth)** | $13.93 | $2.79 | $1.39 |
| **Savings: cents per kWh** | 1.85 | 0.37 | 0.185 |
| | | | |
| **Negative Fiscal Impact to the Province per annum** | $2.6 billion | $520 million | $260 million |

**Assumes total TWh supplied of 140 hours and monthly demand of 750 KWh per residential household*

# Key Fiscal Considerations

- Dedicating the departure tax to ratepayers would have a negative fiscal impact as the Province would record an expense of up to $2.6 bn related to this mitigation (up-front or over time, depending on how the amount is dedicated to ratepayers).
  - Note that the departure tax (DT) did not represent a fiscal or cash windfall to the Province.
    - **Fiscal:** OEFC (and the Province upon consolidation) recorded a higher PILs revenue on receipt of the DT from Hydro One; however, this amount was offset by an equal reduction in provincial revenue from Hydro One's net income as a result of the payment (an expense to Hydro One).
    - **Cash:** OEFC (and the Province upon consolidation) received the $2.6 billion in cash from Hydro One as a PILs payment, but the Province also made a $2.6 billion cash capital contribution to Hydro One to invest in additional common shares of the company and support Hydro One's departure tax payment.
    - **Timing**: The DT represents the upfront payment of PILs that Hydro One would have paid to OEFC in absence of exiting the PILs regime. In essence, it is a true up of past deferred PILs / future PILs payments rather than an incremental payment.
- An additional fiscal risk is that the OEB may still decide to allocate some or all of Hydro One's deferred tax benefit (DTB) to reduce Hydro One's rate request, even if the Province moves forward with the use of the DT amount as an electricity price mitigation tool.
  - Using the DT for price mitigation would likely be province-wide, for both Hydro One and non-Hydro One customers, while an OEB rate application decision, if applied to both its transmission and distribution businesses, would affect Hydro One`s rates and its customers.
  - Any use of the DTB by the OEB for Hydro One rate mitigation would result in a negative fiscal impact.
- Dedicating the DT to ratepayers could also put pressure on the Province to adopt a similar policy for all future DT payments (e.g., if a municipality sells its local distribution company to the private sector, it would be subject to a DT)
  - This would lead to additional negative fiscal and stranded debt impacts.

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- Reallocating the departure tax from OEFC to ratepayers would also cause the unfunded liability of OEFC (or "stranded debt") to increase by an equivalent amount.
  - It would be the first time since 2003-04 that OEFC's stranded debt would increase.
  - In fiscal 2015-16, OEFC's unfunded liability decreased by $3.7 billion, from $8.1 billion to $4.4 billion, primarily reflecting the impact of the Hydro One initial public offering (IPO). This was the largest annual paydown of stranded debt.
  - Going forward, OEFC would also forgo the interest expense savings from the debt that the departure tax amount would otherwise have paid down. This may affect its going-forward ability to continue to reduce stranded debt over time.
    - OEFC`s future results are also negatively affected by the loss of Hydro One PILs and reduced Provincial share of Hydro One net income.
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# Implementation Considerations

- Additional legal discussion would be required regarding implementation, including the Province's authority to direct OEFC to make a payment to the Province to support rate mitigation.
  - For example, the Province may have to amend the objects of OEFC and implement a Minister's directive in order for OEFC to make the payment. Further legal analysis would be needed if the government is to proceed with this option.

- If the Province moves forward with a rate mitigation measure linked to funds received from the departure tax (DT), the government could consider implementing in such a way that it would not directly involve OEFC / increase stranded debt.
  - Rather than having funds transferred from OEFC to the Province (resulting in an expense to OEFC, which would increase stranded debt), the Province could alternatively borrow $2.6 billion to pay for the program from the CRF.
  - The Province would in effect be dedicating an "equivalent benefit" to ratepayers, while keeping the OEFC whole and demonstrating its commitment to reducing stranded debt.
  - The government could face criticism that it is "double counting" the DT cash (since it already made a $2.6 billion capital contribution in cash to Hydro One to facilitate the DT payment) and that the rate mitigation measure is not actually linked to the DT, but is a rate mitigation program funded by taxpayers.
  - Borrowing an additional $2.6 billion (or reducing OEFC's debt paydown by $2.6 billion) would also have associated on-going fiscal impacts from additional interest costs incurred. Net debt would also increase by $2.6 billion.

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- The notion has also been raised for the Province to dedicate the departure tax amount to the Trillium Trust to fund electricity infrastructure to the benefit of ratepayers – in order to reduce the risk that the OEB will use some or all of Hydro One's deferred tax benefit to reduce its rate request.
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    - The timing of the impact could be spread out, both on the fiscal side (if the Province were to own the electricity infrastructure so it could amortise the cost over the life of the asset – note that such an action could be seen as contrary to the policy of bringing in private sector capital to fund electricity infrastructure that was part of the Asset Council's report) and the rate impact side, as the rate impact of displaced rate base growth would be deferred to when the assets come into service, and cost recovery would be over the life of the asset.

DRAFT

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  - This results in an assessment of potential payments-in-lieu of tax for 'recapture' into taxable income previously claimed depreciation expense that reduced past PILs payable, if the fair value is greater than the depreciated value for tax purposes under the PILs regime.
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  - Together, this PILs payment is known as a 'departure tax'.
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  - Because of the elimination of the deferred tax liability under the PILs regime (on payment of the departure tax) and the 'tax shield' impact of the depreciation expense, Hydro One recorded $2.81 billion in a one-time non-cash DTB, which increased its net income by the same amount.
    - This DTB was comprised of an elimination of an about $1.2 billion deferred tax liability under the PILs regime, as Hydro One paid the departure tax, and a deferred tax asset recorded by Hydro One of about $1.6 billion.
  - The recording of a DTB contributed to Hydro One's net income in 2015.
    - The Province recognized a non-cash fiscal benefit of approximately $2.4 billion as a result, upon consolidation its proportionate share of 84% of Hydro One's net income on the Province's books.
- From the Province's perspective, allocating the DTB directly as a policy option for rate mitigation is not viable.
  - This benefit was recognized by Hydro One in connection with the IPO, and the Province, as no longer a sole shareholder, does not have the authority to direct the company to provide this benefit to ratepayers, rather than its shareholders.
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| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon |
| **Cc:** | Gavin He; Darren Scanlan; Shajee Kathirgamanathan; John Kim |
| **Subject:** | RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Tuesday, January 10, 2017 8:01:30 PM |

Thanks Francisco.

Ron

---

**From:** Francisco Chinchon
**Sent:** January-10-17 20:01
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

I'll review now.

On Jan 10, 2017, at 7:39 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi,
>
> I did a clean version too, if that helps with new markups.
>
> Ron
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** January-10-17 19:33
> **To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
> **Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
>
> Hi,
>
> Thanks all.
>
> I moved some slides around and made some elaborations on the DT and DTB, as attached. Comments?
>
> Ron
>
> ---
>
> **From:** Francisco Chinchon

**Sent:** January-10-17 11:08
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

Attached is a draft deck.

Thanks,

Francisco

---

**From:** Gavin He
**Sent:** Monday, January 09, 2017 5:37 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

FYI - DMO would like to receive the notes by EOD tomorrow.

Thanks,
Gavin He

---

**From:** Gavin He
**Sent:** Friday, January 6, 2017 10:32 AM
**To:** Francisco Chinchon; John Kim; Darren Scanlan; Shajee Kathirgamanathan
**Cc:** Ronald Kwan
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

Attached are the notes along with the request.

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, January 06, 2017 10:25 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Please see the request. Lease start drafting a thorough analysis.

Thanks,
Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 6, 2017 at 10:23:12 AM EST
> **To:** "David McLean (MOF)" <David.McLean@ontario.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, Gavin He <Gavin.He@ofina.on.ca>
> **Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Hi David,
>
> Yes, we can work on that for early next week.
>
> Ron
>
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Sent: December 13, 2016 7:21 AM

To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)

Cc: McLean, David (MOF); Pearce, Christopher (MOF)

Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

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| **Date:** | Tuesday, January 10, 2017 7:39:31 PM |
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I did a clean version too, if that helps with new markups.

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DRAFT

# Rate Mitigation Proposal: Departure Tax

Corporate and Electricity Finance Division
January 10, 2017

# Overview:
# Ministry of Energy and Price Mitigation

- In December 2016, the Ministry of Energy, as part of a suite of potential initiatives to mitigate the rising cost of electricity, has suggested for consideration the potential dedication to ratepayer price mitigation some or all of the $2.6 billion 'departure tax' (DT) payments in lieu of tax (PILs) made by Hydro One to the Ontario Electricity Financial Corporation (OEFC) in November 2015, arising from the Hydro One initial public offering (IPO).

- The discussion of the departure tax is often discussed along with the deferred tax benefit that Hydro One recognised in its 2015 annual financial statements, following the IPO.

- While the departure tax and deferred tax benefit are related, they are also separate and distinct, as described in the following slides.

# Ratepayer/Fiscal Impacts

- The following provides illustrative potential ratepayer and fiscal impacts from allocating the $2.6 billion departure tax to ratepayers.
- The impact to an individual ratepayers' electricity bill may not be very significant, unless used over a very short period of time. If the period that the departure tax amount is used to mitigate prices is increased, the annual ratepayer impact diminishes. In all cases, the annual negative fiscal impacts are significant.
  - As an illustrative scenario, if the $2.6 billion is allocated over 1 year and spread evenly over all Ontario consumption (vs targeted at some consumer classes), the benefit is estimated at about 1.85 cents / kWh [TBC].*
    - For a typical residential ratepayer consuming 750 kWh/month, this is estimated at $13.93/month (pre-tax), or less than 10% of a monthly bill [TBC].
  - Over a 5-year period or 10-year period, the benefit to a typical residential ratepayer is estimated at $2.79/month and $1.39/month, respectively. Industrial ratepayers are estimated to benefit by about 0.37 ¢/kWh and 0.185 ¢/kWh, respectively.
- Note that the electricity price relief would be temporary and would result in a spike in electricity bills following the conclusion of the mitigation initiative. This may introduce pressure to extend or replace the mitigation, resulting in additional fiscal impacts.

| Departure Tax Savings to Ratepayers | Allocation over 1 year | Allocation over 5 years | Allocation over 10 years |
|---|---|---|---|
| **Typical Residential Ratepayer (savings $/mth)** | $13.93 | $2.79 | $1.39 |
| **Savings: cents per kWh** | 1.85 | 0.37 | 0.185 |
| | | | |
| **Negative Fiscal Impact to the Province per annum** | $2.6 billion | $520 million | $260 million |

**Assumes total TWh supplied of 140 hours and monthly demand of 750 KWh per residential household*

# Key Fiscal Considerations

- Dedicating the departure tax to ratepayers would have a negative fiscal impact as the Province would record an expense of up to $2.6 bn related to this mitigation (up-front or over time, depending on how the amount is dedicated to ratepayers).
  - Note that the departure tax (DT) did not represent a fiscal or cash windfall to the Province.
    - **Fiscal:** While OEFC (and the Province upon consolidation) recorded a higher PILs revenue on receipt of the DT from Hydro One; however, this amount was offset by an equal reduction in provincial revenue from Hydro One's net income as a result of the payment (an expense to Hydro One).
    - **Cash:** OEFC (and the Province upon consolidation) received the $2.6 billion in cash from Hydro One as a PILs payment, but the Province also made a $2.6 billion cash capital contribution to Hydro One to invest in additional common shares of the company and support Hydro One's departure tax payment.
    - **Timing**: The DT represents the upfront payment of PILs that Hydro One would have paid to OEFC in absence of exiting the PILs regime. In essence, it is a true up of past deferred PILs / future PILs payments rather than an incremental payment.
- An additional fiscal risk is that the decision that the OEB makes with regards to the allocation of Hydro one's deferred tax benefit (DTB) would be independent of how the Province moves forward with the use of the DT amount as an electricity price mitigation tool.
  - Any use of the DTB by the OEB for Hydro One rate mitigation would result in a negative fiscal impact.
- Reallocating the departure tax from OEFC to ratepayers would also cause the unfunded liability of OEFC (or "stranded debt") to increase by an equivalent amount.
  - It would be the first time since 2003-04 that OEFC's stranded debt would increase.
  - In fiscal 2015-16, OEFC's unfunded liability decreased by $3.7 billion, from $8.1 billion to $4.4 billion, primarily reflecting the impact of the Hydro One initial public offering (IPO). This was the largest annual paydown of stranded debt.
  - Going forward, OEFC would also forgo the interest expense savings from the debt that the departure tax amount would otherwise have paid down. This may affect its going-forward ability to continue to reduce stranded debt over time.
- Dedicating the DT to ratepayers could also put pressure on the Province to adopt a similar policy for all future DT payments (e.g., if a municipality sells its local distribution company to the private sector, it would be subject to a DT)
  - This would lead to additional negative fiscal and stranded debt impacts.

# Implementation Considerations

- Additional legal discussion would be required regarding implementation, including the Province's authority to direct OEFC to make a payment to the Province to support rate mitigation.
  - For example, the Province may have to amend the objects of OEFC and implement a Minister's directive in order for OEFC to make the payment. Further legal analysis would be needed if the government is to proceed with this option.

- If the Province moves forward with a rate mitigation measure linked to funds received from the departure tax (DT), the government could consider implementing in such a way that it would not directly involve OEFC / increase stranded debt.
  - Rather than having funds transferred from OEFC to the Province (resulting in an expense to OEFC, which would increase stranded debt), the Province could alternatively borrow $2.6 billion to pay for the program from the CRF.
  - The Province would in effect be dedicating an "equivalent benefit" to ratepayers, while keeping the OEFC whole and demonstrating its commitment to reducing stranded debt.
  - The government could face criticism that it is double counting the DT cash (since it already made a $2.6 billion capital contribution to Hydro One to facilitate the DT payment) and that the rate mitigation measure is not actually linked to the DT, but is a rate mitigation program funded by taxpayers.
  - Borrowing an additional $2.6 billion (or reducing OEFC's debt paydown by $2.6 billion) would also have associated on-going fiscal impacts from additional interest costs incurred.

- The government could also decide to use only a portion of the DT payment for rate mitigation, rather than the entire $2.6 billion.
  - For example, the Province could dedicate the portion of the DT related to capital gains but allow OEFC to keep the portion related to recapturing past depreciation expense.
  - This decision would result in a smaller impact on electricity prices, especially if the amounts were allocated over-time, but would help mitigate negative fiscal impacts.
  - This decision would still face similar policy considerations as previously presented.

DRAFT

# Background: Departure Tax and Hydro One's Deferred Tax Benefit

# Departure Tax (DT)

- The "departure tax" is a result of Hydro One exiting the payments in lieu of tax (PILs) regime and entering the corporate tax regime as a result of the IPO in November 2015.
  - The PILs regime applies to tax-exempt electricity utilities in Ontario (e.g., Ontario Power Generation and municipally-owned local distribution companies, and it mirrors the regular tax system, creating a level playing field between publicly-owned and private sector firms.
  - PILS are paid to OEFC to help it manage and pay down electricity sector debt and other liabilities arising from the old Ontario Hydro.
  - Once a utility becomes less than 90% owned by the Province or municipality, its exemption from tax under the federal Income Tax Act and the Taxation Act (Ontario) ends.

- Due to exiting the PILs regime, Hydro One was deemed to have disposed of its assets immediately before it lost its tax exempt status for proceeds equal to the estimated fair market value of those assets at that time.
  - This results in an assessment of potential payments-in-lieu of tax for 'recapture' into taxable income previously claimed depreciation expense that reduced past PILs payable, if the fair value is greater than the depreciated value for tax purposes under the PILs regime.
  - It may also result in a potential taxable capital gain if the fair value is greater than the original value of the assets.
  - Together, this PILs payment is known as a 'departure tax'.
  - It should be noted that this payment is not incremental but rather a true up of the PILs Hydro One would have been expected to pay over time in absence of exiting the PILs regime.
  - The 'departure tax' is also not unique to the PILs regime, but mirrors provisions under the normal tax system when a taxable entity leaves the normal tax system.

- As a result of this deemed disposition, Hydro One was liable to make a DT PIL to OEFC of $2.6 billion. In order to facilitate Hydro One's payment and preserving the equity value of the company prior to the IPO, the Province made a $2.6 billion capital contribution into Hydro One and received new common shares of the company.

# Deferred Tax Benefit (DTB)

- Upon entering the corporate tax regime, Hydro One also revalued the tax basis of its fixed assets at fair market value and recognized eligible capital expenditures.
  - As a result of a higher revaluation of its fixed assets for tax purposes, Hydro One expects to be able to claim higher depreciation expenses for a period of time under the normal corporate tax system to reduce its taxable income and taxes payable.
  - Because of the elimination of the deferred tax liability under the PILs regime (on payment of the departure tax) and the 'tax shield' impact of the depreciation expense, Hydro One recorded $2.81 billion in a one-time non-cash DTB, which increased its net income by the same amount.
    - This DTB was comprised of an elimination of an about $1.2 billion [CONFIRM] deferred tax liability under the PILs regime, as Hydro One paid the departure tax, and a deferred tax asset recorded by Hydro One of about $1.6 billion [CONFIRM].
  - The recording of a DTB contributed to Hydro One's net income in 2015.
    - The Province recognized a non-cash fiscal benefit of approximately $2.4 billion as a result, upon consolidation its proportionate share of 84% of Hydro One's net income on the Province's books.
- From the Province's perspective, allocating the DTB directly as a policy option for rate mitigation is not viable.
  - This benefit was recognized by Hydro One in connection with the IPO, and the Province, as no longer a sole shareholder, does not have the authority to direct the company to provide this benefit to ratepayers, rather than its shareholders.
  - Hydro One's board of directors has a fiduciary duty to act in the best interests of all Hydro One shareholders.
- A decision from the Province to allocate or transfer part or all of the related departure tax payment received by OEFC would not, however, preclude the OEB's ability with respect to Hydro One's rate application and the DTB recognized by Hydro One in 2015.

# Deferred Tax Benefit and OEB Review of 2017-18 Hydro One Transmission Rates

- The Ontario Energy Board (OEB) is currently reviewing Hydro One's 2017-18 transmission rate application to determine whether the deferred tax benefit (DTB) recorded by Hydro One, as a result of entering the normal corporate tax regime following the IPO, should be allocated to the benefit of ratepayers rather than shareholders.
  - In its review, OEB staff flagged that Hydro One realized a deferred tax recovery that was triggered by the revaluation of the tax basis of its fixed assets at fair market value as it entered the corporate tax regime (due to the IPO).
- An additional fiscal risk is that the decision that the OEB makes with regards to the allocation of the DTB would be independent of how the Province moves forward with the use of the DT amount as an electricity price mitigation tool.
- Since Hydro One made its DT payment, funded by equity holders, and did not seek recovery from ratepayers for this payment, Hydro One's position is that the DTB would receive similar treatment (i.e., not impact ratepayers, but would be to the benefit of shareholders, in part to ensure consistency in treatment).
  - A general regulatory principle would be for ratepayers to receive the benefit from assets that they funded, and equity holders would receive the benefit from their investments.
- Should the OEB decide to reverse the benefit of the DTB from Hydro One's shareholders to ratepayers, there would be significant impacts to the Province.
  - The Province would be subject to negative fiscal impacts based on how the OEB provides the benefit to ratepayers. For example, the OEB could determine that Hydro One's revenue requirement will be reduced over time by the cash tax savings from the DTB. This would negatively affect Hydro One's net income, and, therefore, reduce the Province's revenues upon consolidation of its proportionate share of Hydro One net income. (The Province's recorded increased revenues of ~$2.4B in 2015-16 due to the DTB).
  - There would likely be a material decline in Hydro One's share price, as the overall company value would be negatively affected, given reduced net income and cash flows available to finance capital expenditures and pay dividends. Lower share prices would reduce future gains on sales as the Province moves forward on its path to sell down to the 40% ownership level in Hydro One.
  - The Province may also face criticism as it has already credited the Trillium Trust with the $2.4 billion DTB.

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Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----

From: Thompson, Scott (MOF)

Sent: December 11, 2016 12:25 PM

To: McLean, David (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

---

From: Orsini, Steve (CAB)

Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)

To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)

Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: December-11-16 12:04 PM

To: Orsini, Steve (CAB)

Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

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<Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx>

DRAFT

# Rate Mitigation Proposal: Departure Tax

Corporate and Electricity Finance Division
January 10, 2017

DRAFT

# Overview:
# Ministry of Energy and Price Mitigation

- In December 2016, the Ministry of Energy, as part of a suite of potential initiatives to mitigate the rising cost of electricity, has suggested for consideration the potential dedication to ratepayer price mitigation some or all of the $2.6 billion 'departure tax' (DT) payments in lieu of tax (PILs) made by Hydro One to the Ontario Electricity Financial Corporation (OEFC) in November 2015, arising from the Hydro One initial public offering (IPO).

- The discussion of the departure tax is often discussed along with the deferred tax benefit that Hydro One recognised in its 2015 annual financial statements, following the IPO.

- While the departure tax and deferred tax benefit are related, they are also separate and distinct, as described in the following slides.

# Ratepayer/Fiscal Impacts

- The following provides illustrative potential ratepayer and fiscal impacts from allocating the $2.6 billion departure tax to ratepayers.
- The impact to an individual ratepayers' electricity bill may not be very significant, unless used over a very short period of time. If the period that the departure tax amount is used to mitigate prices is increased, the annual ratepayer impact diminishes. In all cases, the annual negative fiscal impacts are significant.
  - As an illustrative scenario, if the $2.6 billion is allocated over 1 year and spread evenly over all Ontario consumption (vs targeted at some consumer classes), the benefit is estimated at about 1.85 cents / kWh [TBC].*
    - For a typical residential ratepayer consuming 750 kWh/month, this is estimated at $13.93/month (pre-tax), or less than 10% of a monthly bill [TBC].
  - Over a 5-year period or 10-year period, the benefit to a typical residential ratepayer is estimated at $2.79/month and $1.39/month, respectively. Industrial ratepayers are estimated to benefit by about 0.37 ¢/kWh and 0.185 ¢/kWh, respectively.
- Note that the electricity price relief would be temporary and would result in a spike in electricity bills following the conclusion of the mitigation initiative. This may introduce pressure to extend or replace the mitigation, resulting in additional fiscal impacts.

| Departure Tax Savings to Ratepayers | Allocation over 1 year | Allocation over 5 years | Allocation over 10 years |
|---|---|---|---|
| **Typical Residential Ratepayer (savings $/mth)** | $13.93 | $2.79 | $1.39 |
| **Savings: cents per kWh** | 1.85 | 0.37 | 0.185 |
| | | | |
| **Negative Fiscal Impact to the Province per annum** | $2.6 billion | $520 million | $260 million |

**Assumes total TWh supplied of 140 hours and monthly demand of 750 KWh per residential household*

# Key Fiscal Considerations

- Dedicating the departure tax to ratepayers would have a negative fiscal impact as the Province would record an expense of up to $2.6 bn related to this mitigation (up-front or over time, depending on how the amount is dedicated to ratepayers).
  - Note that the departure tax (DT) did not represent a fiscal or cash windfall to the Province.
    - **Fiscal:** While OEFC (and the Province upon consolidation) recorded a higher PILs revenue on receipt of the DT from Hydro One; however, this amount was offset by an equal reduction in provincial revenue from Hydro One's net income as a result of the payment (an expense to Hydro One).
    - **Cash:** OEFC (and the Province upon consolidation) received the $2.6 billion in cash from Hydro One as a PILs payment, but the Province also made a $2.6 billion cash capital contribution to Hydro One to invest in additional common shares of the company and support Hydro One's departure tax payment.
    - **Timing**: The DT represents the upfront payment of PILs that Hydro One would have paid to OEFC in absence of exiting the PILs regime. In essence, it is a true up of past deferred PILs / future PILs payments rather than an incremental payment.
- An additional fiscal risk is that the decision that the OEB makes with regards to the allocation of Hydro one's deferred tax benefit (DTB) would be independent of how the Province moves forward with the use of the DT amount as an electricity price mitigation tool.
  - Any use of the DTB by the OEB for Hydro One rate mitigation would result in a negative fiscal impact.
- Reallocating the departure tax from OEFC to ratepayers would also cause the unfunded liability of OEFC (or "stranded debt") to increase by an equivalent amount.
  - It would be the first time since 2003-04 that OEFC's stranded debt would increase.
  - In fiscal 2015-16, OEFC's unfunded liability decreased by $3.7 billion, from $8.1 billion to $4.4 billion, primarily reflecting the impact of the Hydro One initial public offering (IPO). This was the largest annual paydown of stranded debt.
  - Going forward, OEFC would also forgo the interest expense savings from the debt that the departure tax amount would otherwise have paid down. This may affect its going-forward ability to continue to reduce stranded debt over time.
- Dedicating the DT to ratepayers could also put pressure on the Province to adopt a similar policy for all future DT payments (e.g., if a municipality sells its local distribution company to the private sector, it would be subject to a DT)
  - This would lead to additional negative fiscal and stranded debt impacts.

# Implementation Considerations

- Additional legal discussion would be required regarding implementation, including the Province's authority to direct OEFC to make a payment to the Province to support rate mitigation.
  - For example, the Province may have to amend the objects of OEFC and implement a Minister's directive in order for OEFC to make the payment. Further legal analysis would be needed if the government is to proceed with this option.

- If the Province moves forward with a rate mitigation measure linked to funds received from the departure tax (DT), the government could consider implementing in such a way that it would not directly involve OEFC / increase stranded debt.
  - Rather than having funds transferred from OEFC to the Province (resulting in an expense to OEFC, which would increase stranded debt), the Province could alternatively borrow $2.6 billion to pay for the program from the CRF.
  - The Province would in effect be dedicating an "equivalent benefit" to ratepayers, while keeping the OEFC whole and demonstrating its commitment to reducing stranded debt.
  - The government could face criticism that it is double counting the DT cash (since it already made a $2.6 billion capital contribution to Hydro One to facilitate the DT payment) and that the rate mitigation measure is not actually linked to the DT, but is a rate mitigation program funded by taxpayers.
  - Borrowing an additional $2.6 billion (or reducing OEFC's debt paydown by $2.6 billion) would also have associated on-going fiscal impacts from additional interest costs incurred.

- The government could also decide to use only a portion of the DT payment for rate mitigation, rather than the entire $2.6 billion.
  - For example, the Province could dedicate the portion of the DT related to capital gains but allow OEFC to keep the portion related to recapturing past depreciation expense.
  - This decision would result in a smaller impact on electricity prices, especially if the amounts were allocated over-time, but would help mitigate negative fiscal impacts.
  - This decision would still face similar policy considerations as previously presented.

DRAFT

# Background: Departure Tax and Hydro One's Deferred Tax Benefit

# Departure Tax (DT)

- The "departure tax" is a result of Hydro One exiting the payments in lieu of tax (PILs) regime and entering the corporate tax regime as a result of the IPO in November 2015.
  - The PILs regime applies to tax-exempt electricity utilities in Ontario (e.g., Ontario Power Generation and municipally-owned local distribution companies, and it mirrors the regular tax system, creating a level playing field between publicly-owned and private sector firms.
  - PILS are paid to OEFC to help it manage and pay down electricity sector debt and other liabilities arising from the old Ontario Hydro.
  - Once a utility becomes less than 90% owned by the Province or municipality, its exemption from tax under the federal Income Tax Act and the Taxation Act (Ontario) ends.

- Due to exiting the PILs regime, Hydro One was deemed to have disposed of its assets immediately before it lost its tax exempt status for proceeds equal to the estimated fair market value of those assets at that time.
  - This results in an assessment of potential payments-in-lieu of tax for 'recapture' into taxable income previously claimed depreciation expense that reduced past PILs payable, if the fair value is greater than the depreciated value for tax purposes under the PILs regime.
  - It may also result in a potential taxable capital gain if the fair value is greater than the original value of the assets.
  - Together, this PILs payment is known as a 'departure tax'.
  - It should be noted that this payment is not incremental but rather a true up of the PILs Hydro One would have been expected to pay over time in absence of exiting the PILs regime.
  - The 'departure tax' is also not unique to the PILs regime, but mirrors provisions under the normal tax system when a taxable entity leaves the normal tax system.

- As a result of this deemed disposition, Hydro One was liable to make a DT PIL to OEFC of $2.6 billion. In order to facilitate Hydro One's payment and preserving the equity value of the company prior to the IPO, the Province made a $2.6 billion capital contribution into Hydro One and received new common shares of the company.

# Deferred Tax Benefit (DTB)

- Upon entering the corporate tax regime, Hydro One also revalued the tax basis of its fixed assets at fair market value and recognized eligible capital expenditures.
  - As a result of a higher revaluation of its fixed assets for tax purposes, Hydro One expects to be able to claim higher depreciation expenses for a period of time under the normal corporate tax system to reduce its taxable income and taxes payable.
  - Because of the elimination of the deferred tax liability under the PILs regime (on payment of the departure tax) and the 'tax shield' impact of the depreciation expense, Hydro One recorded $2.81 billion in a one-time non-cash DTB, which increased its net income by the same amount.
    - This DTB was comprised of an elimination of an about $1.2 billion [CONFIRM] deferred tax liability under the PILs regime, as Hydro One paid the departure tax, and a deferred tax asset recorded by Hydro One of about $1.6 billion [CONFIRM].
  - The recording of a DTB contributed to Hydro One's net income in 2015.
    - The Province recognized a non-cash fiscal benefit of approximately $2.4 billion as a result, upon consolidation its proportionate share of 84% of Hydro One's net income on the Province's books.
- From the Province's perspective, allocating the DTB directly as a policy option for rate mitigation is not viable.
  - This benefit was recognized by Hydro One in connection with the IPO, and the Province, as no longer a sole shareholder, does not have the authority to direct the company to provide this benefit to ratepayers, rather than its shareholders.
  - Hydro One's board of directors has a fiduciary duty to act in the best interests of all Hydro One shareholders.
- A decision from the Province to allocate or transfer part or all of the related departure tax payment received by OEFC would not, however, preclude the OEB's ability with respect to Hydro One's rate application and the DTB recognized by Hydro One in 2015.

# Deferred Tax Benefit and OEB Review of 2017-18 Hydro One Transmission Rates

- The Ontario Energy Board (OEB) is currently reviewing Hydro One's 2017-18 transmission rate application to determine whether the deferred tax benefit (DTB) recorded by Hydro One, as a result of entering the normal corporate tax regime following the IPO, should be allocated to the benefit of ratepayers rather than shareholders.
  - In its review, OEB staff flagged that Hydro One realized a deferred tax recovery that was triggered by the revaluation of the tax basis of its fixed assets at fair market value as it entered the corporate tax regime (due to the IPO).
- An additional fiscal risk is that the decision that the OEB makes with regards to the allocation of the DTB would be independent of how the Province moves forward with the use of the DT amount as an electricity price mitigation tool.
- Since Hydro One made its DT payment, funded by equity holders, and did not seek recovery from ratepayers for this payment, Hydro One's position is that the DTB would receive similar treatment (i.e., not impact ratepayers, but would be to the benefit of shareholders, in part to ensure consistency in treatment).
  - A general regulatory principle would be for ratepayers to receive the benefit from assets that they funded, and equity holders would receive the benefit from their investments.
- Should the OEB decide to reverse the benefit of the DTB from Hydro One's shareholders to ratepayers, there would be significant impacts to the Province.
  - The Province would be subject to negative fiscal impacts based on how the OEB provides the benefit to ratepayers. For example, the OEB could determine that Hydro One's revenue requirement will be reduced over time by the cash tax savings from the DTB. This would negatively affect Hydro One's net income, and, therefore, reduce the Province's revenues upon consolidation of its proportionate share of Hydro One net income. (The Province's recorded increased revenues of ~$2.4B in 2015-16 due to the DTB).
  - There would likely be a material decline in Hydro One's share price, as the overall company value would be negatively affected, given reduced net income and cash flows available to finance capital expenditures and pay dividends. Lower share prices would reduce future gains on sales as the Province moves forward on its path to sell down to the 40% ownership level in Hydro One.
  - The Province may also face criticism as it has already credited the Trillium Trust with the $2.4 billion DTB.

**From:** Francisco Chinchon
**To:** Ronald Kwan
**Cc:** Gavin He; Darren Scanlan; Shajee Kathirgamanathan; John Kim
**Subject:** RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx
**Date:** Tuesday, January 10, 2017 11:08:07 AM
**Attachments:** Rate Mitigation Proposals - Departure Tax (2017 01 10 v2).pptx

---

Hi Ron,

Attached is a draft deck.

Thanks,

Francisco

---

**From:** Gavin He
**Sent:** Monday, January 09, 2017 5:37 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

FYI - DMO would like to receive the notes by EOD tomorrow.

Thanks,
Gavin He

---

**From:** Gavin He
**Sent:** Friday, January 6, 2017 10:32 AM
**To:** Francisco Chinchon; John Kim; Darren Scanlan; Shajee Kathirgamanathan
**Cc:** Ronald Kwan
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

Attached are the notes along with the request.

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, January 06, 2017 10:25 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Please see the request. Lease start drafting a thorough analysis.

Thanks,
Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 6, 2017 at 10:23:12 AM EST
> **To:** "David McLean (MOF)" <David.McLean@ontario.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, Gavin He <Gavin.He@ofina.on.ca>
> **Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Hi David,
>
> Yes, we can work on that for early next week.
>
> Ron
>
> > On Jan 6, 2017, at 10:20 AM, McLean, David (MOF) <David.McLean@ontario.ca> wrote:
> >
> > Hi Ron,
> >
> > The DM has asked if you and your team could build on the analysis contained in this note on the departure tax component. He'd like something thorough focused specifically on that proposal.
> >
> > If possible, he'd like to see something as early as feasible next week.

Is that doable?

Thanks,

Dave

-----Original Message-----

From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]

Sent: December 13, 2016 7:21 AM

To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)

Cc: McLean, David (MOF); Pearce, Christopher (MOF)

Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----

From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]

Sent: December-12-16 9:18 AM

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

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To: McLean, David (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: December-11-16 12:04 PM

To: Orsini, Steve (CAB)

Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

---

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or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

<Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx>

DRAFT

# Rate Mitigation Proposal
# Departure Tax

Corporate and Electricity Finance Division
January 10, 2017

DRAFT

# Overview: Departure Tax

The Ministry of Energy, as part of a suite of proposed initiatives to mitigate the rising cost of electricity, has suggested for consideration the potential dedication of the Departure Tax (DT) payment made to OEFC from the Hydro One IPO, to ratepayers.

*Departure Tax*

- Hydro One exited the payment in lieu of tax (PILs) regime and entered the corporate tax regime as a result of the IPO in November 2015.
- Due to exiting the PILs regime, Hydro One's exemption from tax under the federal Income Tax Act and the Taxation Act (Ontario) ceased to apply and Hydro One was deemed to have disposed of its assets immediately before it lost its tax exempt status for proceeds equal to the estimated fair market value of those assets at that time.
- As a result of this deemed disposition, Hydro One was liable to make a DT PIL to OEFC of $2.6 billion. In order to facilitate the funding of this payment, the Province made a $2.6 billion capital contribution into Hydro One and received new common shares of the company.
- It should be noted that this payment is not incremental but rather a true up of the taxes Hydro One would have been expected to pay over time in absence of exiting the PILs regime.

# Overview: Deferred Tax Benefit

The Ontario Energy Board (OEB) is currently reviewing Hydro One's 2017-18 revenue requirement application to determine whether the deferred tax benefit (DTB) recorded by Hydro One, as a result of entering the normal corporate tax regime following the IPO, should be allocated to the benefit of ratepayers rather than shareholders.

*Deferred Tax Benefit*

- Upon entering the corporate tax regime, Hydro One also revalued the tax basis of its fixed assets at fair market value and recognized eligible capital expenditures.
  - As a result of a higher revaluation of its fixed assets, Hydro One recorded $2.81 billion in a one-time non-cash DTB, which increased its net income by the same amount.
  - The Province recognized a non-cash fiscal benefit of approximately $2.4 billion upon consolidation its proportionate share of 84% of Hydro One's net income on the Province's books.
- From the Province's perspective, allocating the DTB is not a viable option in terms of possible rate mitigation measures.
  - This benefit was recognized by Hydro One in connection with the IPO, and the Province, as a shareholder, does not have the authority to direct the company to provide this benefit to ratepayers, rather than its shareholders. Hydro One's board of directors also has a fiduciary duty to act in the best interests of Hydro One shareholders.

A decision from the Province to allocate or transfer part or all of the DT payment received by OEFC would not preclude the OEB's ability with respect to Hydro One's rate application and the DTB recognized by Hydro One in 2015.

- As discussed in the Appendix, a situation in which the OEB decides to dedicate the DTB to the benefit of ratepayers would have material fiscal impacts in addition to any allocation or transfer of the DT.

# Key Fiscal Considerations

- The DT did not represent a fiscal or cash windfall to the Province.
  - **Fiscal:** OEFC (and the Province upon consolidation) recorded a higher PILs revenue on receipt of the DT from Hydro One, but this amount was offset by a proportionate reduction in Hydro One's net income as a result of the payment (which is consolidated by the government in Income from Government Business Enterprises).
  - **Cash:** OEFC (and the Province upon consolidation) received the $2.6 billion in cash from Hydro One as a PILs payment, but the Province also made a $2.6 billion cash capital contribution to Hydro One to invest in additional common shares of the company and support Hydro One's departure tax payment.
  - **Timing**: The DT represents the upfront payment of PILs that Hydro One would have paid to OEFC in absence of exiting the PILs regime. In essence, it is a true up of future PILs payments rather than an incremental payment.

- Dedicating the DT to ratepayers would have a negative fiscal impact as the Province would be required to record an expense of up to $2.6 billion related to this new program (either up-front or over time, depending on how the amount is dedicated to ratepayers).

- Dedicating the DT to ratepayers would also cause the unfunded liability of OEFC (or "stranded debt") to increase by an equivalent amount.
  - In fiscal 2015-16, OEFC's unfunded liability decreased by $3.7 billion, from $8.1 billion to $4.4 billion, primarily reflecting the impact of the Hydro One initial public offering (IPO), including the departure tax. This was the largest annual paydown of stranded debt, and contributed to the twelfth consecutive annual decline in stranded debt.
  - It would be the first time since 2004 that the Province would be required to recognize an increase in the stranded debt.

- Dedicating the DT to ratepayers could also put pressure on the Province to adopt a similar policy for all future DT payments (e.g., if a municipality sells its local distribution company to the private sector, it would be subject to a DT)
  - This would lead to additional negative fiscal and stranded debt impacts.

# Ratepayer/Fiscal Impacts

- The following provides illustrative ratepayer and fiscal impacts from allocating the $2.6 billion DT to ratepayers.
- In summary, the impact to an individual ratepayers' electricity bill not very significant unless implemented over a very short period of time. As the allocation period increases, the annual ratepayer impact diminishes, but would provide savings over a longer period. In all cases, the annual negative fiscal impacts are significant.
  - As an illustrative starting point, if the $2.6 billion is allocated over 1 year, the benefit to a typical residential ratepayer is estimated at $13.93/month / industrial ratepayers at $18.57/MWh. However, this would have a one-time, negative fiscal impact of $2.6 billion.
  - Over a 5-year period or 10-year period, the benefit to a typical residential ratepayer is estimated at $2.79/month and $1.39/month, respectively. Industrial ratepayers are estimated to benefit by $3.71/MWh and $1.86/MWh, respectively. The annual negative fiscal impacts would fall to $520 million per year in the 5-year scenario and $260 million per year in the 10-year scenario.
- Note that the electricity price relief would be temporary and would result in a spike in electricity bills following the conclusion of the program. This may introduce pressure to extend the temporary program, resulting in additional fiscal impacts.

| Departure Tax Savings to Ratepayers | Allocation over 1 year | Allocation over 5 years | Allocation over 10 years |
|---|---|---|---|
| **Typical Residential Ratepayer (savings $/mth)** | $13.93 | $2.79 | $1.39 |
| **Industrial Ratepayers (savings $/MWh)** | $18.57 | $3.71 | $1.86 |
| | | | |
| **Negative Fiscal Impact to the Province per annum** | $2.6 billion | $520 million | $260 million |

**Assumes total TWh supplied of 140 hours and monthly demand of 750 KWh per residential household*

# Implementation Considerations

- Additional legal discussion would be required regarding implementation, including the Province's authority to direct OEFC to make a payment to the Province to support rate mitigation.
  - For example, the Province may have to amend the objects of OEFC and implement a Minister's directive in order for OEFC to make the payment. Further legal analysis would be needed if the government is to proceed with this option.

- If the Province moves forward with a rate mitigation measure linked to funds received from the DT, the government could consider implementing in such a way that it would not directly involve OEFC / increase stranded debt.
  - Rather than having funds transferred from OEFC to the Province (resulting in an expense to OEFC, which would increase stranded debt), the Province could alternatively borrow $2.6 billion to pay for the program.
  - The Province would in effect be dedicating an "equivalent benefit" to ratepayers, while keeping the OEFC whole and demonstrating its commitment to reducing stranded debt.
  - The government could face criticism that it is double counting the DT cash (since it already made a $2.6 billion capital contribution to Hydro One to facilitate the DT payment) and that the rate mitigation measure is not actually linked to the DT, but is just another rate mitigation program funded from tax payers.
  - Borrowing an additional $2.6 billion would also have associated fiscal impacts from additional interest costs incurred, and would not avoid the direct, negative fiscal impact of the $2.6 billion payment to ratepayers.

- The government could also decide to use a portion of the DT payment for rate mitigation, rather than the entire $2.6 billion.
  - For example, the Province could dedicate the portion of the DT related to capital gains but allow OEFC to keep the portion related to recapturing past depreciation expense.
  - This decision would still face similar policy considerations as previously presented and would result in a smaller impact on electricity prices, especially if the amounts were allocated over-time, but would help mitigate negative fiscal impacts.

DRAFT

# Appendix

# OEB Review of 2017-18 Hydro One Transmission Rates

- The OEB is currently reviewing Hydro One's 2017-2018 transmission rate application.
- In its review, OEB staff has flagged that Hydro One realized a deferred tax recovery that was triggered by the revaluation of the tax basis of its fixed assets at fair market value as it entered the corporate tax regime (due to the IPO).
  - The OEB is currently reviewing if the portion of the DTB related to the transmission business should be allocated to the benefit of ratepayers rather than Hydro One's shareholders.
- Should the OEB decide to reverse the benefit of the DTB from Hydro One's shareholders to ratepayers, there would be significant impacts for the Province.
  - The Province would be subject to negative fiscal impacts based on how the OEB provides the benefit to ratepayers. For example, the OEB could determine that Hydro One's revenue requirement will be reduced over time by the cash tax savings from the DTB. This would negatively impact Hydro One's net income, and therefore reduce the Province's revenues upon consolidation. (The Province's recorded increased revenues of ~$2.4B due to the DTB).
  - There would likely be a material decline in Hydro One's share price as the overall company value would be negatively affected, given reduced net income and cash flows available to finance capital expenditures and pay dividends. Lower share prices would reduce future gains on sales as the Province moves forward on its path to sell down to the 40% ownership level in Hydro One.
  - The Province may also face criticism as it has already credited the Trillium Trust with the $2.4 billion DTB.
- Since Hydro One made its DT payment and did not seek recovery from ratepayers for this payment, its position is that the DTB would receive similar treatment (i.e., not impact ratepayers, in part to ensure consistency in treatment).
- The decision that the OEB makes regards to the allocation of the DTB would likely be independent of how the Province moves forward with the treatment of the DT as an electricity price mitigation tool.

| | |
|---|---|
| **From:** | Gavin He |
| **To:** | John Kim |
| **Subject:** | RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Monday, January 09, 2017 6:54:12 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx<br>Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy_SIFBEFBmarkup.pptx<br>Price-Mitigation - CEFD Slides-Dec6-2016_v7.pptx |

Hi John,

As requested, please find attached the materials we have.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Monday, January 09, 2017 3:50 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Yup, sure, no problem.

---

**From:** Gavin He
**Sent:** January 9, 2017 3:48 PM
**To:** John Kim
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi John,

I am at the Frost Building now and will send you the materials after I got back to the office later today. Is that ok?

Regards,
Gavin He

On Jan 9, 2017, at 15:30, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Gavin,
>
> Could you send me the version that we worked on earlier as well as related file in attachments?
>
> Thanks,

John.

---

**From:** Gavin He
**Sent:** January 9, 2017 12:14 PM
**To:** John Kim; Shajee Kathirgamanathan
**Cc:** Francisco Chinchon; Darren Scanlan
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi John/Shajee,

Just a quick update from the meeting. Ron wants a short presentation deck on the Departure Tax proposal, which will include contents on Departure Tax, Deferred Tax Benefit, Stranded Debt impact, and etc. SIFB will lead on this task and will share the deck with EFB for comments on SD related materials.

Francisco/Darren – please feel free to add anything that I might have missed or stated incorrectly.

Thanks,
Gavin He

---

**From:** Francisco Chinchon
**Sent:** Monday, January 09, 2017 10:13 AM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Works for us.

---

**From:** Ronald Kwan
**Sent:** Monday, January 09, 2017 10:12 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi,

We can have a preliminary discussion today, say at 11:30?

Ron

---

**From:** Francisco Chinchon
**Sent:** January-09-17 10:11
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

Thanks and happy new year! I understand Shajee is sick today. Darren and I are available or we could wait until tomorrow.

Thanks,

Francisco

---

**From:** Ronald Kwan
**Sent:** Monday, January 09, 2017 10:09 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Welcome back.

Can we set up a time later this morning to discuss.

Thanks,
Ron

---

**From:** Gavin He
**Sent:** January-06-17 10:32
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

Attached are the notes along with the request.

Thanks,
Gavin He

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**From:** Ronald Kwan
**Sent:** Friday, January 06, 2017 10:25 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Please see the request. Lease start drafting a thorough analysis.

Thanks,
Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 6, 2017 at 10:23:12 AM EST
> **To:** "David McLean (MOF)" <David.McLean@ontario.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, Gavin He <Gavin.He@ofina.on.ca>
> **Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Hi David,
>
> Yes, we can work on that for early next week.
>
> Ron

On Jan 6, 2017, at 10:20 AM, McLean, David (MOF) <David.McLean@ontario.ca> wrote:

Hi Ron,

The DM has asked if you and your team could build on the analysis contained in this note on the departure tax component. He'd like something thorough focused specifically on that proposal.

If possible, he'd like to see something as early as feasible next week. Is that doable?

Thanks,

Dave

-----Original Message-----

From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]

Sent: December 13, 2016 7:21 AM

To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)

Cc: McLean, David (MOF); Pearce, Christopher (MOF)

Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----

From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]

Sent: December-12-16 9:18 AM

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----

From: Thompson, Scott (MOF)

Sent: December 11, 2016 12:25 PM

To: McLean, David (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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From: Orsini, Steve (CAB)

Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)

To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)

Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: December-11-16 12:04 PM

To: Orsini, Steve (CAB)

Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

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<Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx>

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its deck.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

Energy's proposals generally involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value, including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |
| **E**nd the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

<u>OESP & RRRP (Total of about $0.4 to 0.45 Billion/year</u>):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

<u>Fund Conservation Programs through the Tax-Base</u>:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**December 12, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8%  per cent rebate ($11/month savings), updating RRRP ($45/month savings, combined with the 8% rebate), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured,  the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP),  which provides an opportunity to consider a range of policy changes to  how the Ontario energy sector operates.

# Broad Policy Themes / Rationale

- No longer use rate-base to pay for social programs [despite the system benefit rationale] by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.
- Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.
- Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" beyond the Moving Ontario Forward initiative to make certain investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties ~~and expansion of natural gas to rural areas~~, etc. (note that expanding access to natural gas is already included under Moving Ontario Forward.)
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" a single rate plan as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time.
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.16 | 2.31 | 2.41 | 2.49 | 2.54 | 2.58 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.13 | 0.13 | 0.14 | 0.14 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.88 | 3.08 | 3.21 | 3.33 | 3.39 | 3.44 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 2.82 | 3.05 | 2.47 | 2.56 | 2.13 | 2.14 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.10 | 0.10 | 0.11 | 0.11 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Taxpayer Funded Electricity Price Mitigation

| *($M)* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | | 398 | 419 | 433 | 447 |
| 2. Expand the OESP (i.e., 50% increase) | TBD | TBD | TBD | TBD | TBD |
| 3. Fund Conservation Programs Through The Tax-Base | 110 | 450 | 450 | 450 | 450 |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC efficiencies | - | - | - | - | - |
| c. OPG – Borrowing | - | - | - | - | - |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | 110 | 450 | - | - | - |
| 8. Cancel / Adjust FIT | - | - | - | - | - |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| 2. Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy

# Considerations / Outcomes

- The proposed initiatives provide the following opportunities to:
  - Lower the cost of electricity for all consumers;
  - Re-set how electricity programs and energy infrastructure is funded (i.e., shifting costs to the tax-base from rate-base);
  - Provide electricity consumers with greater choices (i.e., signal rate plan);
  - Provide system benefits (e.g., market renewal); and
  - Increase cost effectiveness and improve efficiency.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

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# Electricity Price Mitigation

Corporate and Electricity Finance Division
December 7, 2016

DRAFT

# General Comments on Energy's Deck

- Energy's deck note various actions taken to-date to reduce costs or cost pressures, such as deferring generation supply investments, improving market efficiency, and reducing the costs of existing procurements.
- Aside from reducing costs on the electricity bill, it is not clear what principles are being applied, short term or long term for electricity pricing.
  - A principle that was applied in the past was to ensure that electricity consumers paid the true cost of electricity, for example.
  - The Energy proposals appear to be about, in part at least, moving some costs from the rate base to the tax base.
- However, the Energy proposals may be seen as having a fairly limited impact, e.g., a little over $8/month for residential, or a little over 5% of the monthly bill (though not all of the proposals have been costed / assessed).
  - The proposals would have a significant fiscal cost [about $1.3 – 1.9 plus bn per year in new fiscal costs].
- There is already significant amounts of existing fiscally-funded electricity price mitigation
  - Averages over $1.5 billion per year over the past five years, and estimated to increase to about $2 billion in 17-18 (see subsequent slide for estimated costs over time, and likely increasing over time), with the total tax-based costs rising to about $3.3-3.9 plus billion in 2017-18, if Energy`s proposals are adopted.
  - These existing mitigation costs are not presented in Energy's deck.
  - Not included is any "hidden" price mitigation through constrained financial performance of, e.g., OPG.

# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

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Option 1

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,525** | **1,195** | **2,005** |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge
NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $1.2 billion.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $2.0 billion.

# Context: Current Status on Taxpayer Funded Electricity Price Mitigation

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Option 2

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[2] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| **TOTAL** | **1,530** | **1,544** | **1,564** | **1,639** | **1,450** | **895** | **1,705** |

1. 2016-17, 2017-18 based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ontario Rebate for Electricity Consumers
DRC – Debt Retirement Charge

NIERP – Northern Ontario Electricity Rate Program
NOEC – Northern Ontario Energy Credit
OEPTC – Ontario Energy and Property Tax Credit

- The table above shows the annual amount of taxpayer funded electricity price mitigation from 2011-12 to 2017-18.
- From 2011-12 to 2015-16 there has been an annual fiscal impact of approximately $1.6 billion due to electricity price mitigation programs.
- In 2016-17, the fiscal impact due to electricity price mitigation programs is estimated at approximately $900 million.
- In 2017-18, due primarily to the start of the Ontario Rebate for Electricity Consumers, the expected fiscal impact due to electricity price mitigation programs is approximately $1.7 billion.

# Electricity Price Mitigation

General Decision Points on Program Features:

- Funding: Rate base vs Tax base
  - Tax base programs have a direct fiscal impact on the Province's finances, and shift costs based on taxpayer incidence and impact on expenditure room for other, non-electricity, programs.
  - Rate base programs shift costs from one group of ratepayers to another.
- On-bill vs Not On-bill
  - Recent focus has been on on-bill programs, such as OESP and OREC.
  - Older tax-base funded programs that are not visible on the bill are still in place, such as NOEC and OEPTC.
  - As OESP enrollment increases, could consider phasing out the non-bill benefits of NOEC and OEPTC.
- Targeted vs General
  - Recent new programs include both general (OREC) and targeted (OESP) programs.
  - Consideration could be made to make OREC more conservation-friendly (e.g., a monthly eligible consumption cap brought in, as with the former Ontario Clean Energy Benefit), and maybe a higher cap in the winter to allow for space heating costs.
  - A targeted industrial program recently extended and made on-going is the Northern Industrial Electricity Rate (NIER) program.

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# Energy's Proposals

Energy is proposing additional electricity price mitigation programs, currently funded through the electricity system, be fiscally-funded. They could be upwards of $2 bn/year, (plus the departure tax), which is not included in the fiscal plan, which would challenge the path to balance.

- OESP & RRRP (Total of about $0.4 Bn/yr): This includes shifting the cost of the Ontario Electricity Support Program (OESP) and the Rural or Remote Electricity Rate Program (RRRP) to the tax base. Note that the fiscal exposure is larger if the OESP take up rate is larger, faster than assumed.

- Industrial Conservation Initiative (ICI -- About $900+ M/yr): Energy also shows, as a potential residential price mitigation measure, the cancellation of the ICI.
  - Energy is not initially proposing it be continued instead as taxpayer funded, but notes that about 30% price increase (from $85/MWh to $110), if ICI is cancelled, for the large Class A customers benefiting from ICI currently.
  - As this cost estimate is for 2016, prior to the planned expansion of the ICI, this could further increase the fiscal exposure by about $100 million).

- Departure Tax: As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation.
  - This was paid to the Ontario Electricity Financial Corporation and helped reduce stranded debt.
  - Using some or all of it for price mitigation would change the net stranded debt paydown by OEFC resulting from the IPO. This would also be a one-time measure (potentially over a few years), and fiscal impact, as the departure tax amount was one-time.

- Other fiscal cost risks (Total of about $0.8+ Bn):
  - Amortisation of conservation costs also poses a fiscal risk (about $0.4 bn/yr),
  - Ending the DRC early for Class B customers (commercial, small industrial) (about $0.4 bn/yr to 2017-18)
  - Lowering of the debt interest paid by OPG (about $30 – 70 million/yr between 2017 and 2021),

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# Fiscal Mitigation Options

- With the addition of recent and new price mitigation measures, a review should be initiated on fiscally-funded programs. There could be a phase down / out transition period considered. Examples include the following:

- Ontario Energy and Property Tax Credit (OEPTC) and Northern Ontario Energy Credit (NOEC):
  - Phase down and/or out the non-on-bill benefits of. (Save up to about $460 M/yr)
  - These targeted, low-income measures were introduced after the HST was introduced.
  - The OESP provides a larger, targeted and on-bill relief to qualifying consumers.

- Ontario Rebate for Electricity Consumers (OREC):
  - Introduce over time a monthly eligible consumption cap, with perhaps a higher cap in the winter to allow for space heating costs.
  - As with the prior OCEB cap, provides a rough incentive for conservation and correlation to larger homes. A higher cap in winter may help with space-heating issue.
  - May be challenging to implement.

- Greenhouse Gas Reduction Account:
  - If ICI is put on the tax-base, make it eligible for GGRA funding.
  - Positioned as, e.g., providing annual benefits from participants conserving and shifting off-peak to reduce reliance on GHG-emitting peaking plants

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# Proposed Taxpayer Funded Electricity Price Mitigation Option 1
(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC[2] | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **1,195** | **2,005** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | | | |
| 8. Other | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,305** | **3,901** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

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# Proposed Taxpayer Funded Electricity Price Mitigation Option 2

(To be revised)

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OCEB | - | - | - | - | - |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[3] | 450 | 460 | 470 | 481 | 481 |
| **CURRENT TOTAL** | **895** | **1,705** | **1,715** | **1,826** | **1,826** |
| 1. OESP | | 106 | 119 | 127 | 132 |
| 2. RRRP | | 292 | 300 | 306 | 315 |
| 3. First Nations Delivery Rate | | 18 | 18 | 18 | 18 |
| 4. Fund ICI through Tax Base | | 900+ | 900+ | 900+ | 900+ |
| 5. Departure Tax | | TBD | TBD | TBD | TBD |
| 6. Conservation Amortisation | | TBD | TBD | TBD | TBD |
| 7. DRC Ended for Class B | 110 | 450 | | | |
| 8. Other | | 30 | 45 | 60 | 70 |
| **TOTAL** | **1,105** | **3,501** | **3,197** | **3,237** | **3,261** |

1. 2016-17, 2017-18 based on forecasted numbers
2. Estimated impact up to March 31, 2018
3. OEPTC amounts in all years based on energy component of the rebate.

- As shown above, if all measures proposed in this deck were to be accepted taxpayer funded contributions to electricity price mitigation would increase to about $3.4 – 3.9 billion in 2017-18. That is a 65-95% increase from the current forecast for 2017-18.
- These amounts were not considered in the 2016-17 Fiscal Plan and could put at risk the Province's fiscal objectives for 2017-18 and beyond.

# Appendix

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# Background on Taxpayer-funded Electricity Price Mitigation

Option 1

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Removed Debt Retirement Charge (DRC) from Residential Bills** | ~330 | Jan 1, 2016 to Mar 31, 2018 | Removing the DRC from residential users was a policy decision to help mitigate residential rate pressures – particularly in the context of the end of OCEB – rather than based on defeasance as per the original conception of the DRC. ~~The government removed the DRC from residential electricity users' bills as of January 1, 2016.~~ This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
| **Northern Industrial Electricity Rate (NIER) Program** | 120 | March 2010 | As announced in Budget 2015, the government committed to ongoing support for northern industrials with $120 million allocated annually. NIER was previously extended in 2012 for an additional three-year term, effective April 1, 2013 and also for a year effective April 1, 2016, with an allocation up to $120 million per year.<br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br>NIER initially established as a three-year program in Budget 2010, effective April 1, 2010. |
| **Northern Ontario Energy Credit** | ~25 | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | ~445[1] | Budget 2010 | Delivered as part of the Ontario Trillium Benefit, energy portion provides up to $224 per year (inflation adjusted) for low-to moderate-income individuals and families, and for qualifying seniors.[1] |

1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

# Background on Taxpayer-funded Electricity Price Mitigation

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Option 2

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, 10 per cent benefit was capped for the first 3,000 kWh of electricity consumed per month. OCEB expired December 31, 2015, as legislated. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,200 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST). |
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1. Energy portion cost only. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

# Timeline: Taxpayer-funded Electricity Price Mitigation

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Option 1

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

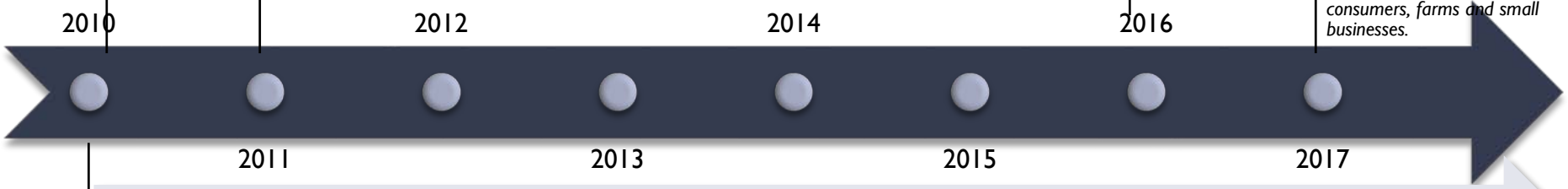
*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills** (Jan 1 2016 to Mar 31 2018)

*Removing the DRC from residential users was a policy decision to help mitigate residential rate pressures rather than based on defeasance as per the original conception of the DRC. This saves a typical residential user about $70 each year and ends the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*




**History of Northern Industrial Electricity Price Relief**

**November 2006**

*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**

*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**

*NIER program announced, with a projected fiscal cost of $150 M per year, to provide electricity price rebates for qualifying large industrial facilities in northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**

*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

# Timeline: Taxpayer-funded Electricity Price Mitigation

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Option 2

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB. The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

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*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*

2010 2011 2012 2013 2014 2015 2016 2017

**History of Northern Industrial Electricity Price Relief**

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**December 2012**

*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

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# Potential Fiscal Impact to the Electricity Sector

- The electricity sector has a significant impact on the Province's fiscal position; through both the revenue and expense sides of the Province's fiscal position.
  - Electricity Rate mitigation programs funded through the tax base have a direct fiscal impact on the Province's finances.
  - Alternatively, electricity rate mitigation programs funded by the rate base shift costs from one group of ratepayers to another.
- The Province's electricity sector agencies and corporations are each consolidated into the government's financial statements, and directly affect the Province's surplus/deficit position.
  - Note: The Province has invested capital into OPG and Hydro One with the expectation that as commercial corporations, the Province would receive a risk-adjusted return in exchange for these investments.
  - Ontario Power Generation (OPG) financial results have a dollar-for-dollar impact on the Province.
    - Electricity price mitigation strategies involving OPG would lead to a direct fiscal impact.
  - Hydro One financial results have a direct impact on the Province, based on the Province's proportionate ownership.
    - The Province currently holds about 70 per cent of Hydro One.

# Potential Fiscal Impact to the Electricity Sector

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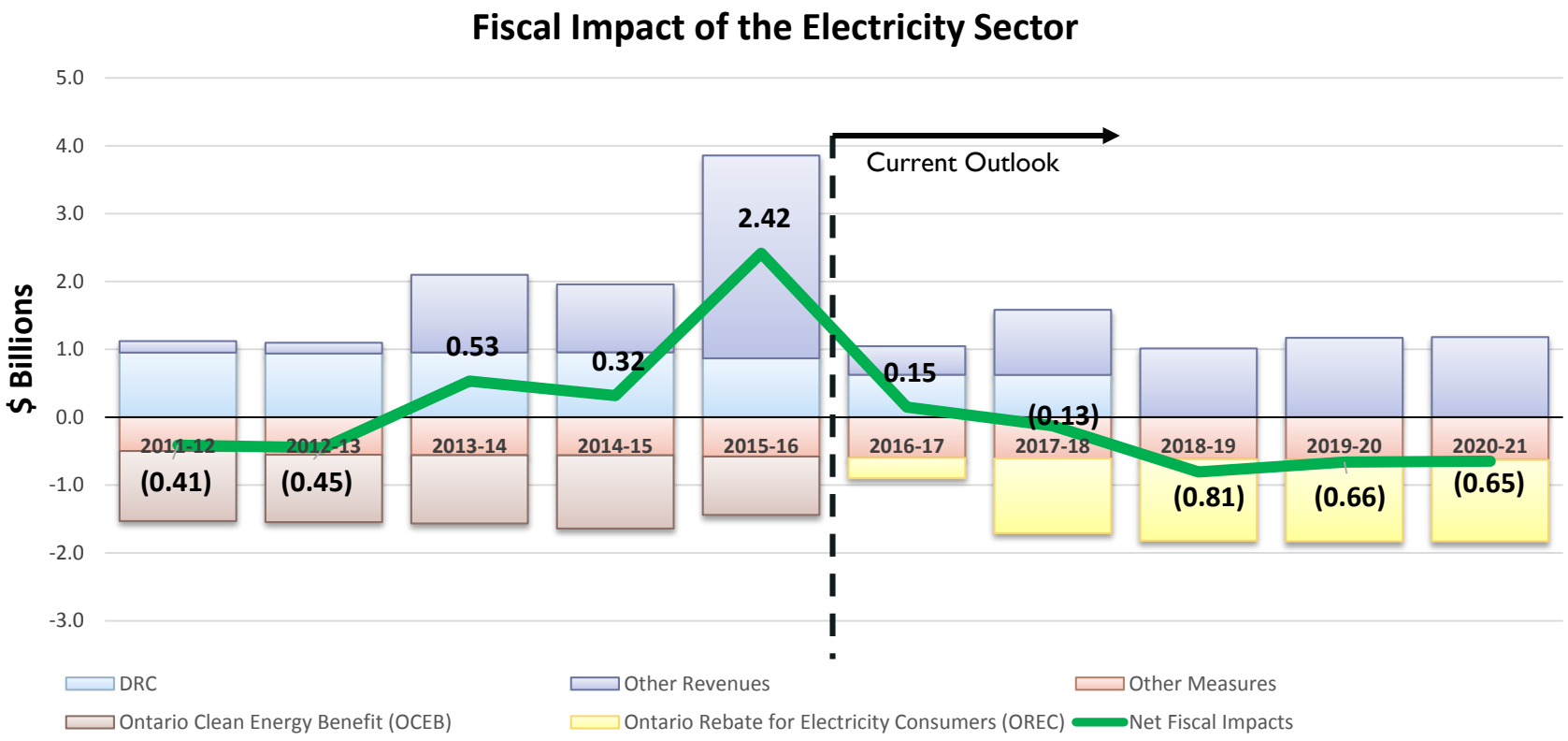
Option 2

- The below chart provides an overview of the fiscal impact from the electricity sector




Other Revenues include payments in lieu of taxes (PILs), and property tax PILs in the case of Hydro One, directed to the OEFC. The provincial portion of these taxes would be a fiscal benefit to the province, regardless of company ownership.

| | |
|---|---|
| **From:** | Gavin He |
| **To:** | John Kim; Shajee Kathirgamanathan |
| **Cc:** | Francisco Chinchon; Darren Scanlan |
| **Subject:** | RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Monday, January 09, 2017 12:14:41 PM |

Hi John/Shajee,

Just a quick update from the meeting. Ron wants a short presentation deck on the Departure Tax proposal, which will include contents on Departure Tax, Deferred Tax Benefit, Stranded Debt impact, and etc. SIFB will lead on this task and will share the deck with EFB for comments on SD related materials.

Francisco/Darren – please feel free to add anything that I might have missed or stated incorrectly.

Thanks,
Gavin He

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**From:** Francisco Chinchon
**Sent:** Monday, January 09, 2017 10:13 AM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Works for us.

---

**From:** Ronald Kwan
**Sent:** Monday, January 09, 2017 10:12 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi,

We can have a preliminary discussion today, say at 11:30?

Ron

---

**From:** Francisco Chinchon
**Sent:** January-09-17 10:11
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>

**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

Thanks and happy new year! I understand Shajee is sick today. Darren and I are available or we could wait until tomorrow.

Thanks,

Francisco

---

**From:** Ronald Kwan
**Sent:** Monday, January 09, 2017 10:09 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Welcome back.

Can we set up a time later this morning to discuss.

Thanks,
Ron

---

**From:** Gavin He
**Sent:** January-06-17 10:32
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

Attached are the notes along with the request.

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, January 06, 2017 10:25 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Please see the request. Lease start drafting a thorough analysis.

Thanks,
Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 6, 2017 at 10:23:12 AM EST
> **To:** "David McLean (MOF)" <David.McLean@ontario.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, Gavin He <Gavin.He@ofina.on.ca>
> **Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Hi David,
>
> Yes, we can work on that for early next week.
>
> Ron
>
> > On Jan 6, 2017, at 10:20 AM, McLean, David (MOF) <David.McLean@ontario.ca> wrote:
> >
> > Hi Ron,
> >
> > The DM has asked if you and your team could build on the analysis contained in this note on the departure tax component. He'd like something thorough focused specifically on that proposal.
> >
> > If possible, he'd like to see something as early as feasible next week. Is that doable?
> >
> > Thanks,
> > Dave

-----Original Message-----

From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]

Sent: December 13, 2016 7:21 AM

To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)

Cc: McLean, David (MOF); Pearce, Christopher (MOF)

Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----

From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]

Sent: December-12-16 9:18 AM

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----

From: Thompson, Scott (MOF)

Sent: December 11, 2016 12:25 PM

To: McLean, David (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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From: Orsini, Steve (CAB)

Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)

To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)

Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: December-11-16 12:04 PM

To: Orsini, Steve (CAB)

Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

---

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<Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx>

**From:** Emily Kerr
**To:** Ronald Kwan; John Kim
**Subject:** RE: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx
**Date:** Monday, January 16, 2017 3:29:19 PM
**Attachments:** Comments on Electricity Sector Transformation Proposals v13 (CEFD)_Markup.docx

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Hi,

I added a comment in the table at the bottom of page 2.

Emily

---

**From:** Ronald Kwan
**Sent:** Monday, January 16, 2017 2:49 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi,

Please add the point.

Thanks,
Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 16, 2017 at 2:48:12 PM EST
> **To:** "Sriram Subrahmanyan (MOF)" <Sriram.Subrahmanyan@ontario.ca>
> **Cc:** Gadi Mayman <Gadi.Mayman@ofina.on.ca>, "Jenarra DeSouza (MEDTE/MRI)" <Jenarra.DeSouza@ontario.ca>
> **Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Thanks Sriram. Good reminder on that point.
>
> Ron
>
> > On Jan 16, 2017, at 2:16 PM, Subrahmanyan, Sriram (MOF) <Sriram.Subrahmanyan@ontario.ca> wrote:
> >
> > There's a risk that some proposals may be seen by the feds as taxable benefits. E.g., we worked with Finance Canada and Energy to make sure that OESP was excluded; not sure if this proposal would change their view. You may want to add the risk to your note. thanks

-----Original Message-----

From: Schuurman, Tim (MOF)

Sent: January 16, 2017 1:23 PM

To: Subrahmanyan, Sriram (MOF)

Cc: DeSouza, Jenarra (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Tim Schuurman

Assistant Deputy Minister

Office of the Budget, Ministry of Finance

7 Queen's Park Cres.

Toronto ON M7A 1Z1

Tel:  416-327-0173

-----Original Message-----

From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]

Sent: January-16-17 8:31 AM

To: Thompson, Scott (MOF)

Cc: Mayman, Gadi (OFA); Schuurman, Tim (MOF); McLean, David (MOF); Pearce, Christopher (MOF)

Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Scott,

We revised and updated the note to reflect the two decks that Energy circulated on Saturday.  The basic messages in the Energy decks are the same on the proposals, and the basic comments are the same as well -- significant fiscal exposure with limited price mitigation, aside from the Global Adjustment proposal, which has an even larger fiscal exposure, depending on the scenario.

I understand Energy reached out late last week to TBS/OPCD for an accounting review, but I have not seen OPCD's BN.  I understood that it would be hard to see the GA proposal as not having a fiscal impact -- but TBC.

Scott N. has not reviewed this version of the BN yet.

Ron

-----Original Message-----

From: Ronald Kwan

Sent: January-12-17 8:45 AM

To: Scott Thompson (CAB) <Scott.Thompson@ontario.ca>

Cc: Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>; David McLean (MOF) <David.McLean@ontario.ca>; Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>

Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Scott,

Will do. Scott N. has it already. I'll find out who the right person is to send it to at Energy (Steen likely).

Ron

> On Jan 12, 2017, at 6:59 AM, Thompson, Scott (MOF) <Scott.Thompson@ontario.ca> wrote:
>
> Thanks Ron. Also received your deck on Departure Tax. Can you make sure that Scott Nelms and Min of Energy have a copy of this. You should approach it as draft advice and seek their input.
>
> Thanks
>
> Scott
>
> -----Original Message-----
>
> From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
>
> Sent: December-13-16 7:21 AM
>
> To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)
>
> Cc: McLean, David (MOF); Pearce, Christopher (MOF)
>
> Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----

From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]

Sent: December-12-16 9:18 AM

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----

From: Thompson, Scott (MOF)

Sent: December 11, 2016 12:25 PM

To: McLean, David (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

---

From: Orsini, Steve (CAB)

Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)

To: Thompson, Scott (MOF); Angus, Helen (MIT);

Davidson, Steven (CAB)

Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: December-11-16 12:04 PM

To: Orsini, Steve (CAB)

Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

---

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**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

**CONTEXT**

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

**COMMENTS**

- A significant number of Energy's proposals involve shifting costs from the rate base to the tax base.
- While the subset of proposals costed by Energy may have a fairly limited residential rate payer impact (e.g. about $6-7/month for residential, or less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (about $2 billion in 2017-18).
- Additional fiscal exposure comes from proposals not yet costed by Energy (e.g., conservation costs, with Energy consulting OPCD on accounting). Energy also presents other proposals where costs and impacts are "TBD".
- In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts (e.g., of about $5.5 Bn in calendar 2017) during the period that GA costs are deferred, depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,535 | 1,225 | 2,035 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**ENERGY'S BROAD POLICY THEMES / RATIONALES**

A key theme / rationale cited by Energy is to no longer use the rate-base to pay for "social programs" by shifting the cost of OESP, RRRP and a proposed First Nation Rate to the tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by ≈ $0.55 in 2017, increasing to ≈ $1.45 in 2022.**<br><br>**Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈** | • Would provide on-bill benefits.<br><br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households.<br>~~o~~• There may be a risk that expanding OESP or RRRP may change the view of the federal government that it is not a taxable benefit. When OESP was created, TPD worked with Finance Canada and Energy to ensure that it was not considered a taxable benefit. | • 2017-18: $162 M<br><br>• Increasing to $322 M in 2020-21.<br><br>• 2017-18: $666 M<br><br>• Increasing to $719 M in 2020-21 |

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| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **$1.55 in 2017, increasing to ≈ $1.75 in 2022.** | | |
| | | |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.<br>o Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC] |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax". | • $260 million annually from |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | 2017-18 to 2020-21. |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding the Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • Current legislated March 31, 2018 end of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end.<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant annual fiscal impact and increase in net debt (estimated by Energy to be up to $66 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • Annual fiscal impact not yet determined. |

**DETAIL ON ENERGY PROPOSALS**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset

by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).

- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.

- If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 2&3), or more (e.g., about $5.5 bn in 2017 under option 4), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

Under option 4, net debt could rise by $66 Bn over time, as estimated by Energy. There would be significant interest rate exposure to the fiscal impact and accumulated debt estimates. The size of the deficit and debt impacts could affect the Province's credit rating and cost of debt.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.

- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

**SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION**

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| Conservation Funding | | TBD | TBD | TBD | TBD |
| [Trillium Trust] | 100 | 390 | 390 | 390 | 390 |
| Departure Tax | 260 | 260 | 260 | 260 | 260 |
| DRC removal for Class B | 110 | 450 | | | |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| **Proposed Program Total:[3]** | **530** | **2,168** | **1,800** | **1,869** | **1,931** |
| | | | | | |
| Amortise and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:** | **1,225** | **2,035** | **1,715** | **1,826** | **1,826** |
| **TOTAL (Excl. GA)[3]** | **1,755** | **4,203** | **3,515** | **3,695** | **3,757** |

1. Based on estimated / forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**January 16, 2017**

**From:** John Kim
**To:** Felix Fung (MOF)
**Subject:** RE: Question....
**Date:** Tuesday, November 08, 2016 5:53:50 PM

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Ah….thanks Felix.

John.

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**From:** Fung, Felix (TBS) [mailto:Felix.Fung@ontario.ca]
**Sent:** Tuesday, November 08, 2016 5:53 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Question....

Hi John, no, I don't have any new estimates. The set of numbers that I have were from Energy when the item when to TB/MBC (see attached assessment note).

We did build the approximately $1B/year into the Ministry's preliminary allocation.

Thanks,
Felix

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** November-08-16 5:50 PM
**To:** Fung, Felix (TBS)
**Subject:** Question....

Hi Felix….question for you. Do you have any new materials that show the OREC cost estimates? If so, could you share?

Thanks,

John.

Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

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| | |
|---|---|
| **From:** | Gavin He |
| **To:** | Ronald Kwan |
| **Cc:** | Francisco Chinchon; John Kim; Emily Kerr |
| **Subject:** | RE: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 4:39:57 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup.docx<br>Proposed Initiatives to Transform Ontarios Electricity Sector 20170113_CEFD.pptx |

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Hi Ron,

Please find attached updated notes and Energy's deck with proposed edits and comments from SIFB, EFB, and SPFB.

The files are also saved under below folder:
S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Energy_Jan16

Thanks,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)

> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
>  Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge
>
>
> Sent from my iPad

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

In addition, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to ~~over~~or more than $2 billion annually during the period that GA costs are deferred depending on the scenario.

**Commented [GH1]:** This was included in the debt-financing GA section below, so not sure if we need to mention it here.

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility, and provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.** | • Significant fiscal exposure -- $0.42-0.845 bn in 2017 to $0.62-1.18 bn in 2022, ~~at current levels,~~ higher if OESP is enhanced. On-bill benefits.<br>• Funding programs through tax base estimated to reduce average monthly residential bill by approximately $2 in 2017, increasing to approximately $3 in 2022.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Amortize ~~Fund~~ **conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account. ~~programs through the tax base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time~~** | • It is unclear whether consevation costs could be amortized according to accounting standards. If this option was pursued without establishing Provincial Controller agreement on accounting, there could be a fiscal risk. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base. ~~Potentially significant fiscal impact – current program costs are about $0.45 bn~~<br>o Conservation programs do provide an electricity system benefits, but ~~would now be~~ fiscal~~ly~~-funding~~ed, so~~ would result in a cross-subsidisation from tax-base |

**Commented [EK2]:** Updated based on slide 12 in Energy's updated deck.

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| | |
|---|---|
| | ○ Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value (share price) and impact fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• In the case of projects located in First Nation territories it could have an upfront fiscal impact if Province is not able to amortize those projects (TBC with OPCD).<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a windfall. It was fiscally neutral, it represented revenue to OEFC and an expense to Hydro One.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates<br>• OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding th Global Adjustment (GA) |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some** | • Incurring debt to pay the generators their contracted or regulated payments |

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| | |
|---|---|
| **generation supply costs by partially financing the cost of the global adjustment (GA)** | • Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022~~Total of about $0.4 to 0.45 Billion/year~~):

~~This w~~Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), ~~-~~and ~~the~~ Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs. ~~Energy notes that~~
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
  - ~~The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).~~
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- ~~o~~ The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

~~Fund~~ Amortize Conservation Program~~s~~ Costs ~~through the Tax Base~~:

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Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization of conservation costs was not permitted, a fiscal impact could result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

~~This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.~~

- ~~Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.~~

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.

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  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income (revenue) to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income (expense) of Hydro One.
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- Having OEFC help implement this measure may require introducing changes to OEFC's objects as is legal mandate is to help reduce and pay down stranded debt.
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."

**Commented [JK3]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

**Commented [JK4]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
  - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
  - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost~~delay recovery of part~~ of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.~~by~~ This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to or more than $2 billion annually during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA

- Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
- Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years

- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

~~[Check and Update]~~

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ~~OEBT~~ RRRP ~~Pilot Nationwide~~ | | ~~398~~666 | ~~419~~684 | ~~433~~700 | ~~447~~719 |
| ~~OEBT – Enhance Benefit~~ | | 162 | 226 | 279 | 322 |
| ~~OEBT – Expand Eligibility~~ | | TBD | TBD | TBD | TBD |
| ~~Conservation Programs through Tax-Base~~ | ~~110~~ | ~~450~~ | ~~450~~ | ~~450~~ | ~~450~~ |
| [Trillium Trust] | ~~TBD~~100 | ~~TBD~~390 | ~~TBD~~390 | ~~TBD~~390 | ~~TBD~~390 |
| Departure Tax | 260 | ~~TBD~~260 | ~~TBD~~260 | ~~TBD~~260 | ~~TBD~~260 |
| DRC removal for Class B | 110 | 450 | | | |
| ~~Tax Relief for Solar and Wind~~ | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total: | ~~220~~470 | ~~1,298~~1,927 | ~~869~~1,560 | ~~883~~1,362 | ~~897~~1,419 |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total:[3] | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| TOTAL[3] | **1,** | **3,** | | | |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**~~December 12~~January 15, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

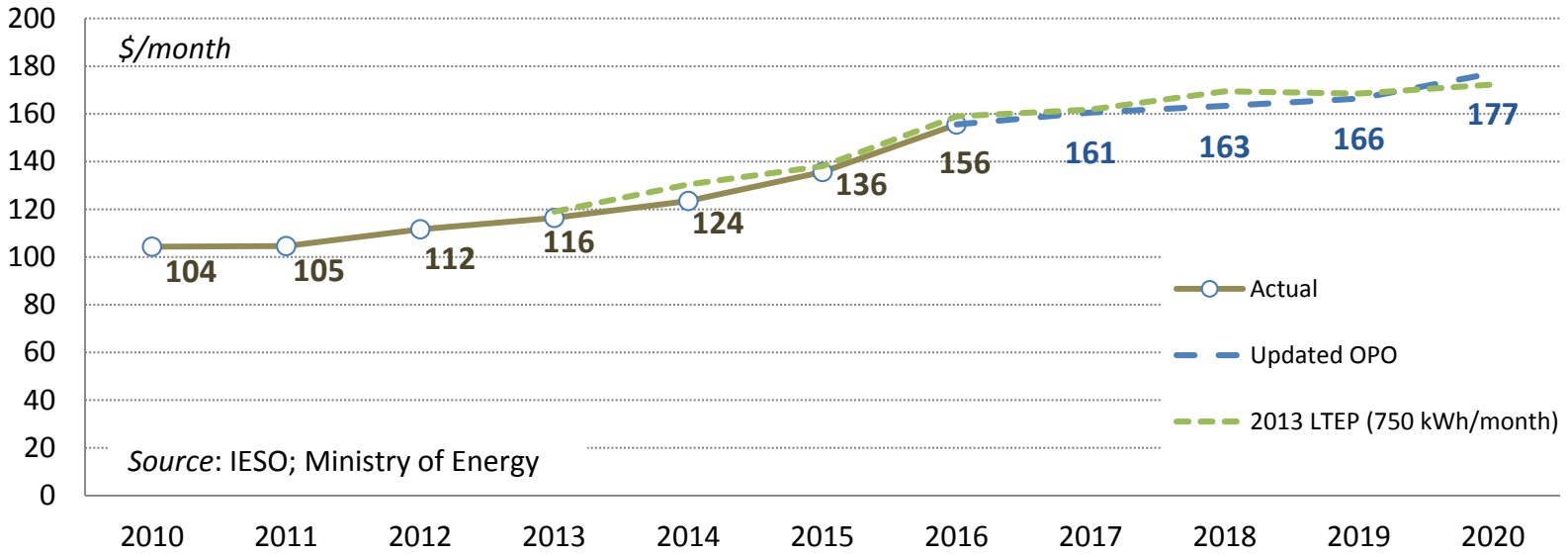
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast*




**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Broad Policy Themes / Rationale

- Support the continued reduction in the differential across distribution rates (as charged by Local Distribution Companies) across the Province through the potential enhancement of Rural or Remote Electricity Rate Protection, (RRRP). In order to not increase regulatory costs to customers as a result, this program can be moved to the tax-base.
- Provide a greater focus and support on lower income Ontarians by funding the Ontario Electricity Support Program (OESP) through the tax-base, as well as enhancing the support available through the program.
- Amortize electricity conservation and demand management (DM) programs over 15-years to provide lower costs for electricity consumers.
  - Alternatively, pay for conservation/DM programs through the tax-base and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties and expansion of natural gas to underserved areas (i.e., rural and remote communities), etc.
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" an alternative rate plan, based on a flat electricity rate, as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time. Also give consumer greater transparency with respect to electricity costs by providing more details regarding the Global Adjustment (GA).
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers, a benefit of $7/MWh.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 1.53 | 1.58 | 1.61 | 1.66 | 1.70 | 1.74 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.57 | 0.79 | 0.98 | 1.13 | 1.29 | 1.44 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC Efficiencies/Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.71 | 0.89 | 1.08 | 1.22 | 1.35 | 1.24 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. v Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 2.04 | 2.10 | 2.15 | 2.22 | 2.27 | 2.32 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.76 | 1.05 | 1.31 | 1.51 | 1.71 | 1.92 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC Efficiencies / Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.59 | 0.74 | 0.89 | 1.01 | 1.12 | 1.03 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Taxpayer Funded Electricity Price Mitigation

| *$M* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. Fund RRRP through the Tax-Base* | - | 666 | 684 | 700 | 719 |
| 2. Fund OESP through the Tax-Base | | | | | |
| a. Enhance OESP Benefit | | 162 | 226 | 279 | 322 |
| b. Expand OESP Eligibility | | TBD | TBD | TBD | TBD |
| 3. Conservation Funding Options | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | - | - | - | - | - |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | 100 | 390 | 390 | 390 | 390 |
| 5. Dedicate Departure Tax | 260 | 260 | 260 | 260 | 260 |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC Efficiencies / Rates | - | - | - | - | - |
| c. OPG – Operational Efficiencies | - | - | - | - | - |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers) | 110 | 450 | - | - | - |
| 9. Extend the Length of Existing Wind/Solar Contracts at Lower Prices | - | - | - | - | - |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| Fund Conservation Programs Through The Tax-Base | 154 | 632 | 649 | 567 | 568 |
| Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy
**Note:** *Assumes RRRP enhancement to reduce distribution rates to $30 for LDCs and **Assumes increase OESP credit by 50%.
Not included in chart is additional $18M/year to fund potential First Nations rate program through the Tax-Base.

# Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are aimed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

- Given that these programs focus on promoting equity between different areas of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.
  - These enhancements would also work in conjunction with the Ontario Energy Board's focus on reducing LDC costs outlined in option 6b.

# 1. Rural or Remote Rate Protection (RRRP) Expansion

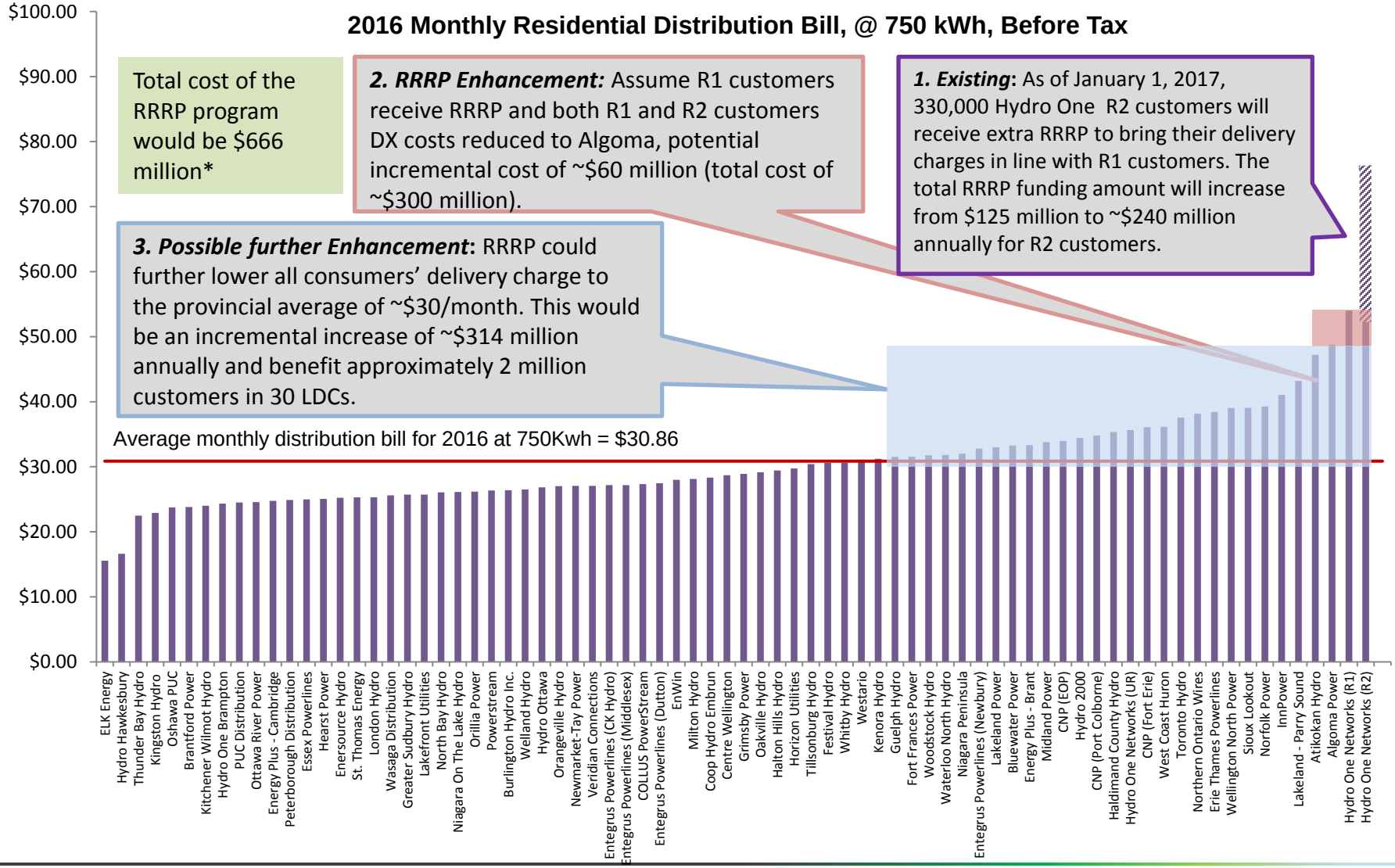
- The Rural or Remote Rate Protection (RRRP) program supports the most costly-to-serve distribution customers in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
  - Costs to these Hydro One customers are higher than average because of their relatively low density. The OEB mandates that they pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies.
  - To mitigate these costs, the RRRP was recently enhanced to help lower the bills of Hydro One's R2 customers to around those of its R1 (medium density) customers.
- Although other LDCs do not have medium- and high-density rates, there is a wide range of distribution costs between LDCs. The RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - Could be done on its own or as part of exploring an Ontario-wide uniform "postage stamp" delivery rate.

**Considerations**

- RRRP will be enhanced for R2 customers on January 1, 2017 to have their costs reduced to approximately R1 distribution costs levels. The RRRP could be further enhanced to include R1 customers, and have R2 and R1 customers reduce their costs down to Algoma (see next slide). This would cost $300 million in the first year (and would adjust year over year).
- If there was a desire to reduce costs for all LDCs, a simple average of distribution cost before tax, across all rate zones is $30.86 per month, for a residential customer consuming 750 kWh per month.** Bringing all delivery rates down to this average would cost approximately $500 million for the first year, with escalation in line with average distribution rate increases.
  - This assumes Hydro One R2 consume 1,200 kWh and H1 R1 customers consume 1,000 kWh per month.
- If all customers were brought down to the average costs (see the chart on the next slide for more detail):
  - It is assumed that residential customers with bills less than the provincial average see no change;
  - Majority of the enhanced benefit would go to Hydro One R1 and Toronto Hydro customers; and
  - Mechanism to ensure that LDCs continue to be motivated to achieve efficiencies would need to be designed (see section 4).
- Enhanced RRRP support may be best provided from the tax-base, because if funded from the rate-base, it would increase the costs for all customers who may argue that it is unfair that they are being asked to pay more to subsidize those in other LDCs.
- In conjunction with using the tax-base to reduce delivery charges to the provincial average, the OEB could be asked to explore moving to a province-wide "postage stamp" delivery rate that would be the same across the province to be implemented over time.
  - Could be "winners and losers" as delivery rates less than the average would go up in a postage stamp model;
  - A "postage stamp" model could help incent LDC consolidation.

**Note:** This is based on preliminary estimates and the amount will fluctuate on monthly consumption from customers and LDCs have different customer base with different consumption types.

# 1. Rural or Remote Rate Protection (RRRP) Expansion (cont'd)




*Note: this includes the ~$50M currently supporting Algoma Power and Hydro One Remotes.*

# 2a. Enhance Ontario Electricity Support Program (OESP) Benefit

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills. The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices and at launch, it was estimated ~560,000 families could be eligible and some 261,000 applications have been submitted.

- The OESP program benefits could be increased across the board by 50%, which would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).

- The OESP program could also be further enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).

**Considerations**

- If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible.
  - At the time of program design, advice was given that a 40-50% participation rate would be high for an application-based program delivered through electricity bills.
  - The province would need to work with LDCs if the rebate was to appear on electricity bills rather than be delivered via the income tax system (e.g., through the Trillium Benefit).

# 1 & 2a. Fiscal Impacts of RRRP, OESP and First Nation Rate

- Table below shows estimates of program costs up to 2022:

| Year | OESP ($M) | OESP + 50%($M) | RRRP($M) | RRRP Enhancement ($M) | First Nations Delivery Rate($M) | TOTAL RANGE ($M) (from status quo to OESP and RRRP enhancements) |
|---|---|---|---|---|---|---|
| 2017 | $108 | $162 | $292 | $374 | $18 | $418 to $846 |
| 2018 | $150 | $226 | $300 | $384 | $18 | $468 to $928 |
| 2019 | $186 | $279 | $306 | $394 | $18 | $510 to $997 |
| 2020 | $215 | $322 | $315 | $404 | $18 | $548 to $1,059 |
| 2021 | $243 | $365 | $322 | $415 | $18 | $583 to $1,120 |
| 2022 | $272 | $408 | $329 | $426 | $18 | $619 to $1,181 |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections above assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
   - The second column forecast also assumes the existing credit amounts increase by 50%.
     - Forecast assumes 10% administration costs
     - Forecast does not account for the approximately 142,000 low-income households that OEB estimated are not eligible because they do not directly receive an electricity bill.

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.
   - Expansion to cap distribution rates for other customers is based at $374M and assumes escalation of 2.6% (historical average dx rate increase). This is a conservative estimate, as Hydro One and Toronto Hydro increases could drive program costs beyond the average increase.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 2b. Expand OESP Eligibility

**Expanded Coverage**

- When OESP was being created, the OEB estimated that are 713,000 low-income households, of which 20% do not receive electricity bills. Thus, only 571,000 would potentially be eligible for OESP.
- If moved to the tax base, the OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity.

**Eligibility Categories**

- OESP has two credits amounts:
    1) Basic credit of $30-50 per month, based on the level of income and the number of residents.
    2) Enhanced credit of $45-75 per month for those with unique electricity needs:
        a) Electric heating,
        b) Indigenous customers, and
        c) Certain electrically intensive medical devices.
- The enhanced credit can be expanded to include additional eligibility categories of customers. For example, a new “Low Density Consumer” category could be introduced that provides Hydro One R2 customers (highest distribution rates) eligible for OESP the enhanced credit.

**Considerations**

- Potential costs for expanded coverage and new eligibility categories depend on updated estimates and changes to program design and delivery.
- There would be value in keeping the OESP as an income-tested program to distinguish it from other initiatives (e.g. RRRP, which is designed to address disparity between rural and urban distribution costs).

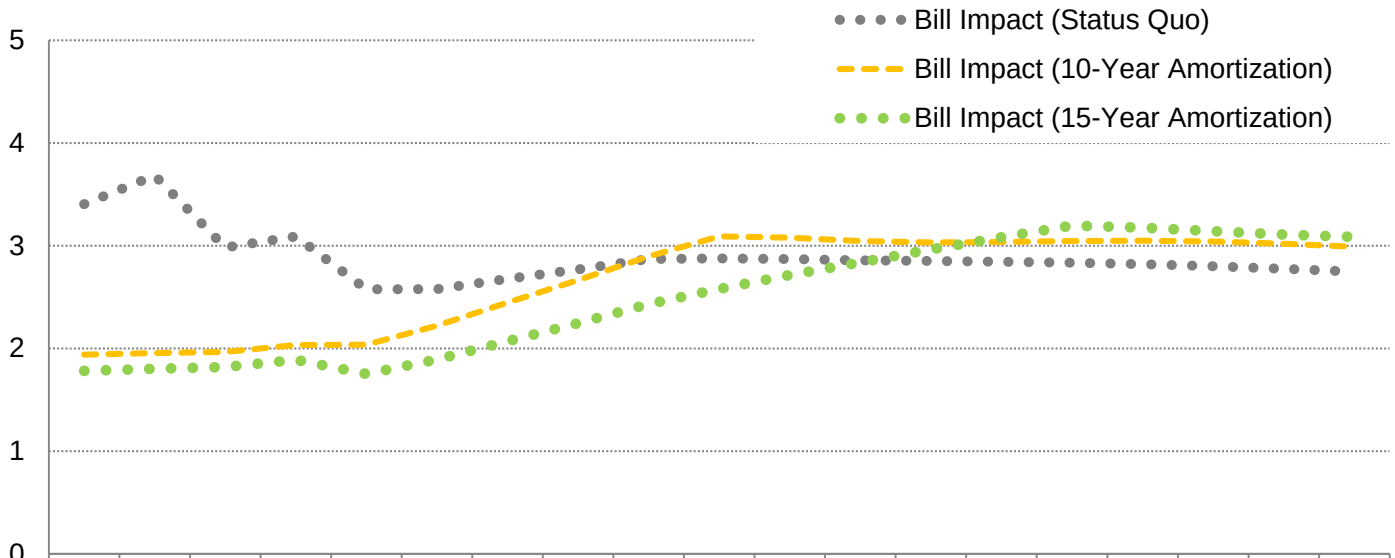
# 3a. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized. This would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs).
  - The time period over which costs could be amortized would be over the lifetime of funded CDM measures.
  - ENERGY is working with IESO to determine the appropriate lifetime period – the graph on the next slide, which illustrates residential bill impacts, presents two cases: **10-year and 15-year measure lifetimes**.
- In both cases, amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020. Over time the benefit would decrease and turn into a cost (higher electricity rates than would otherwise occur), as interest charges begin to grow. Estimated interest charges are as follows (a 3% interest rate is assumed; increases in interest rates could result in higher overall interest charges):
  - $712 million ($2016) – Amortizing eligible 2017-2035 CDM costs for 10-year period; and
  - $1.3 billion ($2016) – Amortizing eligible 2017-2035 CDM costs for 15-year period .
- Legislative changes would be needed to allow recovery of interest payments from ratepayers, or these costs could be recovered from the Consolidated Revenue Fund (CRF, or taxes).
- An alternative that could be explored would be to pay for CDM costs, or for a portion of these, from the tax-base (*see Appendix for more detail on tax funding option*).

# 3a. Amortize Conservation Program Costs (cont'd)

## Conservation Residential Bill Impact – Status Quo, 10-Year and 15-Year Amortization

***CDM Bill Impact ($/month)***




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bill Impact (Status Quo) | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | 2.68 | 2.77 | 2.87 | 2.88 | 2.87 | 2.86 | 2.85 | 2.84 | 2.83 | 2.82 | 2.80 | 2.78 | 2.75 |
| Bill Impact (10-Year Amortization) | 1.94 | 1.95 | 1.97 | 2.03 | 2.04 | 2.22 | 2.45 | 2.67 | 2.90 | 3.09 | 3.08 | 3.05 | 3.03 | 3.04 | 3.04 | 3.05 | 3.04 | 3.02 | 2.99 |
| Bill Impact (15-Year Amortization) | 1.78 | 1.80 | 1.82 | 1.89 | 1.75 | 1.89 | 2.07 | 2.25 | 2.43 | 2.58 | 2.71 | 2.84 | 2.96 | 3.08 | 3.20 | 3.18 | 3.14 | 3.11 | 3.09 |

Source: IESO; Ministry of Energy

**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10 of 15-year borrowing rate of 3.0%.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.
- Legislative amendments would be needed to allow recovery of loan interest charges from GA.
- ENERGY staff have developed a note to seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
- ENERGY is working with IESO to seek an opinion on the proposal from IESO's external auditor.
- ENERGY would then send the IESO external auditor's opinion along with ENERGY's explanatory note to the Ontario Provincial Controller (OPC) to seek a formal opinion on whether CDM costs could be amortized according to rate-regulated accounting standards.
- Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 3b. Rate Smoothing of Conservation Program Costs

- "Rate smoothing" could achieve the same rate reduction effect as amortization.
- Instead of taking out a loan to amortize conservation costs, a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Each year, IESO would defer recovery of a portion of annual conservation costs. Financing would also be required, such as from the OFA, to pay the interest on the deferral account. Interest would accrue on the deferred amounts, likely at the same rates as for the amortization option.
- Deferred costs could be recovered over any time period. If a 10 or 15 year-period was chosen, the rate impacts would be the same as in the amortization option.

**Considerations**

- Option would **not** require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open the Ministry to criticism by the Controller and/or Auditor General since the rate impact is the same.
- The Ministry would have more control under this option to change deferred amounts each year, as opposed to the terms set by a loan agreement under the amortization example.
- There is precedence to this approach for nuclear investments, which otherwise would result in volatile increases and decreases for Ontario ratepayers over the investment period. In 2015, the Ministry amended a regulation that requires the Ontario Energy Board (OEB) to set "smoothed" nuclear rates for OPG's Darlington and Pickering nuclear stations over a 20-year period.
  - The regulation allows OPG to defer recovery in rates of a portion of its nuclear revenue during the Darlington refurbishment (expected to be complete in 2026) and recover these deferred costs over the remaining ten years.
  - OPG will establish a "deferral account" to record the deferred amounts each year up to 2026 plus accumulated interest on the balance to reflect OPG's financing costs as a result of rate smoothing. The deferral account is then drawn down on a straight-line basis between 2026 and 2036.
- At minimum, new regulation would be required. However, further analysis is needed to determine the relevant regulation or legislation, to be amended for IESO (e.g., OEB regulation of IESO costs and fees, GA regulation for how IESO recovers its conservation costs from ratepayers).

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure

- Fund investments in specific energy infrastructure projects through the tax-base. **Note:** This could include the provincial portion of funding for the Remote First Nation Connection Project, a fund to support projects that improve adequacy and reliability in areas where new transmission would unlock economic growth and expansion of natural gas service to underserved communities.

**Considerations**

- Tax-base funding would allow for energy infrastructure to be built without impacting electricity and natural gas rates.
- Would require increasing the amount of funding committed to the Trillium Trust. All fiscal impacts from broadening Hydro One have been committed to the Trillium Trust $5.7 billion target and allocated to Moving Ontario Forward projects.
- There would be an ongoing fiscal impact from the amortization and funding of the investments. Where amortization is not possible there would be an upfront fiscal impact.

*Remote Connection Project:*

- Ontario ratepayers currently support costs of remote electricity service through RRRP on the order of $28 million/year
- Connecting 21 remote communities to the Ontario grid is supported by a positive business case due to diesel cost savings over time. If RRRP is funded through the tax base as proposed above, this project represents an opportunity to reduce impacts from RRRP.
- Direct investment in Ontario's portion of the capital costs of the project through a provincial fund (e.g., Trillium Trust) could also be considered along with mechanisms for cost recovery through transmission rates to refresh the fund as industry benefits from the transmission investment.
- The amount of investment and long-term savings depend on a federal contribution to the project and ENERGY is currently in discussions with Canada with the goal of concluding a cost-sharing agreement by spring 2017.
- A move to tax-based funding may have implications for cost oversight, since the OEB's mandate is to have oversight of ratepayer impacts. Alternative methods to review cost prudence of tax-based funding may be needed.

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (cont'd)

**Considerations (cont'd)**

*Transmission Projects to Enhance Economic Growth:*

- A tax-based fund could target investments in projects that have been identified in IESO regional plans and that would stimulate economic growth but are not proceeding due to cost barriers under the OEB's beneficiary pays principle. Investments could also target areas where the existing system poses challenges for delivering reliable service such as in parts of Northern Ontario with long single circuits.
- Potential opportunities for investment could include a transmission reinforcement in the **Greenstone area**, upgrades south of **Red Lake** and others TBD based on program design.
- This approach would allow a potion of project costs to be socialized to advance key projects without impacting rates or OEB's principles of cost allocation. Scope and scale of fund would be refined through program design.

*Natural Gas Expansion to Underserved Communities:*

- The Government has currently committed to expanding natural gas access to more communities in Ontario (i.e., $200 million Natural Gas Access Loan and $30 million Natural Gas Economic Development Grant).
  - Natural gas is an affordable heating source in Ontario. Its continues to be less expensive than alternative sources such as electric baseboards, heating oil and propane. For example, switching from oil to natural gas can save an average consumer an estimated $1,500 annually.
  - Increasing access to other energy sources such as natural gas, provides Ontarians with more options to meet their needs, reduce their energy costs and improve their quality of life.
  - Expansion of natural gas delivery infrastructure is widely supported in underserved communities (i.e., a recurring theme at ROMA) as a means to provide consumers and businesses in underserved communities with more affordable energy choices, attract new industry to Ontario and benefit agricultural producers.
- A grant program complements the Ontario Energy Board's recent decision enabling greater rate-based expansion to unserved areas, including rural and remote communities.
  - Applying Trillium Trust funding would make it possible to enhance the Grant Program and service more communities.

# 5. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.
- If the Province were to transfer $2.6 billion in economic benefits to the rate base over 10 years suggest the following fiscal impacts (assuming 140TWh per year):
  - Residential Ratepayer Impact (if spread over 10 years): up to $1.39 per month on a typical bill; and
  - Industrial Ratepayer Impact (if spread over 10 years): up to $1.86 / MWh
- There would be no certainty that the OEB could still decide to allocate some or all of Hydro One's deferred tax benefit to ratepayers which would have fiscal impact (lower share price and lower net income over time).

**Considerations**

- Cost savings to ratepayers and associated fiscal impacts would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- The departure tax was effectively a true-up for lower PILs payments from Hydro One in previous years – it was not a one-time windfall for the Province. In other words, it ensures that Hydro One paid all its tax obligations under the PILs regime before moving into the normal corporate tax regime.
- The related ~$2.4 billion fiscal benefit to the Province (from the deferred tax benefit) has already been credited to the Trillium Trust to be used to build infrastructure under Moving Ontario Forward.
- Repurposing funds paid to OEFC would ~~may~~ have an impact on the defeasance of electricity stranded debt and would cause the first increase in stranded debt since 2004.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to ~~infrastructure investments already made in the sector, or to specific initiatives such as conservation~~).

# 6a. Empower Energy Agencies – IESO / Market Renewal

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 6b. LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
  - Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
    - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.

**Considerations**

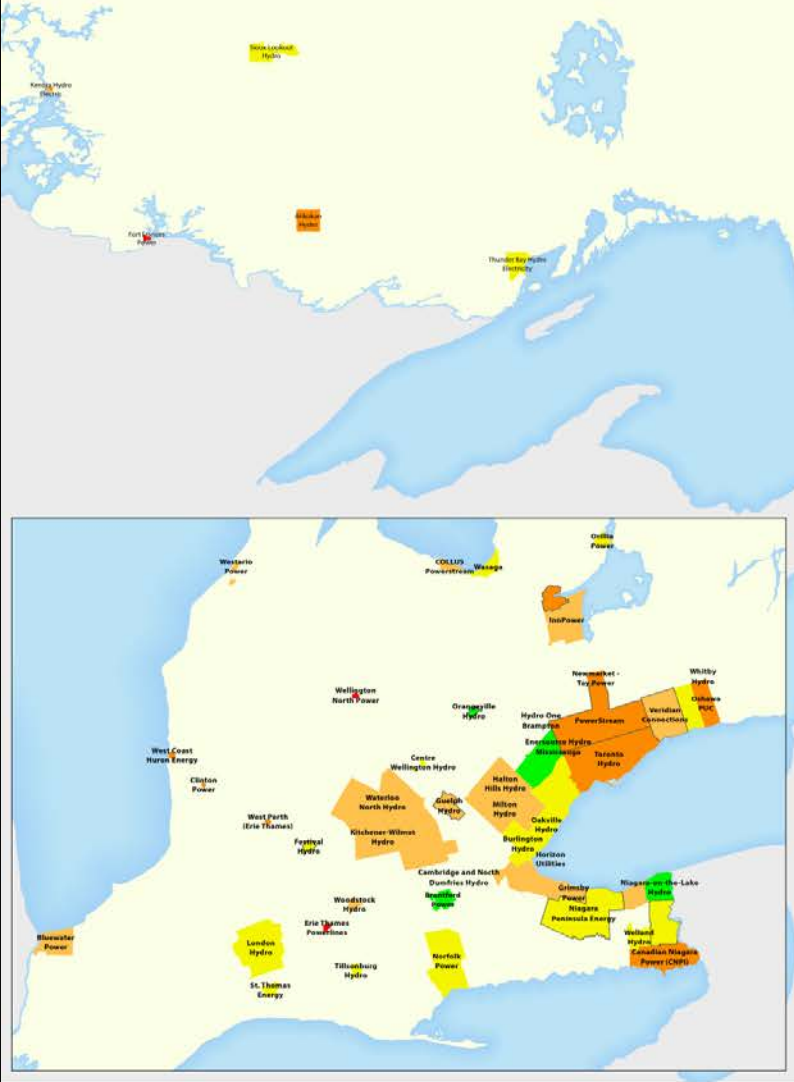
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.

- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
  - To further help address the costs associated with the Delivery line of the electricity bill, program such as the RRRP (previous slide) could be expanded to include other customers that may face higher costs.

- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.

- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation. Further changes to the tax incentives and/or revisiting legislated consolidation could be considered.

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

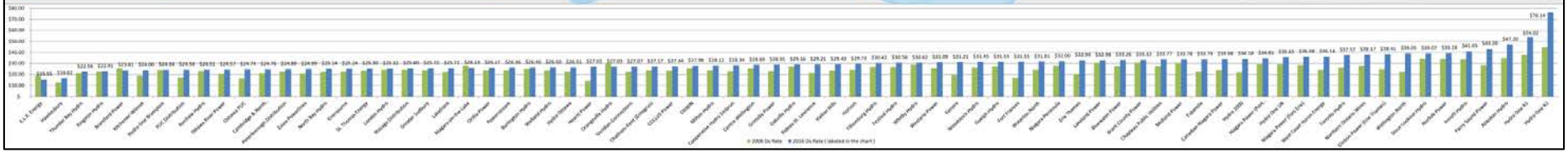
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# 6c. Empower Energy Agencies – OPG / Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

**Considerations**

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.
- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available, providing customers with pricing choice.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- Would provide consumers with electricity pricing choice.
- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro- November 2016 rates)

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7b. Give Consumers More Rate Choices and Greater Transparency – Detailed Global Adjustment

- Provide electricity consumers greater transparency with respect to electricity generation costs by providing more details regarding the Global Adjustment (e.g., adding a line on hydro bills, quarterly energy reports, etc).

**Considerations**

- As electricity bills have increased, many consumers have complained about a lack of transparency on the drivers of electricity costs. In particular, consumers and legislative officers have singled out the GA.

- Providing consumers with additional information on the cost components and amounts recovered through the GA would help consumers understand how the different forms of electricity generation in Ontario contribute to consumers costs.

- Providing additional information to consumers on electricity commodity cost drivers without sufficient context or background could simply lead to increased complaints about particular generating technologies that make up large shares of costs (e.g., nuclear).

- Adding a breakout of the amount of GA on residential electricity bills could lead to further confusion due to the existing breakout of multiple time-of-use buckets.

- Alternatively, the existing quarterly Ontario Energy Report, which provides various energy sector data, could be leveraged to show a breakout of quarterly GA costs by fuel type. A link on electricity bills could point to this information.

# 8. Help Small Business Manage Their Electricity Cost – End DRC Early for Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the proponents agreeing to a lower price in the near term.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period ; discussions/consultation may be required in advance of this potential option moving forward.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- Since the Minister of Energy is not a party, IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms would also reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.

- Projects over 500 kW would offer the most savings potential as they represent the majority of installed renewables capacity and are spread across fewer contracts.

- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.

- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh;
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
  - **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 million | $582 million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - For example, the New contract is $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 million | $632 million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# 10. Tax Relief for Solar and Wind Contracts

- In 2010 and 2011 Ontario procured large scale projects (>500 kW) through the FIT program at standard offer pricing.

- The FIT program was the centerpiece of the GEA which established the economic and social goals of growing the green economy, including establishing a local renewable energy manufacturing base, supporting the development of green energy jobs, and providing incentives for Indigenous participation.

- To help achieve these economic and social goals, the FIT program offered pricing at above competitive procurement rates, and provided Indigenous and Community participation adders, which resulted in economic benefits to all Ontarians, but resulted in additional costs borne by Ontario's electricity ratepayers.

- Ontario could fund the added cost of some or all of these economic and social incentives by shifting their costs from the rate-base to the tax-base.
    1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
    2. The tax base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT.

**Considerations**

- If applied to projects in commercial operation the benefit to the ratepayer would be immediate.
- Comparing FIT pricing to competitive procurement pricing could provide a reasonable representation of energy procurement without the added cost of economic and social incentives.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
   - For example, from 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
   - The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
   - If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
   - The $3.3 billion difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.
   - This represents estimated average ratepayer savings of $1.50/ month relative to OPO forecasts.
   - The same approach could be considered for solar projects however, prior to LRP I in 2016, Ontario had not procured solar capacity competitively and international cost comparisons are challenging given differences in regional development costs.
   - This example does not include the value of participation price adders available for community and indigenous participation.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

2. The tax-base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT 1 solar and wind projects.

   - For example, 17 large FIT 1 wind and solar projects have Indigenous and/or Community participation making them eligible for a price adder in addition to their base contract price.

   - The estimated value of these price adders is approximately $17.1 million (NPV 2017) over the expected remaining term of their contracts.

   - This represents estimated ratepayer savings of approximately $0.01/month relative to OPO forecasts.

# FIT 1 and GEIA Wind Projects in Commercial Operation
(source: IESO Active Contracts List, October 31, 2016)

| Count | Program | MW | COD |
|---|---|---|---|
| 1 | FIT 1 | 0.8 | Oct-10 |
| 2 | FIT 1 | 18 | Jul-15 |
| 3 | FIT 1 | 23 | Aug-15 |
| 4 | FIT 1 | 40 | Jan-15 |
| 5 | FIT 1 | 10 | Sep-14 |
| 6 | FIT 1 | 10 | Sep-14 |
| 7 | FIT 1 | 10 | Jun-14 |
| 8 | FIT 1 | 99 | May-13 |
| 9 | FIT 1 | 100 | Oct-15 |
| 10 | FIT 1 | 4 | Sep-12 |
| 11 | FIT 1 | 100 | Apr-16 |
| 12 | FIT 1 | 15 | Jun-15 |
| 13 | FIT 1 | 18 | Mar-12 |
| 14 | FIT 1 | 104.4 | Nov-13 |
| 15 | FIT 1 | 40 | Dec-15 |
| 16 | FIT 1 | 60 | May-14 |

| Count | Program | MW | COD |
|---|---|---|---|
| 17 | FIT 1 | 125 | Aug-13 |
| 18 | FIT 1 | 73.5 | Aug-14 |
| 19 | FIT 1 | 102 | Jan-15 |
| 20 | FIT 1 | 9 | Jan-12 |
| 21 | FIT 1 | 4.1 | Dec-15 |
| 22 | FIT 1 | 0.5 | Oct-13 |
| 23 | FIT 1 | 82.8 | Nov-11 |
| 24 | FIT 1 | 18.45 | Sep-16 |
| 25 | FIT 1 | 60 | Jul-14 |
| 26 | FIT 1 | 10 | Oct-16 |
| 27 | FIT 1 | 6.15 | Nov-14 |
| 28 | FIT 1 | 2.3 | Aug-15 |
| 29 | FIT 1 | 10 | Feb-16 |
| 30 | FIT 1 | 8.2 | Nov-14 |
| 31 | FIT 1 | 150 | Nov-14 |
| 32 | FIT 1 | 91.39 | Dec-14 |

| Count | Contract | MW | COD |
|---|---|---|---|
| 33 | FIT 1 | 25 | May-15 |
| 34 | FIT 1 | 82.8 | Nov-11 |
| 35 | FIT 1 | 30 | Mar-14 |
| 36 | FIT 1 | 17.6 | May-16 |
| 37 | FIT 1 | 23 | Dec-12 |
| 38 | FIT 1 | 99 | May-13 |
| 39 | FIT 1 | 48.6 | Dec-11 |
| 40 | FIT 1 | 19.44 | Aug-15 |
| 41 | FIT 1 | 10.8 | Mar-12 |
| 42 | FIT 1 | 38.88 | Sep-15 |
| 43 | FIT 1 | 60 | Aug-14 |
| 44 | GEIA | 270 | Mar-14 |
| 45 | GEIA | 180 | Dec-15 |
| 46 | GEIA | 148.6 | Dec-14 |
| 47 | GEIA | 270 | May-15 |

# Key Outcomes / Next Steps

- The proposed initiatives provide the following opportunities to:
  - Provide a greater focus on vulnerable consumers by funding electricity support programs through the tax-base.
    - Enhance existing and new support programs targeted at the most vulnerable consumers (i.e., OESP and RRRP); and
    - Better harmonize delivery rates across the province.
  - Re-set how energy infrastructure is funded by shifting costs to the tax-base from the rate-base.
  - Provide electricity consumers with greater choices and transparency (e.g., alternative rate plan based on a flat electricity rate, unpacking the Global Adjustment costs, etc);
  - Provide system benefits (e.g., market renewal);
  - Increase cost effectiveness and improve efficiency; and
  - Lower the cost of electricity for all consumers.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require legislative and/or regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

A. Rural or Remote Rate Protection (RRRP) – Overview and Enhancements
B. Fund Conservation Programs Through the Tax-Base
C. Eliminate the Industrial Conservation Initiative (ICI)
D. Cancel Large Renewable Procurement I (LRP I)

# A. RRRP Overview and Enhancements

- The Delivery line of the electricity bill is composed of Distribution and Transmission Costs. While transmission costs are uniform across the province, LDC costs vary by distributor and account for about 20% of the total bill for the electricity customers.
  - See slide X for a map of delivery rate increases between 2006 and 2016.
- The Rural or Remote Rate Protection (RRRP) framework was put in place in 2001 to help offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations.
- RRRP is available to: residential Hydro One R2 customers (~350,000 customers), Algoma Power customers (~11,600 customers); H1 remote customers (~3,500 customers).
  - To date, R2 customers receive a fixed amount of $125 million a year distributed amongst the customers. Algoma and Remote customers have RRRP calculated by the OEB each year that fluctuates based on average provincial distribution increases.
- Because the amount had been fixed for over a decade, the Province recently increased funding of the RRRP program for Hydro One R2 customers from $125 million to $240 million. This will be effective as of January 1, 2017, and will bring their delivery charges in line with the next highest charges from Hydro One's R1 customer class.

# B. Fund Conservation Programs Through the Tax-Base

- Propose to fund 2017-2020 electricity conservation and demand management program costs* using tax dollars instead of ratepayer dollars.
  - Funds received through the Hydro One Departure Tax could potentially be repurposed towards this.
- Total remaining 2017-2020 electricity conservation program costs are expected to be ~$2.1 billion.
- Post 2020, this option could evolve to funding conservation programs through the Greenhouse Gas Reduction Account.

**Considerations**

- Electricity conservation programs provide a number of benefits to society, however, Ontario's ratepayers have been covering these costs:
  - Avoiding/deferring future energy infrastructure investments, reducing disruption in communities (e.g., avoiding the need to build new natural gas generation);
  - Environmental benefits (e.g., reduced natural gas peaking generation and GHG emissions); and
  - Social and economic benefits (e.g., job creation and assistance managing electricity bills).
- There is precedence for using tax dollars to fund conservation programs.
  - Between 2007 and 2011, Ontario funded the Home Energy Savings retrofit program using tax dollars.
- Funding conservation programs though the tax-base is expected to result in a benefit of $3.40/month for residential electricity consumers in 2017. This could provide immediate short term relief to consumers while other rate mitigation initiatives are developed (e.g., market renewal, LDC efficiencies).

*** Note:** This includes costs towards the Conservation First Framework, Industrial Accelerator Program, Demand Response and the Conservation Fund)

# C. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

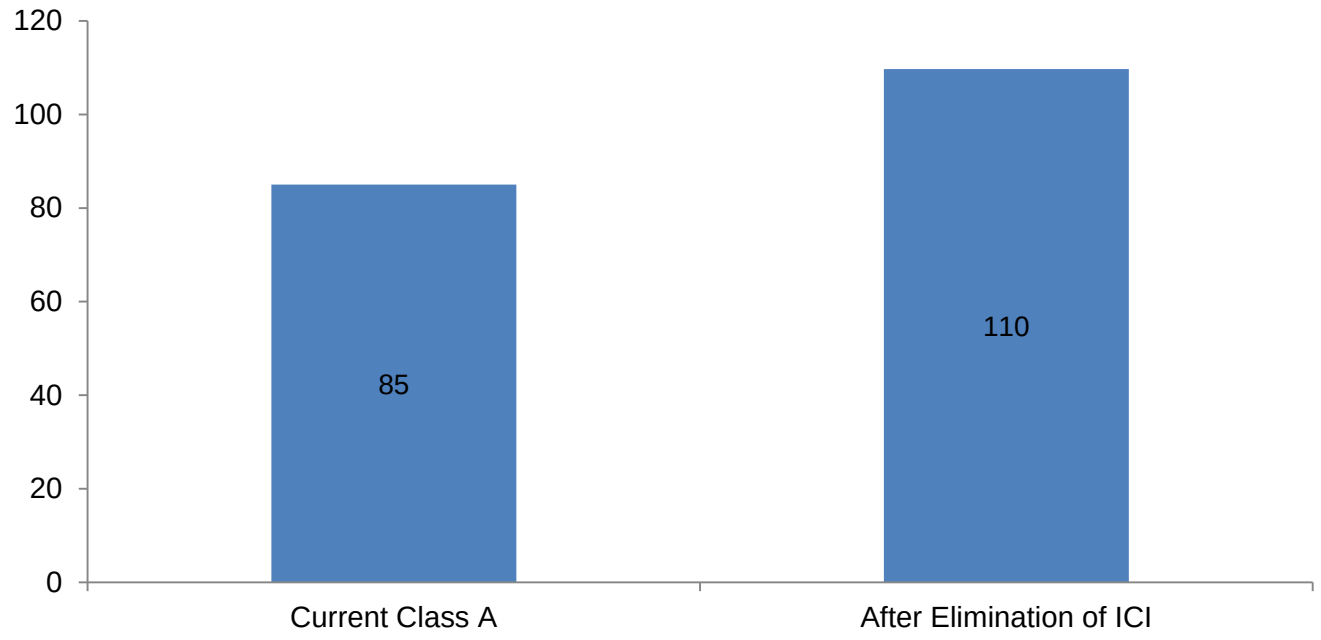
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# C. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# D. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period.
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g. rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

*Cancel/Adjust Announced Procurements:*

- Amendments to existing directions to IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

*Cancel Existing LRP I Contracts:*

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

**Legal Analysis**

- Any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements.
  - An amendment to an existing direction would not require Cabinet approval, however, further analysis is required to determine if direction to cancel LRP I contracts could be considered as amending existing direction.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights. This reasoning would likely apply equally to any direction to IESO to cancel LRP I contracts. Previous advice has also flagged a risk that the Province could be liable for damages in tort for inducing a breach of contract (or other claims).
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

**From:** John Kim
**To:** Emily Kerr
**Subject:** RE: Rate Mitigation
**Date:** Sunday, January 15, 2017 8:06:57 AM

---

Hi Emily,

The file is saved in the folder.....Francisco added his comments to the file as well. V7 is the latest at the moment.

Z:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Energy_Jan16

John.

-----Original Message-----
From: John Kim
Sent: Saturday, January 14, 2017 11:45 PM
To: Emily Kerr <Emily.Kerr@ofina.on.ca>
Subject: RE: Rate Mitigation

Hi Emily,

Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.

Thanks,

John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
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> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
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>
> Serge
>
>
> Sent from my iPad

| | |
|---|---|
| **From:** | Francisco Chinchon |
| **To:** | John Kim |
| **Subject:** | RE: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 7:28:09 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v7 (CEFD).docx<br>Proposed Initiatives to Transform Ontarios Electricity Sector 20170113_CEFD.pptx |

---

Thanks, I worked on your file.

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From: John Kim
Sent: Saturday, January 14, 2017 11:49 PM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
Subject: FW: Rate Mitigation

Fyi, I just put down a few updates quickly so that maybe the effort could be combined later on. So is just a marker to start the effort.

I know you mentioned will focus on DT and TT and I'm totally flexible how to move this.

John.

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**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility** | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| **Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time** | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value (share price) and impact fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |

| | |
|---|---|
| | • In the case of projects located in First Nation territories it could have an upfront fiscal impact if Province is not able to amortize those projects (TBC with OPCD).<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a windfall. It was fiscally neutral, it represented revenue to OEFC and an expense to Hydro One.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates<br>• OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding th Global Adjustment (GA) |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |

**Detail on Proposals**

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.

  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income (revenue) to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income (expense) of Hydro One.
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- Having OEFC help implement this measure may require introducing changes to OEFC's objects as is legal mandate is to help reduce and pay down stranded debt.
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.

**Commented [JK1]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

**Commented [JK2]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.

- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of options to delay recovery of part of the Global Adjustment (GA) by debt financing and recovering over a 25 to 30 year period.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1:
  - Option 2:
  - Option 3:
  - Option4:
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

[Check and Update]

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**~~December 12~~January 15, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

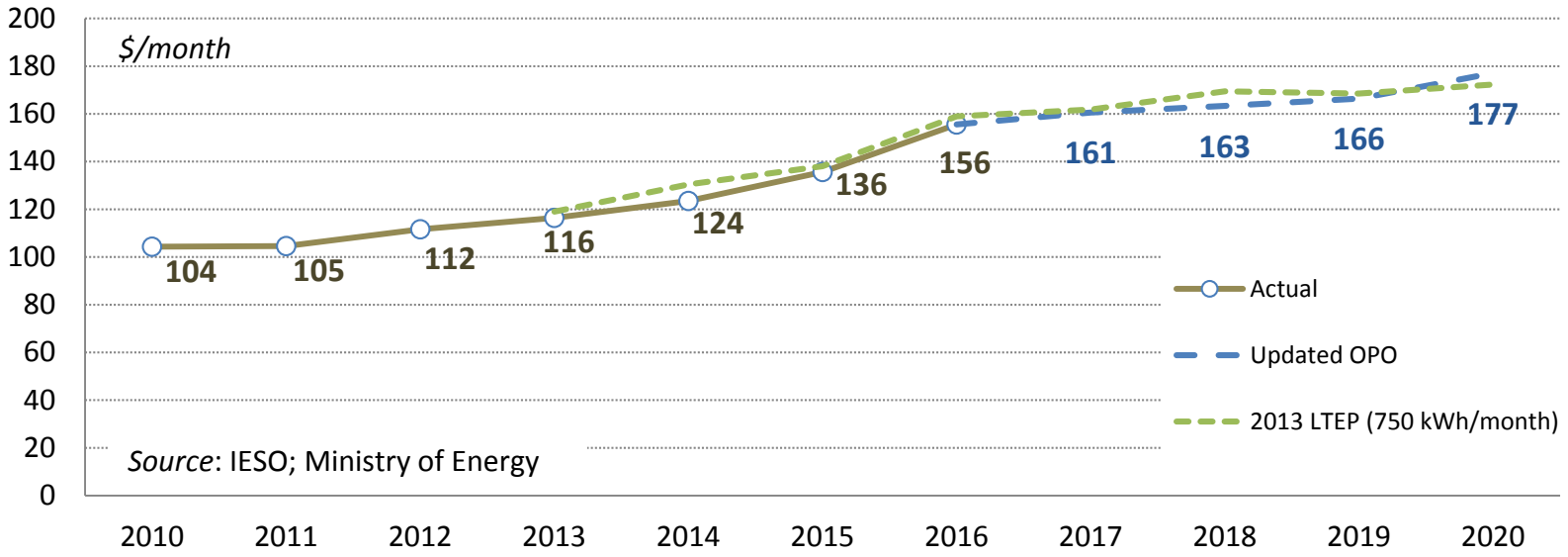
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast*




**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Broad Policy Themes / Rationale

- Support the continued reduction in the differential across distribution rates (as charged by Local Distribution Companies) across the Province through the potential enhancement of Rural or Remote Electricity Rate Protection, (RRRP). In order to not increase regulatory costs to customers as a result, this program can be moved to the tax-base.
- Provide a greater focus and support on lower income Ontarians by funding the Ontario Electricity Support Program (OESP) through the tax-base, as well as enhancing the support available through the program.
- Amortize electricity conservation and demand management (DM) programs over 15-years to provide lower costs for electricity consumers.
  - Alternatively, pay for conservation/DM programs through the tax-base and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties and expansion of natural gas to underserved areas (i.e., rural and remote communities), etc.
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" an alternative rate plan, based on a flat electricity rate, as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time. Also give consumer greater transparency with respect to electricity costs by providing more details regarding the Global Adjustment (GA).
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers, a benefit of $7/MWh.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 1.53 | 1.58 | 1.61 | 1.66 | 1.70 | 1.74 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.57 | 0.79 | 0.98 | 1.13 | 1.29 | 1.44 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC Efficiencies/Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.71 | 0.89 | 1.08 | 1.22 | 1.35 | 1.24 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. v Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 2.04 | 2.10 | 2.15 | 2.22 | 2.27 | 2.32 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.76 | 1.05 | 1.31 | 1.51 | 1.71 | 1.92 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC Efficiencies / Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.59 | 0.74 | 0.89 | 1.01 | 1.12 | 1.03 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Taxpayer Funded Electricity Price Mitigation

| *$M* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. Fund RRRP through the Tax-Base* | - | 666 | 684 | 700 | 719 |
| 2. Fund OESP through the Tax-Base | | | | | |
| a. Enhance OESP Benefit | | 162 | 226 | 279 | 322 |
| b. Expand OESP Eligibility | | TBD | TBD | TBD | TBD |
| 3. Conservation Funding Options | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | - | - | - | - | - |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | 100 | 390 | 390 | 390 | 390 |
| 5. Dedicate Departure Tax | 260 | 260 | 260 | 260 | 260 |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC Efficiencies / Rates | - | - | - | - | - |
| c. OPG – Operational Efficiencies | - | - | - | - | - |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers) | 110 | 450 | - | - | - |
| 9. Extend the Length of Existing Wind/Solar Contracts at Lower Prices | - | - | - | - | - |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| Fund Conservation Programs Through The Tax-Base | 154 | 632 | 649 | 567 | 568 |
| Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy
**Note:** *Assumes RRRP enhancement to reduce distribution rates to $30 for LDCs and **Assumes increase OESP credit by 50%.
Not included in chart is additional $18M/year to fund potential First Nations rate program through the Tax-Base.

# Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are aimed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

- Given that these programs focus on promoting equity between different areas of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.
  - These enhancements would also work in conjunction with the Ontario Energy Board's focus on reducing LDC costs outlined in option 6b.

# 1. Rural or Remote Rate Protection (RRRP) Expansion

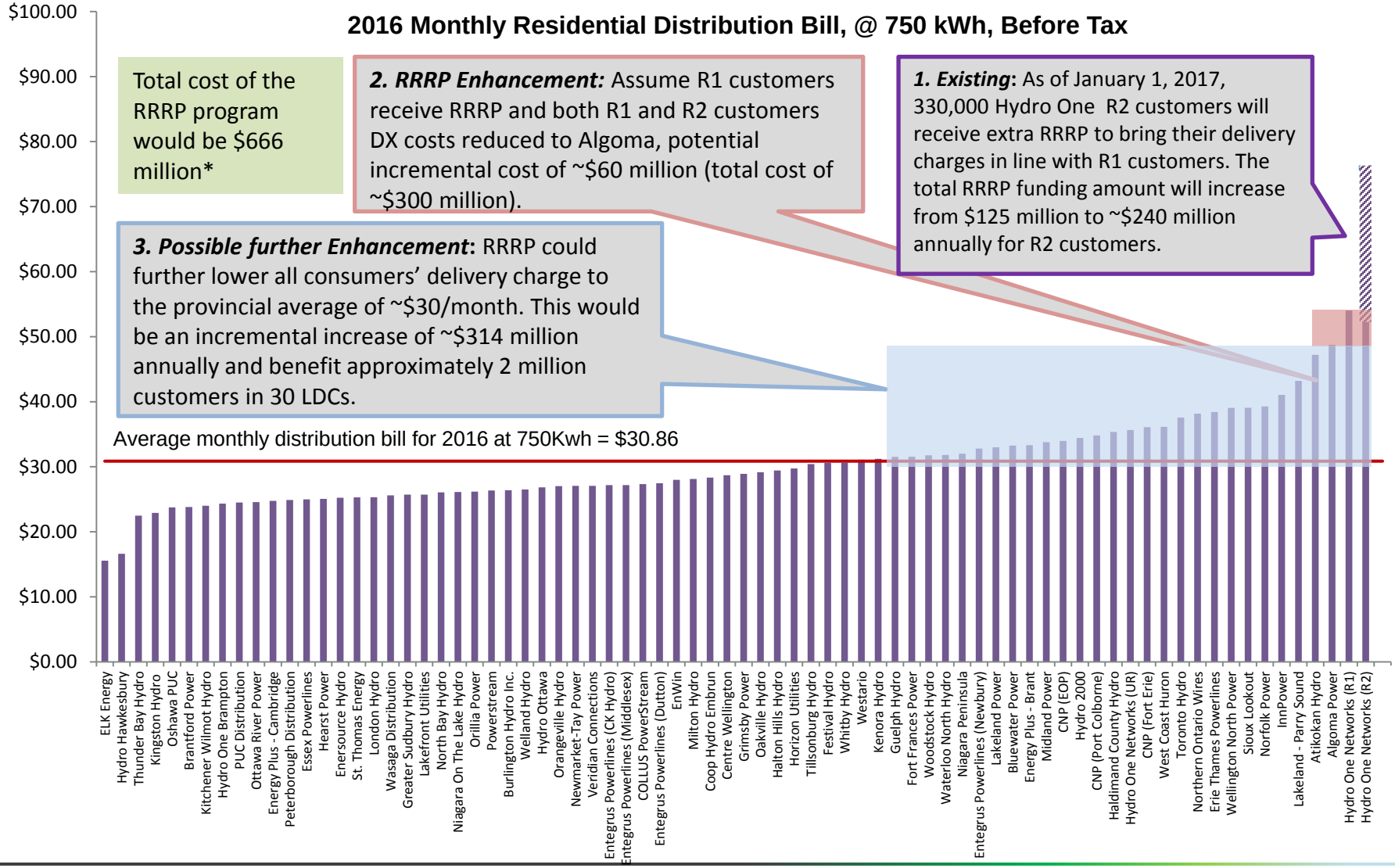
- The Rural or Remote Rate Protection (RRRP) program supports the most costly-to-serve distribution customers in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
  - Costs to these Hydro One customers are higher than average because of their relatively low density. The OEB mandates that they pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies.
  - To mitigate these costs, the RRRP was recently enhanced to help lower the bills of Hydro One's R2 customers to around those of its R1 (medium density) customers.
- Although other LDCs do not have medium- and high-density rates, there is a wide range of distribution costs between LDCs. The RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - Could be done on its own or as part of exploring an Ontario-wide uniform "postage stamp" delivery rate.

**Considerations**

- RRRP will be enhanced for R2 customers on January 1, 2017 to have their costs reduced to approximately R1 distribution costs levels. The RRRP could be further enhanced to include R1 customers, and have R2 and R1 customers reduce their costs down to Algoma (see next slide). This would cost $300 million in the first year (and would adjust year over year).
- If there was a desire to reduce costs for all LDCs, a simple average of distribution cost before tax, across all rate zones is $30.86 per month, for a residential customer consuming 750 kWh per month.** Bringing all delivery rates down to this average would cost approximately $500 million for the first year, with escalation in line with average distribution rate increases.
  - This assumes Hydro One R2 consume 1,200 kWh and H1 R1 customers consume 1,000 kWh per month.
- If all customers were brought down to the average costs (see the chart on the next slide for more detail):
  - It is assumed that residential customers with bills less than the provincial average see no change;
  - Majority of the enhanced benefit would go to Hydro One R1 and Toronto Hydro customers; and
  - Mechanism to ensure that LDCs continue to be motivated to achieve efficiencies would need to be designed (see section 4).
- Enhanced RRRP support may be best provided from the tax-base, because if funded from the rate-base, it would increase the costs for all customers who may argue that it is unfair that they are being asked to pay more to subsidize those in other LDCs.
- In conjunction with using the tax-base to reduce delivery charges to the provincial average, the OEB could be asked to explore moving to a province-wide "postage stamp" delivery rate that would be the same across the province to be implemented over time.
  - Could be "winners and losers" as delivery rates less than the average would go up in a postage stamp model;
  - A "postage stamp" model could help incent LDC consolidation.

**Note:** This is based on preliminary estimates and the amount will fluctuate on monthly consumption from customers and LDCs have different customer base with different consumption types.

# 1. Rural or Remote Rate Protection (RRRP) Expansion (cont'd)




*Note: this includes the ~$50M currently supporting Algoma Power and Hydro One Remotes.*

# 2a. Enhance Ontario Electricity Support Program (OESP) Benefit

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills. The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices and at launch, it was estimated ~560,000 families could be eligible and some 261,000 applications have been submitted.

- The OESP program benefits could be increased across the board by 50%, which would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).

- The OESP program could also be further enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).

**Considerations**

- If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible.
  - At the time of program design, advice was given that a 40-50% participation rate would be high for an application-based program delivered through electricity bills.
  - The province would need to work with LDCs if the rebate was to appear on electricity bills rather than be delivered via the income tax system (e.g., through the Trillium Benefit).

# 1 & 2a. Fiscal Impacts of RRRP, OESP and First Nation Rate

- Table below shows estimates of program costs up to 2022:

| Year | OESP ($M) | OESP + 50%($M) | RRRP($M) | RRRP Enhancement ($M) | First Nations Delivery Rate($M) | TOTAL RANGE ($M) (from status quo to OESP and RRRP enhancements) |
|---|---|---|---|---|---|---|
| 2017 | $108 | $162 | $292 | $374 | $18 | $418 to $846 |
| 2018 | $150 | $226 | $300 | $384 | $18 | $468 to $928 |
| 2019 | $186 | $279 | $306 | $394 | $18 | $510 to $997 |
| 2020 | $215 | $322 | $315 | $404 | $18 | $548 to $1,059 |
| 2021 | $243 | $365 | $322 | $415 | $18 | $583 to $1,120 |
| 2022 | $272 | $408 | $329 | $426 | $18 | $619 to $1,181 |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections above assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
   - The second column forecast also assumes the existing credit amounts increase by 50%.
     - Forecast assumes 10% administration costs
     - Forecast does not account for the approximately 142,000 low-income households that OEB estimated are not eligible because they do not directly receive an electricity bill.

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.
   - Expansion to cap distribution rates for other customers is based at $374M and assumes escalation of 2.6% (historical average dx rate increase). This is a conservative estimate, as Hydro One and Toronto Hydro increases could drive program costs beyond the average increase.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 2b. Expand OESP Eligibility

**Expanded Coverage**

- When OESP was being created, the OEB estimated that are 713,000 low-income households, of which 20% do not receive electricity bills. Thus, only 571,000 would potentially be eligible for OESP.
- If moved to the tax base, the OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity.

**Eligibility Categories**

- OESP has two credits amounts:
    1) Basic credit of $30-50 per month, based on the level of income and the number of residents.
    2) Enhanced credit of $45-75 per month for those with unique electricity needs:
        a) Electric heating,
        b) Indigenous customers, and
        c) Certain electrically intensive medical devices.
- The enhanced credit can be expanded to include additional eligibility categories of customers. For example, a new “Low Density Consumer” category could be introduced that provides Hydro One R2 customers (highest distribution rates) eligible for OESP the enhanced credit.

**Considerations**

- Potential costs for expanded coverage and new eligibility categories depend on updated estimates and changes to program design and delivery.
- There would be value in keeping the OESP as an income-tested program to distinguish it from other initiatives (e.g. RRRP, which is designed to address disparity between rural and urban distribution costs).

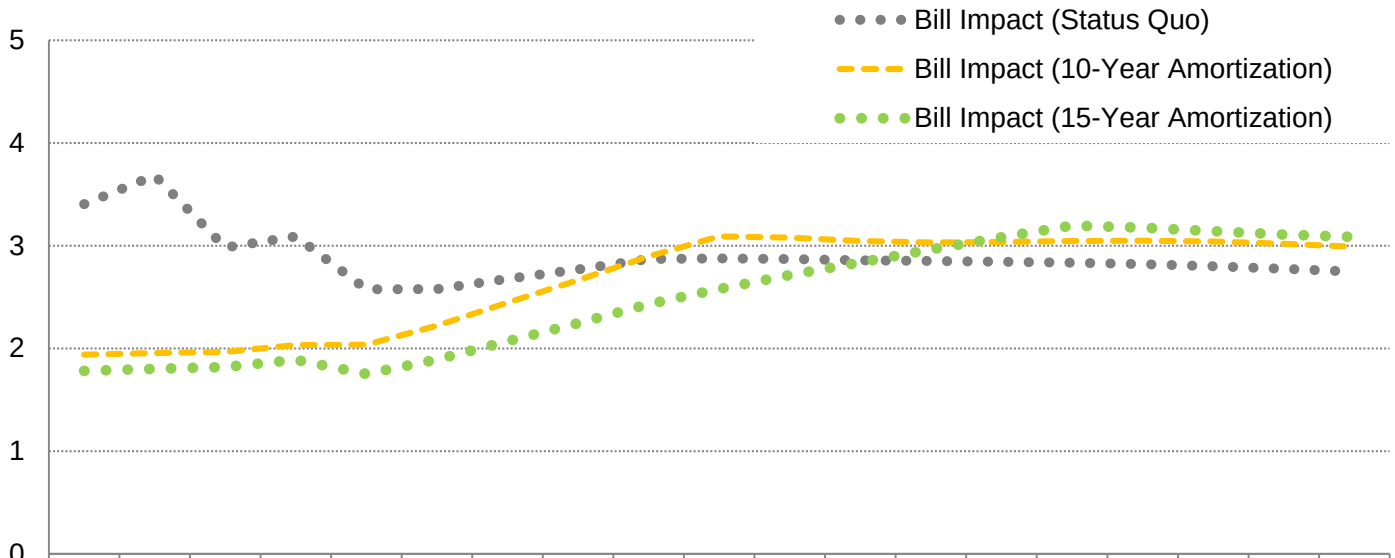
# 3a. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized. This would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs).
  - The time period over which costs could be amortized would be over the lifetime of funded CDM measures.
  - ENERGY is working with IESO to determine the appropriate lifetime period – the graph on the next slide, which illustrates residential bill impacts, presents two cases: **10-year and 15-year measure lifetimes**.
- In both cases, amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020. Over time the benefit would decrease and turn into a cost (higher electricity rates than would otherwise occur), as interest charges begin to grow. Estimated interest charges are as follows (a 3% interest rate is assumed; increases in interest rates could result in higher overall interest charges):
  - $712 million ($2016) – Amortizing eligible 2017-2035 CDM costs for 10-year period; and
  - $1.3 billion ($2016) – Amortizing eligible 2017-2035 CDM costs for 15-year period .
- Legislative changes would be needed to allow recovery of interest payments from ratepayers, or these costs could be recovered from the Consolidated Revenue Fund (CRF, or taxes).
- An alternative that could be explored would be to pay for CDM costs, or for a portion of these, from the tax-base (*see Appendix for more detail on tax funding option*).

# 3a. Amortize Conservation Program Costs (cont'd)

## Conservation Residential Bill Impact – Status Quo, 10-Year and 15-Year Amortization

***CDM Bill Impact ($/month)***




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bill Impact (Status Quo) | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | 2.68 | 2.77 | 2.87 | 2.88 | 2.87 | 2.86 | 2.85 | 2.84 | 2.83 | 2.82 | 2.80 | 2.78 | 2.75 |
| Bill Impact (10-Year Amortization) | 1.94 | 1.95 | 1.97 | 2.03 | 2.04 | 2.22 | 2.45 | 2.67 | 2.90 | 3.09 | 3.08 | 3.05 | 3.03 | 3.04 | 3.04 | 3.05 | 3.04 | 3.02 | 2.99 |
| Bill Impact (15-Year Amortization) | 1.78 | 1.80 | 1.82 | 1.89 | 1.75 | 1.89 | 2.07 | 2.25 | 2.43 | 2.58 | 2.71 | 2.84 | 2.96 | 3.08 | 3.20 | 3.18 | 3.14 | 3.11 | 3.09 |

Source: IESO; Ministry of Energy

**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10 of 15-year borrowing rate of 3.0%.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.
- Legislative amendments would be needed to allow recovery of loan interest charges from GA.
- ENERGY staff have developed a note to seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
- ENERGY is working with IESO to seek an opinion on the proposal from IESO's external auditor.
- ENERGY would then send the IESO external auditor's opinion along with ENERGY's explanatory note to the Ontario Provincial Controller (OPC) to seek a formal opinion on whether CDM costs could be amortized according to rate-regulated accounting standards.
- Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 3b. Rate Smoothing of Conservation Program Costs

- "Rate smoothing" could achieve the same rate reduction effect as amortization.
- Instead of taking out a loan to amortize conservation costs, a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Each year, IESO would defer recovery of a portion of annual conservation costs. Financing would also be required, such as from the OFA, to pay the interest on the deferral account. Interest would accrue on the deferred amounts, likely at the same rates as for the amortization option.
- Deferred costs could be recovered over any time period. If a 10 or 15 year-period was chosen, the rate impacts would be the same as in the amortization option.

**Considerations**

- Option would **not** require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open the Ministry to criticism by the Controller and/or Auditor General since the rate impact is the same.
- The Ministry would have more control under this option to change deferred amounts each year, as opposed to the terms set by a loan agreement under the amortization example.
- There is precedence to this approach for nuclear investments, which otherwise would result in volatile increases and decreases for Ontario ratepayers over the investment period. In 2015, the Ministry amended a regulation that requires the Ontario Energy Board (OEB) to set "smoothed" nuclear rates for OPG's Darlington and Pickering nuclear stations over a 20-year period.
  - The regulation allows OPG to defer recovery in rates of a portion of its nuclear revenue during the Darlington refurbishment (expected to be complete in 2026) and recover these deferred costs over the remaining ten years.
  - OPG will establish a "deferral account" to record the deferred amounts each year up to 2026 plus accumulated interest on the balance to reflect OPG's financing costs as a result of rate smoothing. The deferral account is then drawn down on a straight-line basis between 2026 and 2036.
- At minimum, new regulation would be required. However, further analysis is needed to determine the relevant regulation or legislation, to be amended for IESO (e.g., OEB regulation of IESO costs and fees, GA regulation for how IESO recovers its conservation costs from ratepayers).

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure

- Fund investments in specific energy infrastructure projects through the tax-base. **Note:** This could include the provincial portion of funding for the Remote First Nation Connection Project, a fund to support projects that improve adequacy and reliability in areas where new transmission would unlock economic growth and expansion of natural gas service to underserved communities.

**Considerations**

- Tax-base funding would allow for energy infrastructure to be built without impacting electricity and natural gas rates.
- Would require increasing the amount of funding committed to the Trillium Trust. All fiscal impacts from broadening Hydro One have been committed to the Trillium Trust $5.7 billion target and allocated to Moving Ontario Forward projects.
- There would be an ongoing fiscal impact from the amortization and funding of the investments. Where amortization is not possible there would be an upfront fiscal impact.

*Remote Connection Project:*

- Ontario ratepayers currently support costs of remote electricity service through RRRP on the order of $28 million/year
- Connecting 21 remote communities to the Ontario grid is supported by a positive business case due to diesel cost savings over time. If RRRP is funded through the tax base as proposed above, this project represents an opportunity to reduce impacts from RRRP.
- Direct investment in Ontario's portion of the capital costs of the project through a provincial fund (e.g., Trillium Trust) could also be considered along with mechanisms for cost recovery through transmission rates to refresh the fund as industry benefits from the transmission investment.
- The amount of investment and long-term savings depend on a federal contribution to the project and ENERGY is currently in discussions with Canada with the goal of concluding a cost-sharing agreement by spring 2017.
- A move to tax-based funding may have implications for cost oversight, since the OEB's mandate is to have oversight of ratepayer impacts. Alternative methods to review cost prudence of tax-based funding may be needed.

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (cont'd)

**Considerations (cont'd)**

*Transmission Projects to Enhance Economic Growth:*

- A tax-based fund could target investments in projects that have been identified in IESO regional plans and that would stimulate economic growth but are not proceeding due to cost barriers under the OEB's beneficiary pays principle. Investments could also target areas where the existing system poses challenges for delivering reliable service such as in parts of Northern Ontario with long single circuits.
- Potential opportunities for investment could include a transmission reinforcement in the **Greenstone area**, upgrades south of **Red Lake** and others TBD based on program design.
- This approach would allow a potion of project costs to be socialized to advance key projects without impacting rates or OEB's principles of cost allocation. Scope and scale of fund would be refined through program design.

*Natural Gas Expansion to Underserved Communities:*

- The Government has currently committed to expanding natural gas access to more communities in Ontario (i.e., $200 million Natural Gas Access Loan and $30 million Natural Gas Economic Development Grant).
  - Natural gas is an affordable heating source in Ontario. Its continues to be less expensive than alternative sources such as electric baseboards, heating oil and propane. For example, switching from oil to natural gas can save an average consumer an estimated $1,500 annually.
  - Increasing access to other energy sources such as natural gas, provides Ontarians with more options to meet their needs, reduce their energy costs and improve their quality of life.
  - Expansion of natural gas delivery infrastructure is widely supported in underserved communities (i.e., a recurring theme at ROMA) as a means to provide consumers and businesses in underserved communities with more affordable energy choices, attract new industry to Ontario and benefit agricultural producers.
- A grant program complements the Ontario Energy Board's recent decision enabling greater rate-based expansion to unserved areas, including rural and remote communities.
  - Applying Trillium Trust funding would make it possible to enhance the Grant Program and service more communities.

# 5. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.
- If the Province were to transfer $2.6 billion in economic benefits to the rate base over 10 years suggest the following fiscal impacts (assuming 140TWh per year):
  - Residential Ratepayer Impact (if spread over 10 years): up to $1.39 per month on a typical bill; and
  - Industrial Ratepayer Impact (if spread over 10 years): up to $1.86 / MWh
- There would be no certainty that the OEB could still decide to allocate some or all of Hydro One's deferred tax benefit to ratepayers which would have fiscal impact (lower share price and lower net income over time).

**Considerations**

- Cost savings to ratepayers and associated fiscal impacts would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- The departure tax was effectively a true-up for lower PILs payments from Hydro One in previous years – it was not a one-time windfall for the Province. In other words, it ensures that Hydro One paid all its tax obligations under the PILs regime before moving into the normal corporate tax regime.
- The related ~$2.4 billion fiscal benefit to the Province (from the deferred tax benefit) has already been credited to the Trillium Trust to be used to build infrastructure under Moving Ontario Forward.
- Repurposing funds paid to OEFC would ~~may~~ have an impact on the defeasance of electricity stranded debt and would cause the first increase in stranded debt since 2004.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to ~~infrastructure investments already made in the sector, or to specific initiatives such as conservation~~).

# 6a. Empower Energy Agencies – IESO / Market Renewal

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 6b. LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
  - Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
    - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.

**Considerations**

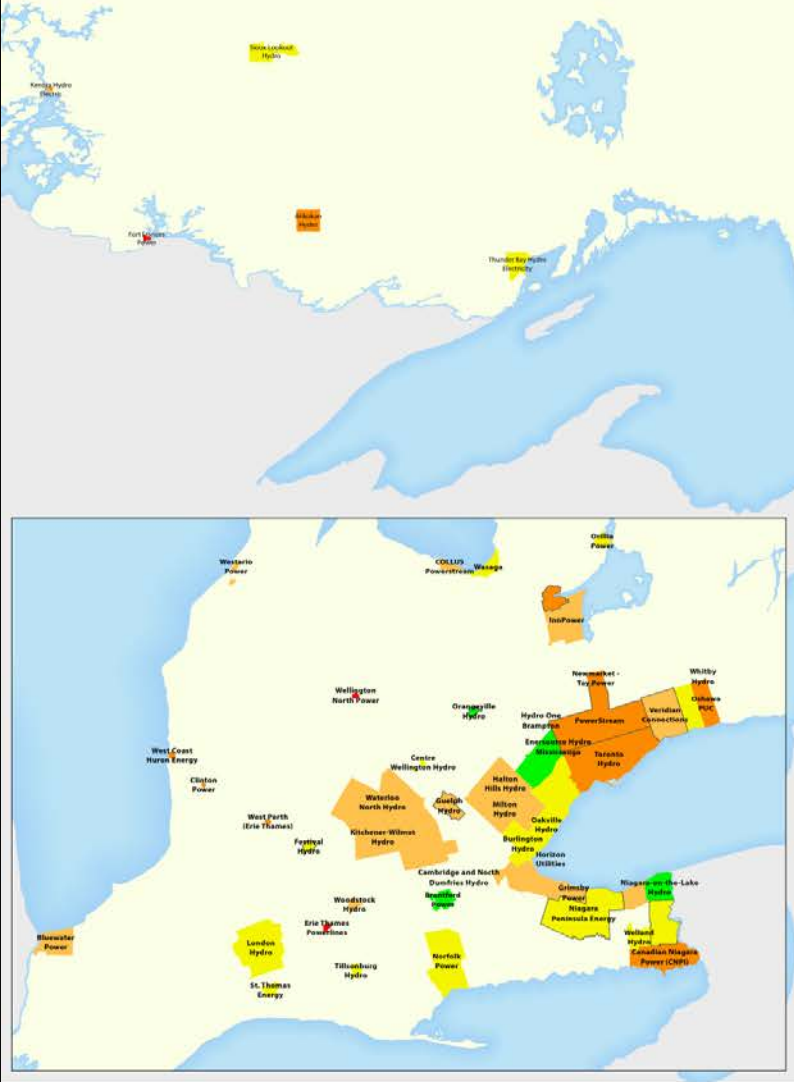
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.

- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
  - To further help address the costs associated with the Delivery line of the electricity bill, program such as the RRRP (previous slide) could be expanded to include other customers that may face higher costs.

- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.

- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation. Further changes to the tax incentives and/or revisiting legislated consolidation could be considered.

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

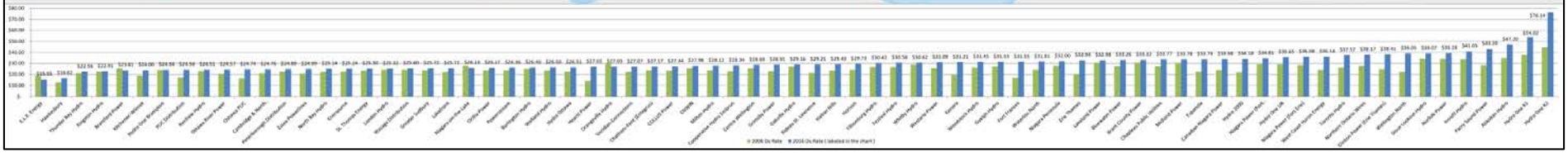
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# 6c. Empower Energy Agencies – OPG / Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

**Considerations**

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.
- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available, providing customers with pricing choice.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- Would provide consumers with electricity pricing choice.
- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro- November 2016 rates)

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7b. Give Consumers More Rate Choices and Greater Transparency – Detailed Global Adjustment

- Provide electricity consumers greater transparency with respect to electricity generation costs by providing more details regarding the Global Adjustment (e.g., adding a line on hydro bills, quarterly energy reports, etc).

**Considerations**

- As electricity bills have increased, many consumers have complained about a lack of transparency on the drivers of electricity costs. In particular, consumers and legislative officers have singled out the GA.

- Providing consumers with additional information on the cost components and amounts recovered through the GA would help consumers understand how the different forms of electricity generation in Ontario contribute to consumers costs.

- Providing additional information to consumers on electricity commodity cost drivers without sufficient context or background could simply lead to increased complaints about particular generating technologies that make up large shares of costs (e.g., nuclear).

- Adding a breakout of the amount of GA on residential electricity bills could lead to further confusion due to the existing breakout of multiple time-of-use buckets.

- Alternatively, the existing quarterly Ontario Energy Report, which provides various energy sector data, could be leveraged to show a breakout of quarterly GA costs by fuel type. A link on electricity bills could point to this information.

# 8. Help Small Business Manage Their Electricity Cost – End DRC Early for Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the proponents agreeing to a lower price in the near term.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period ; discussions/consultation may be required in advance of this potential option moving forward.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- Since the Minister of Energy is not a party, IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms would also reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.

- Projects over 500 kW would offer the most savings potential as they represent the majority of installed renewables capacity and are spread across fewer contracts.

- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.

- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh;
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
  - **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 million | $582 million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - For example, the New contract is $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 million | $632 million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# 10. Tax Relief for Solar and Wind Contracts

- In 2010 and 2011 Ontario procured large scale projects (>500 kW) through the FIT program at standard offer pricing.

- The FIT program was the centerpiece of the GEA which established the economic and social goals of growing the green economy, including establishing a local renewable energy manufacturing base, supporting the development of green energy jobs, and providing incentives for Indigenous participation.

- To help achieve these economic and social goals, the FIT program offered pricing at above competitive procurement rates, and provided Indigenous and Community participation adders, which resulted in economic benefits to all Ontarians, but resulted in additional costs borne by Ontario's electricity ratepayers.

- Ontario could fund the added cost of some or all of these economic and social incentives by shifting their costs from the rate-base to the tax-base.
    1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
    2. The tax base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT.

**Considerations**

- If applied to projects in commercial operation the benefit to the ratepayer would be immediate.
- Comparing FIT pricing to competitive procurement pricing could provide a reasonable representation of energy procurement without the added cost of economic and social incentives.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
   - For example, from 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
   - The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
   - If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
   - The $3.3 billion difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.
   - This represents estimated average ratepayer savings of $1.50/ month relative to OPO forecasts.
   - The same approach could be considered for solar projects however, prior to LRP I in 2016, Ontario had not procured solar capacity competitively and international cost comparisons are challenging given differences in regional development costs.
   - This example does not include the value of participation price adders available for community and indigenous participation.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

2. The tax-base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT 1 solar and wind projects.

   - For example, 17 large FIT 1 wind and solar projects have Indigenous and/or Community participation making them eligible for a price adder in addition to their base contract price.

   - The estimated value of these price adders is approximately $17.1 million (NPV 2017) over the expected remaining term of their contracts.

   - This represents estimated ratepayer savings of approximately $0.01/month relative to OPO forecasts.

# FIT 1 and GEIA Wind Projects in Commercial Operation
(source: IESO Active Contracts List, October 31, 2016)

| Count | Program | MW | COD |
|---|---|---|---|
| 1 | FIT 1 | 0.8 | Oct-10 |
| 2 | FIT 1 | 18 | Jul-15 |
| 3 | FIT 1 | 23 | Aug-15 |
| 4 | FIT 1 | 40 | Jan-15 |
| 5 | FIT 1 | 10 | Sep-14 |
| 6 | FIT 1 | 10 | Sep-14 |
| 7 | FIT 1 | 10 | Jun-14 |
| 8 | FIT 1 | 99 | May-13 |
| 9 | FIT 1 | 100 | Oct-15 |
| 10 | FIT 1 | 4 | Sep-12 |
| 11 | FIT 1 | 100 | Apr-16 |
| 12 | FIT 1 | 15 | Jun-15 |
| 13 | FIT 1 | 18 | Mar-12 |
| 14 | FIT 1 | 104.4 | Nov-13 |
| 15 | FIT 1 | 40 | Dec-15 |
| 16 | FIT 1 | 60 | May-14 |

| Count | Program | MW | COD |
|---|---|---|---|
| 17 | FIT 1 | 125 | Aug-13 |
| 18 | FIT 1 | 73.5 | Aug-14 |
| 19 | FIT 1 | 102 | Jan-15 |
| 20 | FIT 1 | 9 | Jan-12 |
| 21 | FIT 1 | 4.1 | Dec-15 |
| 22 | FIT 1 | 0.5 | Oct-13 |
| 23 | FIT 1 | 82.8 | Nov-11 |
| 24 | FIT 1 | 18.45 | Sep-16 |
| 25 | FIT 1 | 60 | Jul-14 |
| 26 | FIT 1 | 10 | Oct-16 |
| 27 | FIT 1 | 6.15 | Nov-14 |
| 28 | FIT 1 | 2.3 | Aug-15 |
| 29 | FIT 1 | 10 | Feb-16 |
| 30 | FIT 1 | 8.2 | Nov-14 |
| 31 | FIT 1 | 150 | Nov-14 |
| 32 | FIT 1 | 91.39 | Dec-14 |

| Count | Contract | MW | COD |
|---|---|---|---|
| 33 | FIT 1 | 25 | May-15 |
| 34 | FIT 1 | 82.8 | Nov-11 |
| 35 | FIT 1 | 30 | Mar-14 |
| 36 | FIT 1 | 17.6 | May-16 |
| 37 | FIT 1 | 23 | Dec-12 |
| 38 | FIT 1 | 99 | May-13 |
| 39 | FIT 1 | 48.6 | Dec-11 |
| 40 | FIT 1 | 19.44 | Aug-15 |
| 41 | FIT 1 | 10.8 | Mar-12 |
| 42 | FIT 1 | 38.88 | Sep-15 |
| 43 | FIT 1 | 60 | Aug-14 |
| 44 | GEIA | 270 | Mar-14 |
| 45 | GEIA | 180 | Dec-15 |
| 46 | GEIA | 148.6 | Dec-14 |
| 47 | GEIA | 270 | May-15 |

# Key Outcomes / Next Steps

- The proposed initiatives provide the following opportunities to:
  - Provide a greater focus on vulnerable consumers by funding electricity support programs through the tax-base.
    - Enhance existing and new support programs targeted at the most vulnerable consumers (i.e., OESP and RRRP); and
    - Better harmonize delivery rates across the province.
  - Re-set how energy infrastructure is funded by shifting costs to the tax-base from the rate-base.
  - Provide electricity consumers with greater choices and transparency (e.g., alternative rate plan based on a flat electricity rate, unpacking the Global Adjustment costs, etc);
  - Provide system benefits (e.g., market renewal);
  - Increase cost effectiveness and improve efficiency; and
  - Lower the cost of electricity for all consumers.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require legislative and/or regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

A. Rural or Remote Rate Protection (RRRP) – Overview and Enhancements
B. Fund Conservation Programs Through the Tax-Base
C. Eliminate the Industrial Conservation Initiative (ICI)
D. Cancel Large Renewable Procurement I (LRP I)

# A. RRRP Overview and Enhancements

- The Delivery line of the electricity bill is composed of Distribution and Transmission Costs. While transmission costs are uniform across the province, LDC costs vary by distributor and account for about 20% of the total bill for the electricity customers.
  - See slide X for a map of delivery rate increases between 2006 and 2016.
- The Rural or Remote Rate Protection (RRRP) framework was put in place in 2001 to help offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations.
- RRRP is available to: residential Hydro One R2 customers (~350,000 customers), Algoma Power customers (~11,600 customers); H1 remote customers (~3,500 customers).
  - To date, R2 customers receive a fixed amount of $125 million a year distributed amongst the customers. Algoma and Remote customers have RRRP calculated by the OEB each year that fluctuates based on average provincial distribution increases.
- Because the amount had been fixed for over a decade, the Province recently increased funding of the RRRP program for Hydro One R2 customers from $125 million to $240 million. This will be effective as of January 1, 2017, and will bring their delivery charges in line with the next highest charges from Hydro One's R1 customer class.

# B. Fund Conservation Programs Through the Tax-Base

- Propose to fund 2017-2020 electricity conservation and demand management program costs* using tax dollars instead of ratepayer dollars.
  - Funds received through the Hydro One Departure Tax could potentially be repurposed towards this.
- Total remaining 2017-2020 electricity conservation program costs are expected to be ~$2.1 billion.
- Post 2020, this option could evolve to funding conservation programs through the Greenhouse Gas Reduction Account.

**Considerations**

- Electricity conservation programs provide a number of benefits to society, however, Ontario's ratepayers have been covering these costs:
  - Avoiding/deferring future energy infrastructure investments, reducing disruption in communities (e.g., avoiding the need to build new natural gas generation);
  - Environmental benefits (e.g., reduced natural gas peaking generation and GHG emissions); and
  - Social and economic benefits (e.g., job creation and assistance managing electricity bills).
- There is precedence for using tax dollars to fund conservation programs.
  - Between 2007 and 2011, Ontario funded the Home Energy Savings retrofit program using tax dollars.
- Funding conservation programs though the tax-base is expected to result in a benefit of $3.40/month for residential electricity consumers in 2017. This could provide immediate short term relief to consumers while other rate mitigation initiatives are developed (e.g., market renewal, LDC efficiencies).

*** Note:** This includes costs towards the Conservation First Framework, Industrial Accelerator Program, Demand Response and the Conservation Fund)

# C. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

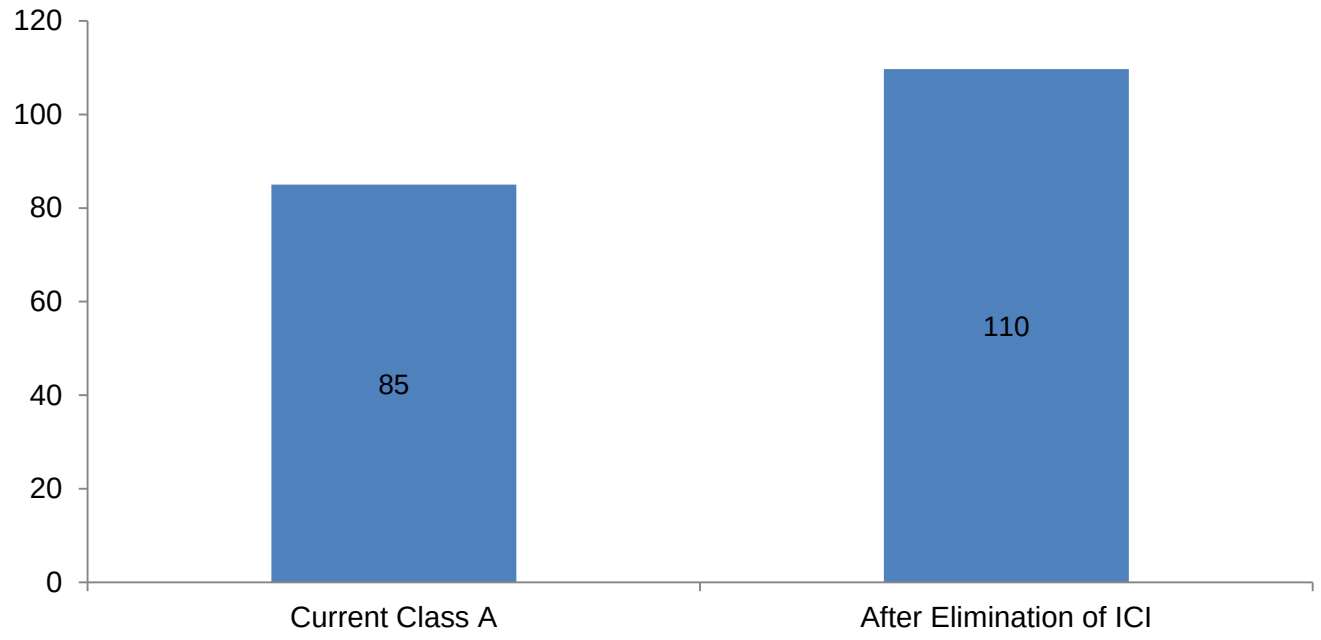
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# C. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# D. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period.
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g. rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

*Cancel/Adjust Announced Procurements:*

- Amendments to existing directions to IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

*Cancel Existing LRP I Contracts:*

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

**Legal Analysis**

- Any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements.
  - An amendment to an existing direction would not require Cabinet approval, however, further analysis is required to determine if direction to cancel LRP I contracts could be considered as amending existing direction.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights. This reasoning would likely apply equally to any direction to IESO to cancel LRP I contracts. Previous advice has also flagged a risk that the Province could be liable for damages in tort for inducing a breach of contract (or other claims).
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

**From:** John Kim
**To:** Emily Kerr
**Subject:** RE: Rate Mitigation
**Date:** Saturday, January 14, 2017 11:44:35 PM
**Attachments:** Comments on Electricity Sector Transformation Proposals v6 (CEFD).docx

---

Hi Emily,

Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.

Thanks,

John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)

> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
>  Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
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**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

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## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |

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| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
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| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility** | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| **Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time** | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value, including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates |

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|---|---|
| | • OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• ~~Provide more details regarding th Global Adjustment (GA)~~ |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal ~~impact/accounting treatment, or implementation~~<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |

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**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
    - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
    - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
    - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
    - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.

**Commented [JK1]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

- This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
- As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
- Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
  - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
  - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of options to delay recovery of part of the Global Adjustment (GA) by debt financing and recovering over a 25 to 30 year period.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1:
  - Option 2:
  - Option 3:

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**Commented [JK2]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

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- Option4:

- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

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| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
~~**December 12**~~**January 15, 2016**

**From:** John Kim
**To:** Emily Kerr
**Subject:** RE: Rate Mitigation
**Date:** Saturday, January 14, 2017 8:55:40 PM

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Hi Emily,

Anything you'd like to comment on would be helpful and we can try to merge the two sides.

I am trying to orient myself but hopefully, we will have something ready by tomorrow. (Being jet lagged isn't helping with the timeline!)

Right now, I'm thinking of updating the note that Gavin shared as being the version from December.

John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM

> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
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>
> Good morning,
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> Keley
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**From:** Ronald Kwan
**To:** Gavin He; Francisco Chinchon; John Kim; Emily Kerr
**Subject:** RE: Rate Mitigation
**Date:** Saturday, January 14, 2017 12:33:06 PM

---

Hi,

I should note that two days ago the DMO asked that the BN from December 12th be shared with Energy, so Energy staff would presumably have had it as they did the version of the deck received this morning, potentially along with the comments yesterday on the specific departure tax deck -- it seems that some of the bullets on those slides reflect our comments.

Thanks,
Ron

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From: Gavin He
Sent: January-14-17 12:28 PM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: RE: Rate Mitigation

Hi Directors,

FYI - In case you don't have it, please attached the note that was shared with DMO back in December. In addition, I have attached the "Proposed Initiatives to Transform Ontario's Electricity Sector" deck with edits from your Branch last month.

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| **To:** | Francisco Chinchon; John Kim; Emily Kerr |
| **Cc:** | Ronald Kwan |
| **Subject:** | RE: Rate Mitigation |
| **Date:** | Saturday, January 14, 2017 12:27:48 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx<br>Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy_SIFBEFBmarkup.pptx |

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2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value, including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |
| **E**nd the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

<u>OESP & RRRP (Total of about $0.4 to 0.45 Billion/year</u>):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

<u>Fund Conservation Programs through the Tax-Base</u>:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**December 12, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8%  per cent rebate ($11/month savings), updating RRRP ($45/month savings, combined with the 8% rebate), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured,  the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP),  which provides an opportunity to consider a range of policy changes to  how the Ontario energy sector operates.

# Broad Policy Themes / Rationale

- No longer use rate-base to pay for social programs [despite the system benefit rationale] by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.
- Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.
- Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" beyond the Moving Ontario Forward initiative to make certain investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties ~~and expansion of natural gas to rural areas~~, etc. (note that expanding access to natural gas is already included under Moving Ontario Forward.)
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" a single rate plan as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time.
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.16 | 2.31 | 2.41 | 2.49 | 2.54 | 2.58 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.13 | 0.13 | 0.14 | 0.14 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.88 | 3.08 | 3.21 | 3.33 | 3.39 | 3.44 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 2.82 | 3.05 | 2.47 | 2.56 | 2.13 | 2.14 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.10 | 0.10 | 0.11 | 0.11 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Taxpayer Funded Electricity Price Mitigation

| *($M)* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | | 398 | 419 | 433 | 447 |
| 2. Expand the OESP (i.e., 50% increase) | TBD | TBD | TBD | TBD | TBD |
| 3. Fund Conservation Programs Through The Tax-Base | 110 | 450 | 450 | 450 | 450 |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC efficiencies | - | - | - | - | - |
| c. OPG – Borrowing | - | - | - | - | - |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | 110 | 450 | - | - | - |
| 8. Cancel / Adjust FIT | - | - | - | - | - |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| 2. Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy

# Considerations / Outcomes

- The proposed initiatives provide the following opportunities to:
  - Lower the cost of electricity for all consumers;
  - Re-set how electricity programs and energy infrastructure is funded (i.e., shifting costs to the tax-base from rate-base);
  - Provide electricity consumers with greater choices (i.e., signal rate plan);
  - Provide system benefits (e.g., market renewal); and
  - Increase cost effectiveness and improve efficiency.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | John Kim; Adam Prokop |
| **Cc:** | Gavin He; Salman Qadir |
| **Subject:** | RE: Rate Mitigation - Draft MP Deck |
| **Date:** | Thursday, January 19, 2017 9:28:04 AM |

Thanks.

Did we get the password?

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Thursday, January 19, 2017 5:26 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** FW: Rate Mitigation - Draft MP Deck

---

**From:** Ronald Kwan
**Sent:** Wednesday, January 18, 2017 8:48 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Rate Mitigation - Draft MP Deck

Hi,

Please review.

Thanks,
Ron

Begin forwarded message:

> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **To:** "Gadi Mayman" <Gadi.Mayman@ofina.on.ca>, "Ronald Kwan" <Ronald.Kwan@ofina.on.ca>, "Gavin He" <Gavin.He@ofina.on.ca>, "Lynsey Wynberg" <Lynsey.Wynberg@ofina.on.ca>, "Marianne Nguyen (MCYS)" <Marianne.Nguyen@ontario.ca>, "Elizabeth Mendes (MOF)" <Elizabeth.Mendes@ontario.ca>, "Ghiassi, Ali (MOF)"

<Ali.Ghiassi@ontario.ca>
**Subject: Fw: Rate Mitigation - Draft MP Deck**

FYI. Attached are the rate mitigation materials for MPC tomorrow. PW to follow.

Sent from my BlackBerry 10 smartphone on the Rogers network.

---

From: Imbrogno, Serge (ENERGY)
Sent: Wednesday, January 18, 2017 8:01:35 PM (UTC-05:00) Eastern Time (US & Canada)
To: Orsini, Steve (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF); Angus, Helen (TBS)
Cc: Bromm, William (CAB)
Subject: Rate Mitigation - Draft MP Deck

Hi,

Attached is the rate mitigation deck for tomorrow's MP meeting. I'll send you the pw in a separate email.

Serge

| | |
|---|---|
| **From:** | Gavin He |
| **To:** | John Kim |
| **Subject:** | RE: Rate Mitigation - Draft MP Deck |
| **Date:** | Thursday, January 19, 2017 12:15:34 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v14.docx |

Hi John,

I just did a quick update on the GA financing section... I was going to update other sections too, but realizing this is a huge deck (50 slides), so I don't think I can get through that tonight...

I saved it in a new folder:
S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Energy Jan 2017-MPC

Thanks,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Wednesday, January 18, 2017 9:20 PM
To: John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
Subject: Re: Rate Mitigation - Draft MP Deck

Hi,

For early as possible tomorrow morning, can we update our BN (some options seem to have been pushed to the appendix or dropped) and focus comments on the key points, such as on fiscal impact and risk, including risk on the actual GA amount, accounting and intergenerational issues; exposure on borrowing interest rates and increased debt; implementation issues including legislation.

Thanks,
Ron

> On Jan 18, 2017, at 8:47 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> Hi,
>
> Please review.
>
> Thanks,
> Ron
>
>
> Begin forwarded message:

>
> From: "Pearce, Christopher (MOF)"
<Christopher.Pearce@ontario.ca<mailto:Christopher.Pearce@ontario.ca>>
> To: "Gadi Mayman" <Gadi.Mayman@ofina.on.ca<mailto:Gadi.Mayman@ofina.on.ca>>, "Ronald Kwan" <Ronald.Kwan@ofina.on.ca<mailto:Ronald.Kwan@ofina.on.ca>>, "Gavin He" <Gavin.He@ofina.on.ca<mailto:Gavin.He@ofina.on.ca>>, "Lynsey Wynberg" <Lynsey.Wynberg@ofina.on.ca<mailto:Lynsey.Wynberg@ofina.on.ca>>, "Marianne Nguyen (MCYS)" <Marianne.Nguyen@ontario.ca<mailto:Marianne.Nguyen@ontario.ca>>, "Elizabeth Mendes (MOF)" <Elizabeth.Mendes@ontario.ca<mailto:Elizabeth.Mendes@ontario.ca>>, "Ghiassi, Ali (MOF)" <Ali.Ghiassi@ontario.ca<mailto:Ali.Ghiassi@ontario.ca>>
> Subject: Fw: Rate Mitigation - Draft MP Deck
>
> FYI. Attached are the rate mitigation materials for MPC tomorrow. PW to follow.
>
> Sent from my BlackBerry 10 smartphone on the Rogers network.
>
> _____
> From: Imbrogno, Serge (ENERGY)
> Sent: Wednesday, January 18, 2017 8:01:35 PM (UTC-05:00) Eastern Time (US & Canada)
> To: Orsini, Steve (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF); Angus, Helen (TBS)
> Cc: Bromm, William (CAB)
> Subject: Rate Mitigation - Draft MP Deck
>
> Hi,
>
> Attached is the rate mitigation deck for tomorrow's MP meeting.  I'll send you the pw in a separate email.
>
> Serge
>
> <Rate Mitigation Plan Options 20170118 v2 _MP.pptx>

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

**CONTEXT**

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

**COMMENTS**

- A significant number of Energy's proposals involve shifting costs from the rate base to the tax base.
- While the subset of proposals costed by Energy may have a fairly limited residential rate payer impact (e.g. about $6-7/month for residential, or less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (about $2 billion in 2017-18).
- Additional fiscal exposure comes from proposals not yet costed by Energy (e.g., conservation costs, with Energy consulting OPCD on accounting). Energy also presents other proposals where costs and impacts are "TBD".
- In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts (e.g., of about $5.5 Bn in calendar 2017) during the period that GA costs are deferred, depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,535 | 1,225 | 2,035 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**ENERGY'S BROAD POLICY THEMES / RATIONALES**

A key theme / rationale cited by Energy is to no longer use the rate-base to pay for "social programs" by shifting the cost of OESP, RRRP and a proposed First Nation Rate to the tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by ≈ $0.55 in 2017, increasing to ≈ $1.45 in 2022.**<br><br>**Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈** | • Would provide on-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households.<br>• There may be a risk that expanding OESP or RRRP may change the view of the federal government that it is not a taxable benefit. When OESP was created, TPD worked with Finance Canada and Energy to ensure that it was not considered a taxable benefit. | • 2017-18: $162 M<br>• Increasing to $322 M in 2020-21.<br><br>• 2017-18: $666 M<br>• Increasing to $719 M in 2020-21 |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **$1.55 in 2017, increasing to ≈ $1.75 in 2022.** | | |
| | | |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.<br>o Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC] |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax". | • $260 million annually from |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | 2017-18 to 2020-21. |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding the Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • Current legislated March 31, 2018 end of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end.<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant annual fiscal impact and increase in net debt (estimated by Energy to be up to $66 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • Annual fiscal impact not yet determined. |

**DETAIL ON ENERGY PROPOSALS**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset

by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).

- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.

- If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 1a~~2~~, ~~&~~1b~~3~~, and low GA Financing scenario), or more (e.g., about $5.5 bn in 2017 under ~~option 4~~high GA Financing scenario), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

Under the high GA Financing scenario~~option 4~~, net debt could rise by $656 Bn over time, as estimated by Energy, and the cost pressure could be up to $51 per month by 2047. There would be significant interest rate exposure to the fiscal impact and accumulated debt estimates. The size of the deficit and debt impacts could affect the Province's credit rating and cost of debt.

**Commented [GH1]:** This option has been moved to the appendix section, not sure if need to be mentioned.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - ~~Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year~~
  - Option 1a~~2~~: Moderate ~~short-term cost reductions~~GA financing, paying $3.2 and $3.4 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
  - Option 1b: Moderate GA financing, paying $1.1 billion below the true cost of GA, with limits of no more than $2 billion above the true cost of GA
  - Option 3: Low / GA financing – paying $2.5 billion below the true cost of GA and increases in each subsequent year until the total amount of money borrowed is paid off, with limits of no more than $2 billion above the true cost of GA.~~Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA~~
  - Option 4: High / GA financing – paying $4.4 and $5 billion below the true cost of GA and increases at 2% in each subsequent year until the total amount of money borrowed is paid off in 25 and 30 years respectively, with no limits above the true cost of GA.~~Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years~~
- Impact of the Level of Financing on Large Industrial Electricity Consumers provided in the deck was based on previous scenarios. It should be updated using above scenarios.
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

**SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION**

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| Conservation Funding | | TBD | TBD | TBD | TBD |
| [Trillium Trust] | 100 | 390 | 390 | 390 | 390 |
| Departure Tax | 260 | 260 | 260 | 260 | 260 |
| DRC removal for Class B | 110 | 450 | | | |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| **Proposed Program Total:[3]** | **530** | **2,168** | **1,800** | **1,869** | **1,931** |
| | | | | | |
| Amortise and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:** | **1,225** | **2,035** | **1,715** | **1,826** | **1,826** |
| **TOTAL (Excl. GA)[3]** | **1,755** | **4,203** | **3,515** | **3,695** | **3,757** |

1. Based on estimated / forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**January 16, 2017**

| | |
|---|---|
| **From:** | Gavin He |
| **To:** | Shajee Kathirgamanathan; John Kim; Adam Prokop |
| **Cc:** | Salman Qadir |
| **Subject:** | RE: Rate Mitigation - Draft MP Deck |
| **Date:** | Thursday, January 19, 2017 9:29:16 AM |

snowplow

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, January 19, 2017 9:28 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: Rate Mitigation - Draft MP Deck

Thanks.

Did we get the password?

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

**From:** John Kim
**Sent:** Thursday, January 19, 2017 5:26 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** FW: Rate Mitigation - Draft MP Deck

**From:** Ronald Kwan
**Sent:** Wednesday, January 18, 2017 8:48 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Rate Mitigation - Draft MP Deck

Hi,

Please review.

Thanks,
Ron

Begin forwarded message:

**From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
**To:** "Gadi Mayman" <Gadi.Mayman@ofina.on.ca>, "Ronald Kwan" <Ronald.Kwan@ofina.on.ca>, "Gavin He" <Gavin.He@ofina.on.ca>, "Lynsey Wynberg" <Lynsey.Wynberg@ofina.on.ca>, "Marianne Nguyen (MCYS)" <Marianne.Nguyen@ontario.ca>, "Elizabeth Mendes (MOF)" <Elizabeth.Mendes@ontario.ca>, "Ghiassi, Ali (MOF)" <Ali.Ghiassi@ontario.ca>
**Subject: Fw: Rate Mitigation - Draft MP Deck**

FYI. Attached are the rate mitigation materials for MPC tomorrow. PW to follow.

Sent from my BlackBerry 10 smartphone on the Rogers network.

---

From: Imbrogno, Serge (ENERGY)
Sent: Wednesday, January 18, 2017 8:01:35 PM (UTC-05:00) Eastern Time (US & Canada)
To: Orsini, Steve (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF); Angus, Helen (TBS)
Cc: Bromm, William (CAB)
Subject: Rate Mitigation - Draft MP Deck

Hi,

Attached is the rate mitigation deck for tomorrow's MP meeting. I'll send you the pw in a separate email.

Serge

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon |
| **Cc:** | Gavin He; Darren Scanlan; John Kim |
| **Subject:** | RE: Rate Mitigation - H1 Options |
| **Date:** | Monday, January 16, 2017 3:54:36 PM |
| **Attachments:** | 2017 01 16 Rate Mitigation - H1 Options v03 redline_CEFDmarkup2.pptx |

Hi Francisco,

Looks god. I made some small suggestion, in blue.

Ron

---

**From:** Francisco Chinchon
**Sent:** January-16-17 15:13
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Rate Mitigation - H1 Options

Hi Ron,

"Energy" staff reached out with a new iteration of the deck. They want to confirm they haven't mischaracterized our proposed edits. In general the slides are fine but we are suggesting a few tweaks (in green). They will be sending to Energy DMO by EOD so we should send this back to them ASAP.

Thanks,

Francisco

---

**From:** Francisco Chinchon
**Sent:** Friday, January 13, 2017 5:00 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Rate Mitigation - H1 Options

Hi Ron,

Looks good. One colour version is attached.

Thanks,

Francisco

---

**From:** Ronald Kwan
**Sent:** Friday, January 13, 2017 4:24 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: Rate Mitigation - H1 Options

Hi Francisco,

Thanks. I had similar concerns and added in some additional suggested edits.

Ron

---

**From:** Francisco Chinchon
**Sent:** January 13, 2017 2:35 PM
**To:** Ronald Kwan
**Cc:** Gavin He; Darren Scanlan; John Kim
**Subject:** RE: Rate Mitigation - H1 Options

Hi Ron,

A few comments and edits. I must say we are a bit fussed with the tone of the slide (our deck was way more neutral), in particular with respect to option 3 as it assumes a lot.

Thanks,

Francisco

---

**From:** Ronald Kwan
**Sent:** Friday, January 13, 2017 1:47 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation - H1 Options

Hi,

Please review ASAP.

Thanks,
Ron

---

**From:** Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
**Sent:** January-13-17 13:12
**To:** Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** Rate Mitigation - H1 Options

Hi Nancy, Ron,

The attached responds to a request from the SoC for options dealing with the Hydro One deferred tax benefit. This doesn't include a lot by way of pre-amble, as I think we have spent a fair bit of time discussing the issue. Ron, we attempted to take the key elements from your presentation, as well as the note that ENE prepared before the holidays. Please let me know if you have any edits / comments. Apologies for short notice, but I have been asked to share a draft with ENE DMO by EOD.

Thanks,
Scott

# Rate Mitigation Options
# Hydro One-Related Options

# Purpose

- The following presentation considers the following three options in the context of electricity rate mitigation, and the Ontario Energy Board's (OEB) upcoming transmission rate decision that will include treatment of Hydro One's Deferred Tax Benefit:

    1. Dedicate the Departure Tax to ratepayers
    2. Allocate Trillium Trust Funds to Energy Projects
    3. Await OEB Decision (Status Quo)

# Context: Tax Benefit and the Ontario Energy Board Review

- Hydro One paid a one time Departure Tax of $2.6 B to the Ontario Electricity Financial Corporation (OEFC) towards stranded debt prior to exiting the payments-in-lieu of tax regime and then recorded a Deferred Tax Benefit (DTB) of ~$2.8 B, as it entered the income tax regime, post-IPO
  - The Province recorded revenues of ~$2.4B from the DTB, now allocated to the Trillium Trust
- The OEB is currently reviewing Hydro One's 2017-18 transmission rate application to determine whether the DTB should be allocated to the benefit of ratepayers rather than shareholders
  - There is no clear precedent, as it has been rare; however, this could arise in the future in the case of transactions of municipally-owned electricity utilities
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- OEB's transmission rate decision is expected in late winter / early spring 2017, and a similar decision on distribution rates is expected at the end of 2017

# Option 1: Dedicate Departure Tax to Ratepayers

- Dedicate the $2.6B Departure Tax to ratepayers over 5-10 years

- Prior to the OEB's decision on the Hydro One transmission rate application, the Province could commit to providing value equivalent to the tax payment to ratepayers
- This may reduce the likelihood that OEB would require providing the DTB to ratepayers

| | |
|---|---|
| **Ratepayer Impact** | • Typical Residential ratepayers would save $2.79/month if allocated over 5 years or $1.39/month if allocated over 10 years<br>• Relief would be temporary and could result in a spike in electricity bills following the conclusion of the mitigation initiative<br>• This benefit could apply to all Ontario ratepayers, or be conveyed as targeted relief |
| **Fiscal Impact** | • The tax payment did not result in a net fiscal benefit to the Province as it was offset upon consolidation by the tax expense on Hydro One's financial statements<br>• Dedicating the departure tax to ratepayers would have a negative fiscal impact on a dollar per dollar basis, with an annual expense of $520M (5yrs) or $260M (10yrs)<br>• Reallocating the departure tax from OEFC to ratepayers would also cause an equivalent increase to the unfunded liability of OEFC (or "stranded debt") |
| **Other** | • Discussions with OEB would be required to ensure this tradeoff is acceptable. Otherwise, there may be an additional fiscal impact pending an OEB decision on the treatment of the DTB<br>• This decision may lead to pressure for the Province to adopt a similar policy for future departure tax payments (e.g. municipal utility transactions)<br>• Implementation mechanisms require further consideration, including legal considerations related to involvement from the OEFC as its objective is to reduce stranded debt |

# Option 2: Allocate Trillium Trust Funds to Energy Projects

- Allocate a portion of the Trillium Trust to investments in electricity sector projects

- In advance of OEB's decision on Hydro One's rate application, the Province could re-allocate a portion of the Trillium Trust funds from broadening the of ownership of Hydro One to fund electricity infrastructure projects.
- It is possible that this could ~~may~~ mitigate the risk of an adverse regulatory decision, and would help defray the ratepayers' cost of investments that are made to modernize the province's electricity infrastructure, shifting the cost to the tax base (e.g. Transmission connection to remote communities and natural gas expansion)

| | |
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| **Ratepayer Impact** | • The ratepayer impact may be small and/or deferred until projects are in-service<br>• May benefit a select group of ratepayers depending on the location and type of projects<br>• If the Province owned the rate-regulated or contracted electricity infrastructure with rate recovery, there would be no (or little) ratepayer rate reduction |
| **Fiscal Impact** | • If invested in Provincially-owned assets, the fiscal cost would be spread over the life of the asset. If invested in non-provincially owned assets, the fiscal cost would be upfront [TBC]<br>• Incremental interest costs associated with funding electricity projects, assuming Moving Ontario Forward projects continue to be funded/financed from another source (debt), and foregone revenues for projects that would otherwise be delivered by OPG and Hydro One and earn a rate of return<br>• ~~Careful consideration would need to be given to the chosen projects so that Hydro One and OPG were not impacted negatively by reduced long-term infrastructure prospects~~. Reduced infrastructure prospects for Hydro One could reduce the share value. |
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# Option 3: Await OEB Decision (Status Quo)

- Take no action and let the OEB decide, as part of Hydro One's rate filing, whether the DTB should benefit ratepayers or shareholders

- The following table highlights considerations in the event the OEB allocated the full DTB to ratepayers.
- However, the most likely outcome is currently unclear. If the OEB rules in favour of shareholders, there would be no fiscal or ratepayer impact.

| | |
|---|---|
| **Ratepayer Impact** | • Residential customers could benefit from a small reduction in rates (~8 cents/month for transmission customers), potentially continuing over several years<br>• Assuming a similar decision is applied to the distribution application, typical medium density Hydro One customers would experience a reduction of ~78 cents/month. However, this benefit would flow only to Hydro One customers |
| **Fiscal and Shareholder Impact** | • Share price could decline by ~$1.85 per share, due in part to the reduction in expected future earnings, and perceived regulatory risk as a result of a surprise decision<br>• Hydro One may also write down the DTB, which could trigger a negative fiscal impact from a write down of the Province's $2.4B portion of this benefit that has already credited to the Trillium Trust and recognized in the 2015-16 Public Accounts<br>• As a result of both the decline in share price, and write down of the tax benefit, the Province may have difficulty in reaching its objective of $4B in net gains from the broadening of ownership of Hydro One ~~to be dedicated to the Trillium Trust~~ |
| **Other** | • This option would allow for targeted benefits to flow to Hydro One customers, but the Province would not control the size or timing of those benefits<br>• The Province would not be credited for any rate mitigation resulting from this outcome, although the Province could emphasize the OEB's role in protecting consumers<br>• Some of the downside would be absorbed by private investors<br>• If the OEB allows Hydro One to keep the DTB, the Province would still be able to introduce rate mitigation measures |

**From:** Francisco Chinchon
**To:** Ronald Kwan
**Cc:** Gavin He; Darren Scanlan; John Kim
**Subject:** RE: Rate Mitigation - H1 Options
**Date:** Monday, January 16, 2017 3:12:41 PM
**Attachments:** 2017 01 16 Rate Mitigation - H1 Options v03 redline_CEFDmarkup.pptx

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Hi Ron,

"Energy" staff reached out with a new iteration of the deck. They want to confirm they haven't mischaracterized our proposed edits. In general the slides are fine but we are suggesting a few tweaks (in green). They will be sending to Energy DMO by EOD so we should send this back to them ASAP.

Thanks,

Francisco

---

**From:** Francisco Chinchon
**Sent:** Friday, January 13, 2017 5:00 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
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Hi Ron,

Looks good. One colour version is attached.

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Hi Francisco,

Thanks.  I had similar concerns and added in some additional suggested edits.

Ron

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**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation - H1 Options

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Please review ASAP.

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**From:** Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
**Sent:** January-13-17 13:12
**To:** Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** Rate Mitigation - H1 Options

Hi Nancy, Ron,

The attached responds to a request from the SoC for options dealing with the Hydro One deferred tax benefit.  This doesn't include a lot by way of pre-amble, as I think

we have spent a fair bit of time discussing the issue.  Ron, we attempted to take the key elements from your presentation, as well as the note that ENE prepared before the holidays.  Please let me know if you have any edits / comments.  Apologies for short notice, but I have been asked to share a draft with ENE DMO by EOD.

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# Rate Mitigation Options
# Hydro One-Related Options

# Purpose

- The following presentation considers the following three options in the context of electricity rate mitigation, and the Ontario Energy Board's (OEB) upcoming transmission rate decision that will include treatment of Hydro One's Deferred Tax Benefit:

    1. Dedicate the Departure Tax to ratepayers
    2. Allocate Trillium Trust Funds to Energy Projects
    3. Await OEB Decision (Status Quo)

# Context: Tax Benefit and the Ontario Energy Board Review

- Hydro One paid a one time Departure Tax of $2.6 B to the Ontario Electricity Financial Corporation (OEFC) towards stranded debt prior to exiting the payments-in-lieu of tax regime and then recorded a Deferred Tax Benefit (DTB) of ~$2.8 B, as it entered the income tax regime, post-IPO
  - The Province recorded revenues of ~$2.4B from the DTB, now allocated to the Trillium Trust
- The OEB is currently reviewing Hydro One's 2017-18 transmission rate application to determine whether the DTB should be allocated to the benefit of ratepayers rather than shareholders
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**From:** Francisco Chinchon
**To:** Ronald Kwan
**Cc:** Gavin He; Darren Scanlan; John Kim
**Subject:** RE: Rate Mitigation - H1 Options
**Date:** Friday, January 13, 2017 5:00:07 PM
**Attachments:** 2017 01 13 Rate Mitigation - H1 Options v02_CEFD_markup2.pptx

---

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**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: Rate Mitigation - H1 Options

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    - This argument is complicated by the Province's equity injection of $2.6 B to Hydro One pre-IPO, which was done to mitigate the negative financial consequences arising from the Departure Tax payment. A shareholder equity injection is consistent with the departure tax being funded by equity holders, not ratepayers, so that an associated DTB should be for the benefit of shareholders as well.
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| **Other** | • Discussions with OEB would be required to ensure this tradeoff is acceptable. Otherwise, there may be an additional fiscal impact ~~risk~~ pending an OEB decision on the treatment of the DTB<br>• This decision may lead to pressure for the Province to adopt a similar policy for future departure tax payments (e.g. municipal utility transactions)<br>• Implementation mechanisms require further consideration, including legal considerations with respect to any involvement from OEFC as its main objective is to reduce stranded debt. |

# Option 2: Allocate Trillium Trust Funds to Energy Projects

- Allocate a portion of the Trillium Trust to investments in electricity sector projects

- In advance of OEB's decision on Hydro One's rate application, the Province could expand the Trillium Trust project types ~~by allocating a portion of the benefit that the Province received from the broadening of ownership of Hydro One,~~ to also include electricity infrastructure projects. However, this would crowd-out Moving Ontario Forward projects already internally identified as Trillium Trust recipients.
- While it is not certain that this would ~~In addition to~~ mitigat~~eing~~ the risk of an adverse regulatory decision, this would help defray the ratepayers' cost of investments that are made to modernize the province's electricity infrastructure, shifting the cost to the tax base. (Potential projects could include transmission connection to remote communities and natural gas expansion)

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| **Ratepayer Impact** | • The ratepayer impact may be small and/or deferred until projects are in-service<br>• Benefits may accrue to a select group of ratepayers depending on the location and type of projects that are funded |
| **Fiscal Impact** | • If invested in Provincially-owned assets, the fiscal cost would be spread over the life of the asset but would be incremental to the amounts included in the current infrastructure plan. If spent on non-provincially-owned assets, the fiscal impact would be upfront as funds are transferred [accounting TBC].<br>• Incremental interest costs associated with funding incremental electricity projects, assuming Moving Ontario Forward projects continue to be funded/financed from another source (debt)<br>• There would be indirect fiscal impacts as there would be fewer infrastructure projects available for electricity sector companies where the Province has a stake and earns a rate of return (OPG, Hydro One).<br>• This could also decrease the value of Hydro One shares if investors consider such measure affects the long-term prospects of Hydro One (i.e., as it would have fewer areas/projects where it could invest). |
| **Other** | • Discussions with OEB would be required to ensure this trade-off is acceptable. Otherwise, there would ~~may~~ be additional fiscal risk pending an OEB decision on the treatment of the DTB<br>• This represents a policy shift, as the asset optimisation amounts have been fully allocated to go to Moving Ontario Forward projects<br>• Depending on structuring, the Province would ~~may~~ have expenses (upfront or over time) associated with electricity infrastructure spending without a mechanism for cost recovery (if the Province owned the rate-regulated or contracted electricity infrastructure with rate recovery, while there may be no fiscal impact, there would be no (or little) ratepayer rate reduction – could raise questions on one rationale for selling Hydro One shares)<br>• Implementation mechanisms require further consideration |

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- Take no action and let the OEB decide, as part of Hydro One's rate filing, whether the DTB should benefit ratepayers or shareholders

- The following table highlights considerations assuming the OEB rules in favour of ratepayers. However, this is not to suggest that there is evidence that this would be the most likely outcome and with respect to some or all of the amount of the DTB.

| | |
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**From:** Francisco Chinchon
**To:** Ronald Kwan
**Cc:** Gavin He; Darren Scanlan; John Kim
**Subject:** RE: Rate Mitigation - H1 Options
**Date:** Friday, January 13, 2017 2:36:00 PM
**Attachments:** 2017 01 13 Rate Mitigation - H1 Options v02_SIFB_markup3.pptx

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**Subject:** Rate Mitigation - H1 Options

Hi Nancy, Ron,

The attached responds to a request from the SoC for options dealing with the Hydro One deferred tax benefit. This doesn't include a lot by way of pre-amble, as I think we have spent a fair bit of time discussing the issue. Ron, we attempted to take the key elements from your presentation, as well as the note that ENE prepared before the holidays. Please let me know if you have any edits / comments. Apologies for short notice, but I have been asked to share a draft with ENE DMO by EOD.

Thanks,
Scott

# Rate Mitigation Options
# Hydro One Options

# Purpose

- The following presentation considers the following three options in the context of electricity rate mitigation, and the Ontario Energy Board's upcoming transmission rate decision that will include treatment of Hydro One's Deferred Tax Benefit:

    1. Dedicate the Departure Tax to ratepayers
    2. Allocate Trillium Trust Funds to Energy Projects
    3. Await OEB Decision (Status Quo)

# Context: Tax Benefit and the Ontario Energy Board Review

- Hydro One paid a one time Departure Tax of $2.6 B to the Province prior to exiting the payments-in-lieu of tax regime and then recorded a Deferred Tax Benefit (DTB) of ~$2.8 B, as it entered the income tax regime, post-IPO
  - The Province recorded increased revenues of ~$2.4B due to the DTB, which it has allocated to the Trillium Trust
- The Ontario Energy Board (OEB) is currently reviewing Hydro One's 2017-18 transmission rate application to determine whether the DTB should be allocated to the benefit of ratepayers rather than shareholders
  - There is no clear precedent, as it is rare for the seller to benefit from tax collections
  - Hydro One believes it has a strong argument to keep the DTB, as Hydro One paid the departure tax, investors purchased shares on the basis that the value of the tax shield would flow to their benefit, and ratepayers are no worse off as a result of the transaction
    - This argument is complicated by the Province's equity injection of $2.6 B to Hydro One pre-IPO, which was done to mitigate the negative financial consequences arising from the Departure Tax payment
  - Hydro One and the IPO lead bookrunners reached out to regulatory experts in 2015 for an assessment and although outlined as a risk in the prospectus, this was viewed as an unlikely outcome at the time of the IPO
- In the event the OEB requires the benefit from the DTB to flow to ratepayers, the lead bookrunners calculated an earnings impact of ~$1 B on a present value basis (~$1.85 per share). Further impacts to share value could arise depending on whether analysts and investors reconsider regulatory risk
- OEB's transmission rate decision is expected in late winter / early spring 2017, and a similar decision on distribution rates is expected at the end of 2017

# Option 1: Dedicate Departure Tax to Ratepayers

- Dedicate the $2.6B Departure Tax to ratepayers over 5-10 years

- Prior to the OEB's decision on the Hydro One transmission rate application, the Province could commit to providing value equivalent to the tax payment to ratepayers
- This may ~~would~~ reduce the likelihood that OEB would require providing the DTB to ratepayers

| | |
|---|---|
| **Ratepayer Impact** | • Typical Residential ratepayers would save $2.79/month if allocated over 5 years or $1.39/month if allocated over 10 years<br>• Relief would be temporary and could result in a spike in electricity bills following the conclusion of the mitigation initiative<br>• This benefit could apply to all Ontario ratepayers, or be conveyed as targeted relief |
| **Fiscal Impact** | • The tax payment did not result in a net fiscal benefit to the Province as it was offset upon consolidation by the tax expense on Hydro One's financial statements<br>• Dedicating the departure tax to ratepayers would have a negative fiscal impact on a dollar per dollar basis as the Province would record an annual expense of $520M (5yrs) or $260M (10yrs)<br>• Reallocating the departure tax from OEFC to ratepayers would also cause an equivalent increase to the unfunded liability of OEFC (or "stranded debt") |
| **Other** | • Discussions with OEB would be required to ensure this tradeoff is acceptable. Otherwise, there ~~may~~ would be additional fiscal risk pending an OEB decision on the treatment of the DTB<br>• This decision may lead to pressure for the Province to adopt a similar policy for future departure tax payments (e.g. municipal utility transactions)<br>• Implementation mechanisms require further consideration, including legal considerations with respect to any involvement from OEFC as its main objective is to reduce stranded debt. |

# Option 2: Allocate Trillium Trust Funds to Energy Projects

- Allocate a portion of the Trillium Trust to investments in electricity sector projects

- In advance of OEB's decision on Hydro One's rate application, the Province could expand the Trillium Trust target ~~by allocating a portion of the benefit that the Province received from the broadening of ownership of Hydro One,~~ to also include electricity infrastructure projects
- While it is not certain that this would ~~In addition to~~ mitigat~~eing~~ the risk of an adverse regulatory decision, this would help defray the cost of investments that are made to modernize the province's electricity infrastructure (Potential projects could include transmission connection to remote communities and natural gas expansion)

| | |
|---|---|
| **Ratepayer Impact** | • The ratepayer impact may be small and/or deferred until projects are in-service<br>• Benefits may accrue to a select group of ratepayers depending on the location and type of projects that are funded |
| **Fiscal Impact** | • If invested in Provincially-owned assets, the cost would be spread over the life of the asset but would be incremental to the amounts included in the current infrastructure plan.<br>• ~~Incremental interest costs associated with funding any Moving Ontario Forward projects which had funding reallocated~~<br>• There would be indirect fiscal impacts as there would be fewer infrastructure projects available for electricity sector companies where the Province has a stake and earns a rate of return (OPG, Hydro One).<br>• This could also decrease the value of Hydro One shares if investors consider such measure affects the long-term prospects of Hydro One (i.e., as it would have fewer areas/projects where it could invest). |
| **Other** | • Discussions with OEB would be required to ensure this trade-off is acceptable. Otherwise, there would ~~may~~ be additional fiscal risk pending an OEB decision on the treatment of the DTB<br>• This represents a policy shift, as the asset optimisation amounts have been fully allocated to go to Moving Ontario Forward projects<br>• Depending on structuring, the Province may have expenses (upfront or over time) associated with electricity infrastructure spending without a mechanism for cost recovery<br>• Implementation mechanisms require further consideration |

# Option 3: Await OEB Decision (Status Quo)

- Take no action and let the OEB decide, as part of Hydro One's rate filing, whether the DTB should benefit ratepayers or shareholders

- The following table highlights considerations assuming the OEB rules in favour of ratepayers. However, there is no evidence to suggest that is the most likely outcome and with respect to the full amount of the DTB.

| | |
|---|---|
| **Ratepayer Impact** | • Residential customers could benefit from a small reduction in rates (~8 cents/month for transmission customers), potentially continuing over several years<br>• Assuming a similar decision is applied to the distribution application, typical medium density Hydro One customers would experience a reduction of ~78 cents/month. However, this benefit would flow only to Hydro One customers and only if the OEB claws back the full amount. |
| **Fiscal and Shareholder Impact** | • Share price could decline by ~$1.85 per share, due in part to the reduction in expected future earnings, and also because this surprise decision would affect perceived regulatory risk<br>• Hydro One may also write down the DTB, which could trigger a write down the Province's $2.4B portion of this benefit that has already credited to the Trillium Trust and recognized in the 2015-16 Public Accounts.<br>• As a result of both the decline in share price, and write down of the tax benefit, the Province may have difficulty in achieving its asset optimization target. ~~reaching its objective of $4B in net gains from the broadening of ownership of Hydro One to be dedicated to the Trillium Trust~~ |
| **Other** | • This option would allow for targeted benefits to flow to Hydro One customers, but the Province would not control the size or timing of those benefits<br>• The Province would not be credited for any rate mitigation resulting from this outcome, although the Province could emphasize the OEB's role in protecting consumers<br>• Some of the downside would be absorbed by private investors<br>• If the OEB allows Hydro One to keep the DTB, as is expected by Hydro One, the Province would still be able to introduce rate mitigation measures. |

| | |
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| **From:** | Francisco Chinchon |
| **To:** | Ronald Kwan |
| **Cc:** | Gavin He; Darren Scanlan; John Kim |
| **Subject:** | RE: Rate Mitigation - H1 Options |
| **Date:** | Monday, January 16, 2017 3:55:56 PM |

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Thanks, we will send back to them.

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**From:** Ronald Kwan
**Sent:** Monday, January 16, 2017 3:55 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Rate Mitigation - H1 Options

Hi Francisco,

Looks god. I made some small suggestion, in blue.

Ron

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**From:** Francisco Chinchon
**Sent:** January-16-17 15:13
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Rate Mitigation - H1 Options

Hi Ron,

"Energy" staff reached out with a new iteration of the deck. They want to confirm they haven't mischaracterized our proposed edits. In general the slides are fine but we are suggesting a few tweaks (in green). They will be sending to Energy DMO by EOD so we should send this back to them ASAP.

Thanks,

Francisco

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**From:** Francisco Chinchon
**Sent:** Friday, January 13, 2017 5:00 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>

**Subject:** RE: Rate Mitigation - H1 Options

Hi Ron,

Looks good. One colour version is attached.

Thanks,

Francisco

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**From:** Ronald Kwan
**Sent:** Friday, January 13, 2017 4:24 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: Rate Mitigation - H1 Options

Hi Francisco,

Thanks. I had similar concerns and added in some additional suggested edits.

Ron

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**From:** Francisco Chinchon
**Sent:** January 13, 2017 2:35 PM
**To:** Ronald Kwan
**Cc:** Gavin He; Darren Scanlan; John Kim
**Subject:** RE: Rate Mitigation - H1 Options

Hi Ron,

A few comments and edits. I must say we are a bit fussed with the tone of the slide (our deck was way more neutral), in particular with respect to option 3 as it assumes a lot.

Thanks,

Francisco

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**From:** Ronald Kwan
**Sent:** Friday, January 13, 2017 1:47 PM

**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation - H1 Options

Hi,

Please review ASAP.

Thanks,
Ron

---

**From:** Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
**Sent:** January-13-17 13:12
**To:** Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** Rate Mitigation - H1 Options

Hi Nancy, Ron,

The attached responds to a request from the SoC for options dealing with the Hydro One deferred tax benefit. This doesn't include a lot by way of pre-amble, as I think we have spent a fair bit of time discussing the issue. Ron, we attempted to take the key elements from your presentation, as well as the note that ENE prepared before the holidays. Please let me know if you have any edits / comments. Apologies for short notice, but I have been asked to share a draft with ENE DMO by EOD.

Thanks,
Scott

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Gavin He |
| **Cc:** | Francisco Chinchon; John Kim; Emily Kerr |
| **Subject:** | RE: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 6:56:19 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup2.docx |

Hi,

Just started to review. Looks good.

On the table, I marked out some requests – split OESP and RRRP into separate rows, and add a 17-18 fiscal cost / exposure column (including commenting more on and adding in the fiscal risk of the OPG efficiencies related proposal). On the Trillium Trust, it might be fair to point out that Energy raises the prospect of investing in projects that would not otherwise be viewed by the OEB as projects that meet a system benefits test – so not really a rate saving if the projects would not have been done on the rate base. Really a tax-based subsidisation for other policy reasons.

I'll review more later this evening.

Thanks,
Ron

---

**From:** Gavin He
**Sent:** January-15-17 4:40 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi Ron,

Please find attached updated notes and Energy's deck with proposed edits and comments from SIFB, EFB, and SPFB.

The files are also saved under below folder:
S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Energy_Jan16

Thanks,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>;

Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge
>
>

> Sent from my iPad

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which ~~will~~is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has ~~taken steps to~~ expanded the Rural or Remote Electricity Rate Protection program, ~~expected to~~ saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $~~5~~6-~~6~~7/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (about $~~1~~2 billion ~~to $1.3 billion~~in 2017-18), with some proposals not costed (e.g., conservation costs, with Energy consulting OPCD on accounting). ~~Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion).~~ Energy also presents other proposals where costs and impacts are "TBD".

In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts of ~~up to over~~ more than $2 billion annually during the period that GA costs are deferred depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

**Commented [GH1]:** This was included in the debt-financing GA section below, so not sure if we need to mention it here.

Over the past five years, the existing fiscally ~~-~~funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility~~., and provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.~~** | • Significant fiscal exposure -- $0.42-0.845 bn in 2017 to $0.62-1.18 bn in 2022, ~~at current levels,~~ higher if OESP is enhanced. On-bill benefits.<br>• Funding programs through tax base estimated to reduce average monthly residential bill by approximately $2 in 2017, increasing to approximately $3 in 2022.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| **Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.** | • |
| **Amortize ~~Fund~~ conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account. ~~programs through the tax base for the~~** | • It is unclear whether consevation costs could be amortized according to accounting standards. If this option was pursued without establishing Provincial Controller agreement on accounting, there could be a fiscal risk. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion. |

**Commented [RK3]:** Could we add in a fiscal cost columbn instead, to show Energy's estimated 17-18 fiscal cost, or what we think is the exposure (accounting TBC can be footnoted).

**Commented [EK4]:** Updated based on slide 12 in Energy's updated deck.

**Commented [RK2]:** Can we split the OESP and RRRP into two rows,

| | |
|---|---|
| ~~remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time~~ | • Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base. ~~Potentially significant fiscal impact – current program costs are about $0.45 bn~~<br>o Conservation programs do provide an electricity system benefits, but ~~would now be~~ fiscal~~ly~~ funding~~ed, so~~ would result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value (share price) and impact fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• In the case of projects located in First Nation territories it could have an upfront fiscal impact if Province is not able to amortize those projects (TBC with OPCD).<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a windfall. It was fiscally neutral, it represented revenue to OEFC and an expense to Hydro One.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates<br>• OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding th Global Adjustment (GA) |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt |

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| | • Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022~~Total of about $0.4 to 0.45 Billion/year~~):

~~This w~~Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), ~~-~~and ~~the~~ Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs. ~~Energy notes that~~
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
  - ~~The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).~~
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.

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- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

~~Fund~~ Amortize Conservation Program~~s~~ Costs ~~through the Tax Base~~:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization of conservation costs was not permitted, a fiscal impact could result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

~~This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.~~

- ~~Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.~~

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all

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fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
    - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
    - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
    - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
    - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
    - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
    - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income (revenue) to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income (expense) of Hydro One.
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- Having OEFC help implement this measure may require introducing changes to OEFC's objects as is legal mandate is to help reduce and pay down stranded debt.
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the

rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
    - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost~~delay recovery of part~~ of the Global Adjustment (GA) and incurring debt to pay the

**Commented [JK5]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

**Commented [JK6]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

generators their contracted or regulated payments.~~by~~ This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to or more than $2 billion annually during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

~~[Check and Update]~~

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ~~OESP,~~ RRRP~~, First Nation rate~~ | | ~~398~~666 | ~~419~~684 | ~~433~~700 | ~~447~~719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| ~~Conservation Programs through Tax Base~~ | ~~110~~ | ~~450~~ | ~~450~~ | ~~450~~ | ~~450~~ |
| [Trillium Trust] | ~~TBD~~100 | ~~TBD~~390 | ~~TBD~~390 | ~~TBD~~390 | ~~TBD~~390 |
| Departure Tax | 260 | ~~TBD~~260 | ~~TBD~~260 | ~~TBD~~260 | ~~TBD~~260 |
| DRC removal for Class B | 110 | 450 | | | |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total: | ~~220~~470 | ~~1,298~~1,927 | ~~869~~1,560 | ~~883~~1,362 | ~~897~~1,419 |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total:[3] | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| TOTAL[3] | 1,~~445~~695 | 3,~~303~~933 | ~~2,584~~3,275 | ~~2,709~~3,188 | ~~2,723~~3,245 |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
~~**December 12**~~January 15**, 2016**

**From:** Gavin He
**To:** John Kim
**Cc:** Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation
**Date:** Sunday, January 15, 2017 4:35:58 PM

---

Sure.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:35 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Let's send the first two with the aim to send the third tomorrow if still asked. I will review the third one, the GA one, again either tonight or tomorrow morning.

John.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:32 PM
**To:** John Kim
**Cc:** Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Sure, just to confirm, I will send all the attached to Ron?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:26 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks....let's send to Ron. Pls. also include the deck from Francisco.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:21 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

I am good with the notes and I don't have any additional comments, saved that in the folder.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:19 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

No reason....updated the RRRP.

I took a look at the comments in the deck and the comments are good. Given the meeting is on Monday, I am leaning towards not sending back comments on the deck back unless proposing to make edits to the text, like Francisco is in the attached.

I'm OK to send these back with cc: to Emily and Francisco unless you have additional comments, which would be welcome. Ideally would like to review further but I'm going to bed soon.

Thanks,

John.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:13 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

I reviewed the debt-financing GA sections and I am good with the edits.

I didn't review the other deck in details, but took a quick look on slide 7 and the new section at the end of the note. Just one question, is there a reason why the RRRP numbers for 2019-2021 were not updated?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:01 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Let me know what you think. If OK, could you save to the folder?

Going to quickly go through the deck.

---

**From:** John Kim
**Sent:** January 15, 2017 3:32 PM
**To:** Gavin He; Shajee Kathirgamanathan
**Subject:** Re: Rate Mitigation

Yeah, I think Shajee's point on slide 7? might be the only path. I am about to take a crack at it but I don't want to minimize the fiscal impact by taking their numbers. Thus being deliberate. Shouldn't take long.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:30 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Based on Emily's update, the impact for OESP & RRRP will be $0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022, without detailed impact on each year. So it we are going to update the table, it seems we might need to make some assumption.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:17 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yes, the OESP and RRRP that Emily updated, kind of showed me there were updates.

Ok, I need to go back to that deck.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:13 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Are you referring to the numbers for OESP and RRRP?

Also, the $2B GA amount is from scenario 2 and 3. The cap for the maximum amount of GA above the true cost is $2B.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:10 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yeah, I'm trying to decide if it's worth adding that proposal. While I am trying to minimize work, it's fiscal impact stuff.

And the table. I'm trying to assess if not updating that is an option as I'm getting tired.

What's your sense?

---

**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 3:06 PM
**To:** John Kim; Gavin He

**Subject:** RE: Rate Mitigation

If you're referring to #10 on renewables/wind contracts, I think it's not so much tax exempting renewables, but rather paying through the tax base the amounts above competitive electricity rates. (Eg. If competitive amount is say $80/mwh. And they have a community/indigenous adder of $40/mwh. Therefore a total contract price is $120/mwh. The proposal would shift the $40/mwh to the tax base). That's my interpretation at least.

Again it's just another way to transfer to the tax base from the rate base.

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 2:57 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks.....I think we should send the note in for about 6pm so don't worry about it. I will have a look at the deck.

The only thing that concerns me is the additional proposals like tax exempting of renewable contracts, etc. I'm debating whether they need coverage but likely to try to dodge it. I think the table at the bottom needs updating but I'm currently still assessing it.

---

**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 2:54 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

I finished with my comments on the power point file. I think there were some CEFD and Energy Comments from before.

Only way to distinguish are my comments are "**CEFD Comments**" (bold), whereas before it was evidently bold and underlined.

Will take a quick review of the document, but heading out shortly for the evening. Will try to get done what I can.

Thanks,
Shajee

---

**From:** John Kim

**Sent:** Sunday, January 15, 2017 2:45 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks....saw this after sending the other.

---

**From:** Gavin He
**Sent:** January 15, 2017 2:41 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

Emily just finished the file. I have copied my edits in her version and saved it as v9.

Thanks,
Gavin He

---

**From:** Gavin He
**Sent:** Sunday, January 15, 2017 2:24 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

In the interest of time, I have worked on v8 from my personal drive, as Emily is still in the note. I have reviewed and updated sections related to debt-financing GA.

John – for the numbers, I wasn't involved in providing the updates, so don't have much knowledge on how the numbers were put together, and the presentation decks don't provide update on those numbers, so I didn't make any update there.

Please review and let me know if you have any questions. I can consolidate my edits once Emily is done.

Thanks,
Gavin He

---

**From:** John Kim

**Sent:** Sunday, January 15, 2017 10:01 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation

FYI.

Hoping to finalize on our end by early afternoon…..Emily might have other comments.

I think what things need to be checked against the updated deck, as well.

John.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 9:59 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John, Emily,

I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.

I also made some edits to Energy's slides but not sure those are needed.

Thanks,

Francisco

> -----Original Message-----
> From: John Kim
> Sent: Saturday, January 14, 2017 11:45 PM
> To: Emily Kerr <Emily.Kerr@ofina.on.ca>
> Subject: RE: Rate Mitigation
>
> Hi Emily,
>
> Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.
>
> Thanks,

John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation

Good morning,

Attached are materials for Monday's rate mitigation meeting.

Keley

Original Message

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>

Sent: Saturday, January 14, 2017 7:49 AM

To: Orsini, Steve (CAB)

Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

Hi Steve,

Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

**From:** Gavin He
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation
**Date:** Sunday, January 15, 2017 2:42:05 PM
**Attachments:** Comments on Electricity Sector Transformation Proposals v9 (CEFD).docx

---

Hi John/Shajee,

Emily just finished the file. I have copied my edits in her version and saved it as v9.

Thanks,
Gavin He

---

**From:** Gavin He
**Sent:** Sunday, January 15, 2017 2:24 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Rate Mitigation

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Gavin He

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**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation

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**Subject:** RE: Rate Mitigation

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Francisco

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> Subject: RE: Rate Mitigation
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>
> John.
>
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> From: Emily Kerr
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> To: John Kim <John.Kim@ofina.on.ca>
> Subject: RE: Rate Mitigation

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Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

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> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation
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Keley

Original Message

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>

Sent: Saturday, January 14, 2017 7:49 AM

To: Orsini, Steve (CAB)

Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

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Serge

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

In addition, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to ~~over~~or more than $2 billion annually during the period that GA costs are deferred depending on the scenario.

**Commented [GH1]:** This was included in the debt-financing GA section below, so not sure if we need to mention it here.

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility, and provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.** | • Significant fiscal exposure -- $0.42-0.845 bn in 2017 to $0.62-1.18 bn in 2022, ~~at current levels,~~ higher if OESP is enhanced. On-bill benefits.<br>• Funding programs through tax base estimated to reduce average monthly residential bill by approximately $2 in 2017, increasing to approximately $3 in 2022.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Amortize ~~Fund~~ **conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account. ~~programs through the tax base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time~~** | • It is unclear whether consevation costs could be amortized according to accounting standards. If this option was pursued without establishing Provincial Controller agreement on accounting, there could be a fiscal risk. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base. ~~Potentially significant fiscal impact – current program costs are about $0.45 bn~~<br>o Conservation programs do provide an electricity system benefits, but ~~would now be~~ fiscal~~ly~~-funding~~ed, so~~ would result in a cross-subsidisation from tax-base |

**Commented [EK2]:** Updated based on slide 12 in Energy's updated deck.

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| | |
|---|---|
| | ○ Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value (share price) and impact fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• In the case of projects located in First Nation territories it could have an upfront fiscal impact if Province is not able to amortize those projects (TBC with OPCD).<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a windfall. It was fiscally neutral, it represented revenue to OEFC and an expense to Hydro One.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates<br>• OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding th Global Adjustment (GA) |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some** | • Incurring debt to pay the generators their contracted or regulated payments |

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| **generation supply costs by partially financing the cost of the global adjustment (GA)** | • Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022~~Total of about $0.4 to 0.45 Billion/year~~):

~~This w~~Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), ~~-~~and ~~the~~ Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs. ~~Energy notes that~~
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
  - ~~The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).~~
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- ~~o~~ The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

~~Fund~~ Amortize Conservation Program~~s~~ Costs ~~through the Tax Base~~:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

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- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization of conservation costs was not permitted, a fiscal impact could result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

~~This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.~~

- ~~Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.~~

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase

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growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income (revenue) to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income (expense) of Hydro One.
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- Having OEFC help implement this measure may require introducing changes to OEFC's objects as is legal mandate is to help reduce and pay down stranded debt.
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

**Commented [JK3]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

**Commented [JK4]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
    - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost~~delay recovery of part~~ of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.~~by~~ This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to or more than $2 billion annually during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
    - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
    - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA
    - Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
    - Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years

- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

[Check and Update]

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
~~**December 12**~~**January 15, 2016**

| | |
|---|---|
| **From:** | Gavin He |
| **To:** | John Kim; Shajee Kathirgamanathan |
| **Subject:** | RE: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 2:23:52 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v8 (CEFD)_GH.docx |

Hi John/Shajee,

In the interest of time, I have worked on v8 from my personal drive, as Emily is still in the note. I have reviewed and updated sections related to debt-financing GA.

John – for the numbers, I wasn't involved in providing the updates, so don't have much knowledge on how the numbers were put together, and the presentation decks don't provide update on those numbers, so I didn't make any update there.

Please review and let me know if you have any questions. I can consolidate my edits once Emily is done.

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 10:01 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation

FYI.

Hoping to finalize on our end by early afternoon…..Emily might have other comments.

I think what things need to be checked against the updated deck, as well.

John.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 9:59 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John, Emily,

I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.

I also made some edits to Energy's slides but not sure those are needed.

Thanks,

Francisco

-----Original Message-----
From: John Kim
Sent: Saturday, January 14, 2017 11:45 PM
To: Emily Kerr <Emily.Kerr@ofina.on.ca>
Subject: RE: Rate Mitigation

Hi Emily,

Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.

Thanks,

John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation
>
> Good morning,
>
> Attached are materials for Monday's rate mitigation meeting.
>
> Keley
>
> Original Message
>
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
>
> Sent: Saturday, January 14, 2017 7:49 AM
>
> To: Orsini, Steve (CAB)
>
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

Hi Steve,

Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

**CONTEXT**

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

**COMMENTS**

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

~~In addition, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to over $2 billion annually during the period that GA costs are deferred.~~

**Commented [GH1]:** Revised and moved to the later Debt-financing GA section.

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility, and provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.** | • Significant fiscal exposure -- $0.42-0.845 bn in 2017 to $0.62-1.18 bn in 2022, ~~at current levels,~~ higher if OESP is enhanced. On-bill benefits.<br>• Funding programs through tax base estimated to reduce average monthly residential bill by approximately $2 in 2017, increasing to approximately $3 in 2022.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Amortize ~~Fund~~ **conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account. ~~programs through the tax base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time~~** | • It is unclear whether consevation costs could be amortized according to accounting standards. If this option was pursued without establishing Provincial Controller agreement on accounting, there could be a fiscal risk. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base. ~~Potentially significant fiscal impact – current program costs are about $0.45 bn~~<br>o Conservation programs do provide an electricity system benefits, but ~~would now be~~ fiscal~~ly~~-funding~~ed, so~~ would result in a cross-subsidisation from tax-base |

**Commented [EK2]:** Updated based on slide 12 in Energy's updated deck.

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| | |
|---|---|
| | ○ Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value (share price) and impact fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• In the case of projects located in First Nation territories it could have an upfront fiscal impact if Province is not able to amortize those projects (TBC with OPCD).<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a windfall. It was fiscally neutral, it represented revenue to OEFC and an expense to Hydro One.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates<br>• OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding th Global Adjustment (GA) |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some** | • Incurring debt to pay the generators their contracted or regulated payments |

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|---|---|
| **generation supply costs by partially financing the cost of the global adjustment (GA)** | • Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022~~Total of about $0.4 to 0.45 Billion/year~~):

~~This w~~Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), ~~-~~and ~~the~~ Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs. ~~Energy notes that~~
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
  - ~~The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).~~
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- ~~o~~ The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

~~Fund~~ Amortize Conservation Program~~s~~ Costs ~~through the Tax Base~~:

Certain conservation costs are proposed to be amortized. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

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- Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.

~~This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.~~

- ~~Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.~~

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.

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- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income (revenue) to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income (expense) of Hydro One.
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- Having OEFC help implement this measure may require introducing changes to OEFC's objects as is legal mandate is to help reduce and pay down stranded debt.
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.

**Commented [JK3]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

**Commented [JK4]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.

- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost~~delay recovery of part~~ of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.~~by~~ This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to or more than $2 billion annually during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

[Check and Update]

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**~~December 12~~January 15, 2016**

**From:** Gavin He
**To:** John Kim
**Subject:** RE: Rate Mitigation
**Date:** Sunday, January 15, 2017 11:17:19 AM

---

Hi John,

It seems Emily is working on the note.  I will update after she is done.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 10:01 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation

FYI.

Hoping to finalize on our end by early afternoon…..Emily might have other comments.

I think what things need to be checked against the updated deck, as well.

John.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 9:59 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John, Emily,

I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.

I also made some edits to Energy's slides but not sure those are needed.

Thanks,

Francisco

-----Original Message-----
From: John Kim
Sent: Saturday, January 14, 2017 11:45 PM
To: Emily Kerr <Emily.Kerr@ofina.on.ca>
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Hi Emily,

Just put down some quick updates to the existing note so that we could have a reasonable starting point.  Pls. feel free to edit and update and maybe we could try to combine tomorrow.

Thanks,

John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

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Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation
>
>
>
> Good morning,
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> Attached are materials for Monday's rate mitigation meeting.
>
> Keley
>
>
> Original Message
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> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
>
> Sent: Saturday, January 14, 2017 7:49 AM
>
> To: Orsini, Steve (CAB)
>
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
>
> Subject: Rate Mitigation
>
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Serge

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**Subject:** RE: Rate Mitigation
**Date:** Sunday, January 15, 2017 10:01:19 AM

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Thanks Francisco. I'm going to take another look in the afternoon.

---

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**From:** Francisco Chinchon
**To:** John Kim; Emily Kerr
**Subject:** RE: Rate Mitigation
**Date:** Sunday, January 15, 2017 9:58:38 AM
**Attachments:** Comments on Electricity Sector Transformation Proposals v7 (CEFD).docx
ATT00001.htm
Proposed Initiatives to Transform Ontarios Electricity Sector 20170113_CEFD.pptx
ATT00002.htm

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Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility** | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| **Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time** | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value (share price) and impact fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |

| | |
|---|---|
| | • In the case of projects located in First Nation territories it could have an upfront fiscal impact if Province is not able to amortize those projects (TBC with OPCD).<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a windfall. It was fiscally neutral, it represented revenue to OEFC and an expense to Hydro One.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates<br>• OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding th Global Adjustment (GA) |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |

**Detail on Proposals**

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Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP (Total of about $0.4 to 0.45 Billion/year):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Fund Conservation Programs through the Tax-Base:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.

  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income (revenue) to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income (expense) of Hydro One.
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- Having OEFC help implement this measure may require introducing changes to OEFC's objects as is legal mandate is to help reduce and pay down stranded debt.
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.

**Commented [JK1]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

**Commented [JK2]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

- Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.

- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of options to delay recovery of part of the Global Adjustment (GA) by debt financing and recovering over a 25 to 30 year period.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1:
  - Option 2:
  - Option 3:
  - Option4:
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

[Check and Update]

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**~~December 12~~January 15, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

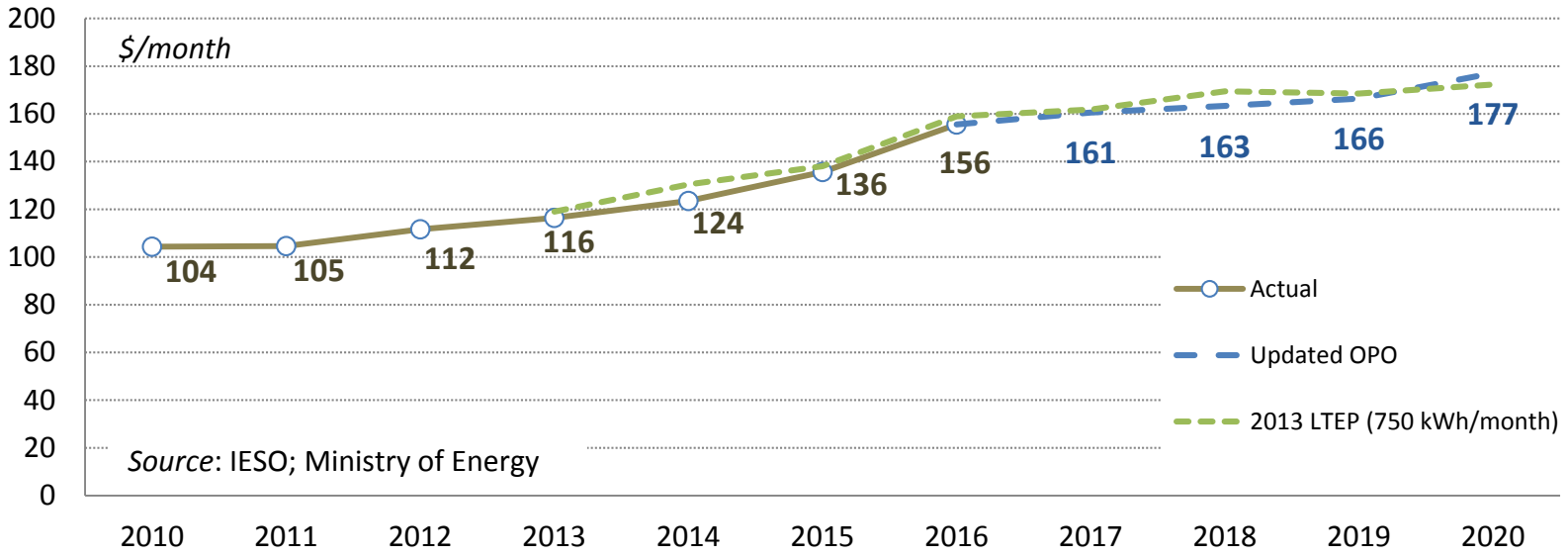
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast*




**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Broad Policy Themes / Rationale

- Support the continued reduction in the differential across distribution rates (as charged by Local Distribution Companies) across the Province through the potential enhancement of Rural or Remote Electricity Rate Protection, (RRRP). In order to not increase regulatory costs to customers as a result, this program can be moved to the tax-base.
- Provide a greater focus and support on lower income Ontarians by funding the Ontario Electricity Support Program (OESP) through the tax-base, as well as enhancing the support available through the program.
- Amortize electricity conservation and demand management (DM) programs over 15-years to provide lower costs for electricity consumers.
  - Alternatively, pay for conservation/DM programs through the tax-base and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties and expansion of natural gas to underserved areas (i.e., rural and remote communities), etc.
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" an alternative rate plan, based on a flat electricity rate, as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time. Also give consumer greater transparency with respect to electricity costs by providing more details regarding the Global Adjustment (GA).
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers, a benefit of $7/MWh.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 1.53 | 1.58 | 1.61 | 1.66 | 1.70 | 1.74 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.57 | 0.79 | 0.98 | 1.13 | 1.29 | 1.44 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC Efficiencies/Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.71 | 0.89 | 1.08 | 1.22 | 1.35 | 1.24 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. v Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 2.04 | 2.10 | 2.15 | 2.22 | 2.27 | 2.32 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.76 | 1.05 | 1.31 | 1.51 | 1.71 | 1.92 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC Efficiencies / Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.59 | 0.74 | 0.89 | 1.01 | 1.12 | 1.03 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Taxpayer Funded Electricity Price Mitigation

| *$M* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. Fund RRRP through the Tax-Base* | - | 666 | 684 | 700 | 719 |
| 2. Fund OESP through the Tax-Base | | | | | |
| a. Enhance OESP Benefit | | 162 | 226 | 279 | 322 |
| b. Expand OESP Eligibility | | TBD | TBD | TBD | TBD |
| 3. Conservation Funding Options | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | - | - | - | - | - |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | 100 | 390 | 390 | 390 | 390 |
| 5. Dedicate Departure Tax | 260 | 260 | 260 | 260 | 260 |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC Efficiencies / Rates | - | - | - | - | - |
| c. OPG – Operational Efficiencies | - | - | - | - | - |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers) | 110 | 450 | - | - | - |
| 9. Extend the Length of Existing Wind/Solar Contracts at Lower Prices | - | - | - | - | - |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| Fund Conservation Programs Through The Tax-Base | 154 | 632 | 649 | 567 | 568 |
| Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy
**Note:** *Assumes RRRP enhancement to reduce distribution rates to $30 for LDCs and **Assumes increase OESP credit by 50%.
Not included in chart is additional $18M/year to fund potential First Nations rate program through the Tax-Base.

# Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are aimed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

- Given that these programs focus on promoting equity between different areas of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.
  - These enhancements would also work in conjunction with the Ontario Energy Board's focus on reducing LDC costs outlined in option 6b.

# 1. Rural or Remote Rate Protection (RRRP) Expansion

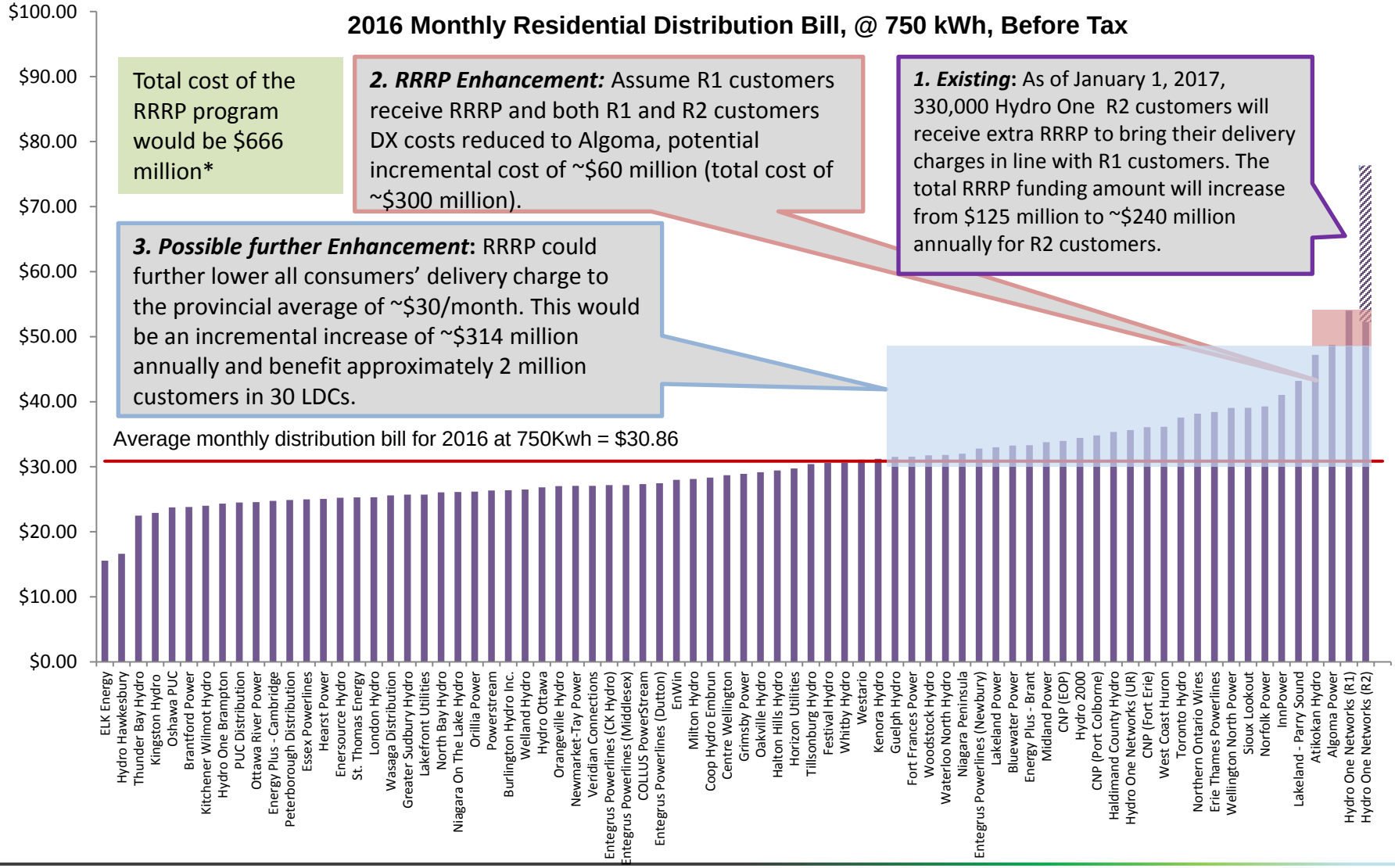
- The Rural or Remote Rate Protection (RRRP) program supports the most costly-to-serve distribution customers in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
  - Costs to these Hydro One customers are higher than average because of their relatively low density. The OEB mandates that they pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies.
  - To mitigate these costs, the RRRP was recently enhanced to help lower the bills of Hydro One's R2 customers to around those of its R1 (medium density) customers.
- Although other LDCs do not have medium- and high-density rates, there is a wide range of distribution costs between LDCs. The RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - Could be done on its own or as part of exploring an Ontario-wide uniform "postage stamp" delivery rate.

**Considerations**

- RRRP will be enhanced for R2 customers on January 1, 2017 to have their costs reduced to approximately R1 distribution costs levels. The RRRP could be further enhanced to include R1 customers, and have R2 and R1 customers reduce their costs down to Algoma (see next slide). This would cost $300 million in the first year (and would adjust year over year).
- If there was a desire to reduce costs for all LDCs, a simple average of distribution cost before tax, across all rate zones is $30.86 per month, for a residential customer consuming 750 kWh per month.** Bringing all delivery rates down to this average would cost approximately $500 million for the first year, with escalation in line with average distribution rate increases.
  - This assumes Hydro One R2 consume 1,200 kWh and H1 R1 customers consume 1,000 kWh per month.
- If all customers were brought down to the average costs (see the chart on the next slide for more detail):
  - It is assumed that residential customers with bills less than the provincial average see no change;
  - Majority of the enhanced benefit would go to Hydro One R1 and Toronto Hydro customers; and
  - Mechanism to ensure that LDCs continue to be motivated to achieve efficiencies would need to be designed (see section 4).
- Enhanced RRRP support may be best provided from the tax-base, because if funded from the rate-base, it would increase the costs for all customers who may argue that it is unfair that they are being asked to pay more to subsidize those in other LDCs.
- In conjunction with using the tax-base to reduce delivery charges to the provincial average, the OEB could be asked to explore moving to a province-wide "postage stamp" delivery rate that would be the same across the province to be implemented over time.
  - Could be "winners and losers" as delivery rates less than the average would go up in a postage stamp model;
  - A "postage stamp" model could help incent LDC consolidation.

**Note:** This is based on preliminary estimates and the amount will fluctuate on monthly consumption from customers and LDCs have different customer base with different consumption types.

# 1. Rural or Remote Rate Protection (RRRP) Expansion (cont'd)




*Note: this includes the ~$50M currently supporting Algoma Power and Hydro One Remotes.*

# 2a. Enhance Ontario Electricity Support Program (OESP) Benefit

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills. The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices and at launch, it was estimated ~560,000 families could be eligible and some 261,000 applications have been submitted.

- The OESP program benefits could be increased across the board by 50%, which would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).

- The OESP program could also be further enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).

**Considerations**

- If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible.
  - At the time of program design, advice was given that a 40-50% participation rate would be high for an application-based program delivered through electricity bills.
  - The province would need to work with LDCs if the rebate was to appear on electricity bills rather than be delivered via the income tax system (e.g., through the Trillium Benefit).

# 1 & 2a. Fiscal Impacts of RRRP, OESP and First Nation Rate

- Table below shows estimates of program costs up to 2022:

| Year | OESP ($M) | OESP + 50%($M) | RRRP($M) | RRRP Enhancement ($M) | First Nations Delivery Rate($M) | TOTAL RANGE ($M) (from status quo to OESP and RRRP enhancements) |
|---|---|---|---|---|---|---|
| 2017 | $108 | $162 | $292 | $374 | $18 | $418 to $846 |
| 2018 | $150 | $226 | $300 | $384 | $18 | $468 to $928 |
| 2019 | $186 | $279 | $306 | $394 | $18 | $510 to $997 |
| 2020 | $215 | $322 | $315 | $404 | $18 | $548 to $1,059 |
| 2021 | $243 | $365 | $322 | $415 | $18 | $583 to $1,120 |
| 2022 | $272 | $408 | $329 | $426 | $18 | $619 to $1,181 |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections above assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
   - The second column forecast also assumes the existing credit amounts increase by 50%.
     - Forecast assumes 10% administration costs
     - Forecast does not account for the approximately 142,000 low-income households that OEB estimated are not eligible because they do not directly receive an electricity bill.

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.
   - Expansion to cap distribution rates for other customers is based at $374M and assumes escalation of 2.6% (historical average dx rate increase). This is a conservative estimate, as Hydro One and Toronto Hydro increases could drive program costs beyond the average increase.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 2b. Expand OESP Eligibility

**Expanded Coverage**

- When OESP was being created, the OEB estimated that are 713,000 low-income households, of which 20% do not receive electricity bills. Thus, only 571,000 would potentially be eligible for OESP.
- If moved to the tax base, the OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity.

**Eligibility Categories**

- OESP has two credits amounts:
    1) Basic credit of $30-50 per month, based on the level of income and the number of residents.
    2) Enhanced credit of $45-75 per month for those with unique electricity needs:
        a) Electric heating,
        b) Indigenous customers, and
        c) Certain electrically intensive medical devices.
- The enhanced credit can be expanded to include additional eligibility categories of customers. For example, a new “Low Density Consumer” category could be introduced that provides Hydro One R2 customers (highest distribution rates) eligible for OESP the enhanced credit.

**Considerations**

- Potential costs for expanded coverage and new eligibility categories depend on updated estimates and changes to program design and delivery.
- There would be value in keeping the OESP as an income-tested program to distinguish it from other initiatives (e.g. RRRP, which is designed to address disparity between rural and urban distribution costs).

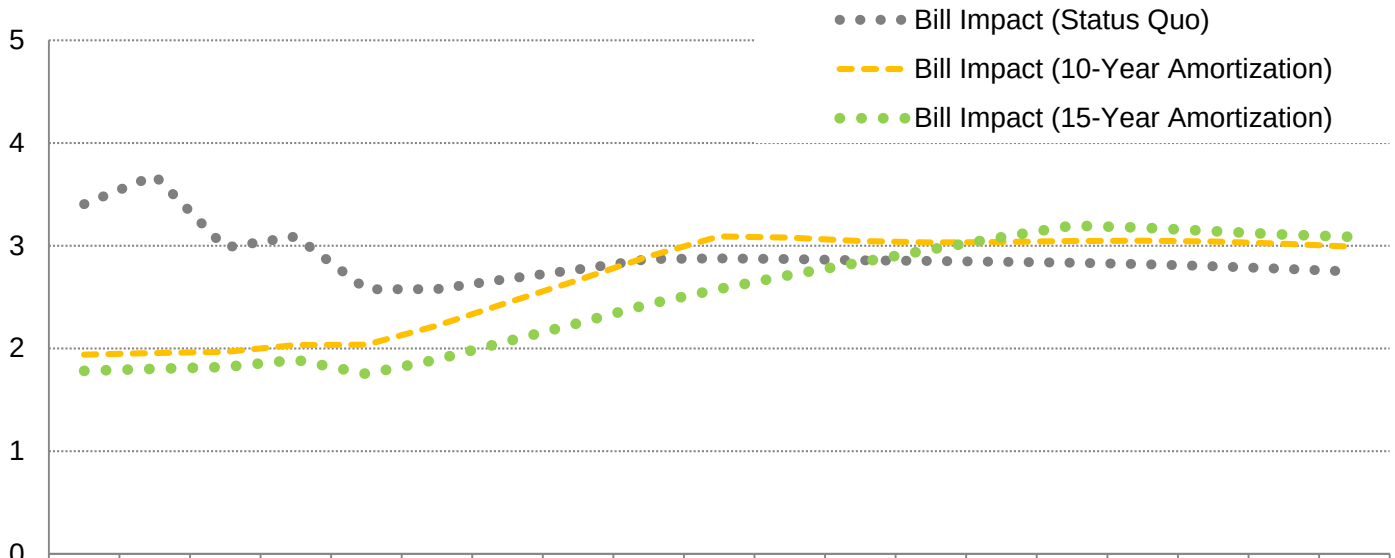
# 3a. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized. This would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs).
  - The time period over which costs could be amortized would be over the lifetime of funded CDM measures.
  - ENERGY is working with IESO to determine the appropriate lifetime period – the graph on the next slide, which illustrates residential bill impacts, presents two cases: **10-year and 15-year measure lifetimes**.
- In both cases, amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020. Over time the benefit would decrease and turn into a cost (higher electricity rates than would otherwise occur), as interest charges begin to grow. Estimated interest charges are as follows (a 3% interest rate is assumed; increases in interest rates could result in higher overall interest charges):
  - $712 million ($2016) – Amortizing eligible 2017-2035 CDM costs for 10-year period; and
  - $1.3 billion ($2016) – Amortizing eligible 2017-2035 CDM costs for 15-year period .
- Legislative changes would be needed to allow recovery of interest payments from ratepayers, or these costs could be recovered from the Consolidated Revenue Fund (CRF, or taxes).
- An alternative that could be explored would be to pay for CDM costs, or for a portion of these, from the tax-base (*see Appendix for more detail on tax funding option*).

# 3a. Amortize Conservation Program Costs (cont'd)

## Conservation Residential Bill Impact – Status Quo, 10-Year and 15-Year Amortization

***CDM Bill Impact ($/month)***




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bill Impact (Status Quo) | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | 2.68 | 2.77 | 2.87 | 2.88 | 2.87 | 2.86 | 2.85 | 2.84 | 2.83 | 2.82 | 2.80 | 2.78 | 2.75 |
| Bill Impact (10-Year Amortization) | 1.94 | 1.95 | 1.97 | 2.03 | 2.04 | 2.22 | 2.45 | 2.67 | 2.90 | 3.09 | 3.08 | 3.05 | 3.03 | 3.04 | 3.04 | 3.05 | 3.04 | 3.02 | 2.99 |
| Bill Impact (15-Year Amortization) | 1.78 | 1.80 | 1.82 | 1.89 | 1.75 | 1.89 | 2.07 | 2.25 | 2.43 | 2.58 | 2.71 | 2.84 | 2.96 | 3.08 | 3.20 | 3.18 | 3.14 | 3.11 | 3.09 |

Source: IESO; Ministry of Energy

**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10 of 15-year borrowing rate of 3.0%.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.
- Legislative amendments would be needed to allow recovery of loan interest charges from GA.
- ENERGY staff have developed a note to seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
- ENERGY is working with IESO to seek an opinion on the proposal from IESO's external auditor.
- ENERGY would then send the IESO external auditor's opinion along with ENERGY's explanatory note to the Ontario Provincial Controller (OPC) to seek a formal opinion on whether CDM costs could be amortized according to rate-regulated accounting standards.
- Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 3b. Rate Smoothing of Conservation Program Costs

- "Rate smoothing" could achieve the same rate reduction effect as amortization.
- Instead of taking out a loan to amortize conservation costs, a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Each year, IESO would defer recovery of a portion of annual conservation costs. Financing would also be required, such as from the OFA, to pay the interest on the deferral account. Interest would accrue on the deferred amounts, likely at the same rates as for the amortization option.
- Deferred costs could be recovered over any time period. If a 10 or 15 year-period was chosen, the rate impacts would be the same as in the amortization option.

**Considerations**

- Option would **not** require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open the Ministry to criticism by the Controller and/or Auditor General since the rate impact is the same.
- The Ministry would have more control under this option to change deferred amounts each year, as opposed to the terms set by a loan agreement under the amortization example.
- There is precedence to this approach for nuclear investments, which otherwise would result in volatile increases and decreases for Ontario ratepayers over the investment period. In 2015, the Ministry amended a regulation that requires the Ontario Energy Board (OEB) to set "smoothed" nuclear rates for OPG's Darlington and Pickering nuclear stations over a 20-year period.
  - The regulation allows OPG to defer recovery in rates of a portion of its nuclear revenue during the Darlington refurbishment (expected to be complete in 2026) and recover these deferred costs over the remaining ten years.
  - OPG will establish a "deferral account" to record the deferred amounts each year up to 2026 plus accumulated interest on the balance to reflect OPG's financing costs as a result of rate smoothing. The deferral account is then drawn down on a straight-line basis between 2026 and 2036.
- At minimum, new regulation would be required. However, further analysis is needed to determine the relevant regulation or legislation, to be amended for IESO (e.g., OEB regulation of IESO costs and fees, GA regulation for how IESO recovers its conservation costs from ratepayers).

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure

- Fund investments in specific energy infrastructure projects through the tax-base. **Note:** This could include the provincial portion of funding for the Remote First Nation Connection Project, a fund to support projects that improve adequacy and reliability in areas where new transmission would unlock economic growth and expansion of natural gas service to underserved communities.

**Considerations**

- Tax-base funding would allow for energy infrastructure to be built without impacting electricity and natural gas rates.
- Would require increasing the amount of funding committed to the Trillium Trust. All fiscal impacts from broadening Hydro One have been committed to the Trillium Trust $5.7 billion target and allocated to Moving Ontario Forward projects.
- There would be an ongoing fiscal impact from the amortization and funding of the investments. Where amortization is not possible there would be an upfront fiscal impact.

*Remote Connection Project:*

- Ontario ratepayers currently support costs of remote electricity service through RRRP on the order of $28 million/year
- Connecting 21 remote communities to the Ontario grid is supported by a positive business case due to diesel cost savings over time. If RRRP is funded through the tax base as proposed above, this project represents an opportunity to reduce impacts from RRRP.
- Direct investment in Ontario's portion of the capital costs of the project through a provincial fund (e.g., Trillium Trust) could also be considered along with mechanisms for cost recovery through transmission rates to refresh the fund as industry benefits from the transmission investment.
- The amount of investment and long-term savings depend on a federal contribution to the project and ENERGY is currently in discussions with Canada with the goal of concluding a cost-sharing agreement by spring 2017.
- A move to tax-based funding may have implications for cost oversight, since the OEB's mandate is to have oversight of ratepayer impacts. Alternative methods to review cost prudence of tax-based funding may be needed.

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (cont'd)

**Considerations (cont'd)**

*Transmission Projects to Enhance Economic Growth:*

- A tax-based fund could target investments in projects that have been identified in IESO regional plans and that would stimulate economic growth but are not proceeding due to cost barriers under the OEB's beneficiary pays principle. Investments could also target areas where the existing system poses challenges for delivering reliable service such as in parts of Northern Ontario with long single circuits.
- Potential opportunities for investment could include a transmission reinforcement in the **Greenstone area**, upgrades south of **Red Lake** and others TBD based on program design.
- This approach would allow a potion of project costs to be socialized to advance key projects without impacting rates or OEB's principles of cost allocation. Scope and scale of fund would be refined through program design.

*Natural Gas Expansion to Underserved Communities:*

- The Government has currently committed to expanding natural gas access to more communities in Ontario (i.e., $200 million Natural Gas Access Loan and $30 million Natural Gas Economic Development Grant).
  - Natural gas is an affordable heating source in Ontario. Its continues to be less expensive than alternative sources such as electric baseboards, heating oil and propane. For example, switching from oil to natural gas can save an average consumer an estimated $1,500 annually.
  - Increasing access to other energy sources such as natural gas, provides Ontarians with more options to meet their needs, reduce their energy costs and improve their quality of life.
  - Expansion of natural gas delivery infrastructure is widely supported in underserved communities (i.e., a recurring theme at ROMA) as a means to provide consumers and businesses in underserved communities with more affordable energy choices, attract new industry to Ontario and benefit agricultural producers.
- A grant program complements the Ontario Energy Board's recent decision enabling greater rate-based expansion to unserved areas, including rural and remote communities.
  - Applying Trillium Trust funding would make it possible to enhance the Grant Program and service more communities.

# 5. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.
- If the Province were to transfer $2.6 billion in economic benefits to the rate base over 10 years suggest the following fiscal impacts (assuming 140TWh per year):
  - Residential Ratepayer Impact (if spread over 10 years): up to $1.39 per month on a typical bill; and
  - Industrial Ratepayer Impact (if spread over 10 years): up to $1.86 / MWh
- There would be no certainty that the OEB could still decide to allocate some or all of Hydro One's deferred tax benefit to ratepayers which would have fiscal impact (lower share price and lower net income over time).

**Considerations**

- Cost savings to ratepayers and associated fiscal impacts would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- The departure tax was effectively a true-up for lower PILs payments from Hydro One in previous years – it was not a one-time windfall for the Province. In other words, it ensures that Hydro One paid all its tax obligations under the PILs regime before moving into the normal corporate tax regime.
- The related ~$2.4 billion fiscal benefit to the Province (from the deferred tax benefit) has already been credited to the Trillium Trust to be used to build infrastructure under Moving Ontario Forward.
- Repurposing funds paid to OEFC would ~~may~~ have an impact on the defeasance of electricity stranded debt and would cause the first increase in stranded debt since 2004.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to ~~infrastructure investments already made in the sector, or to specific initiatives such as conservation~~).

# 6a. Empower Energy Agencies – IESO / Market Renewal

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 6b. LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
  - Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
    - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.

**Considerations**

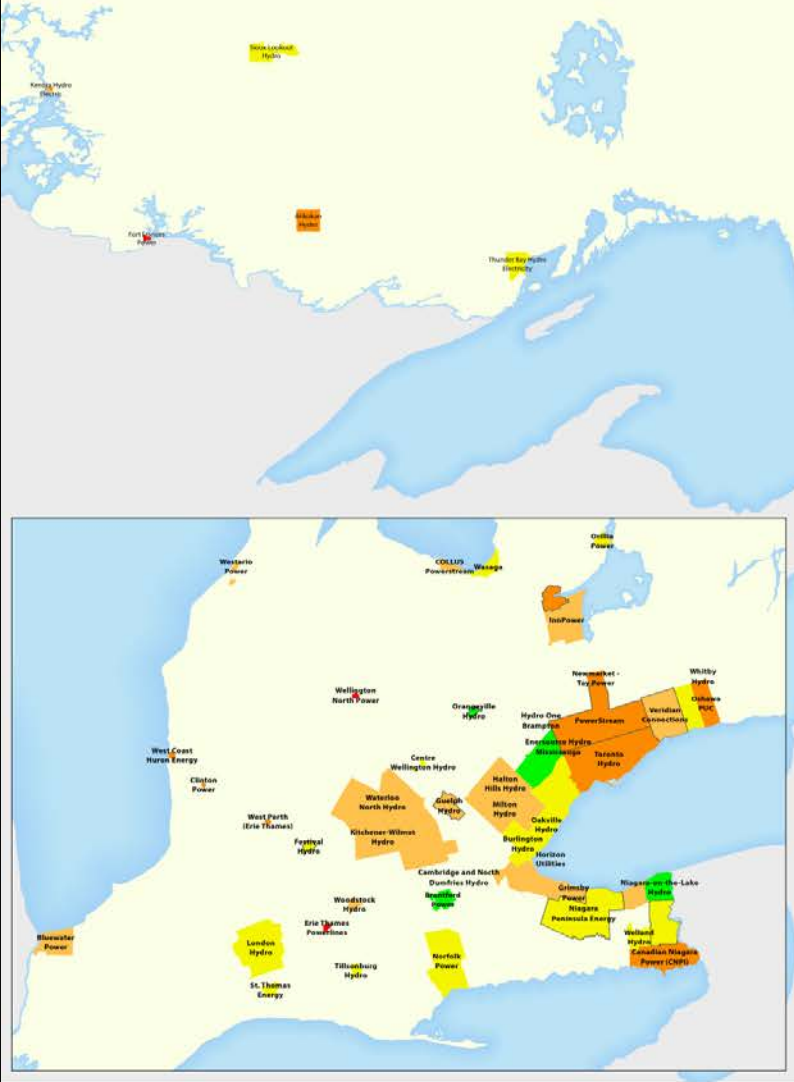
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.

- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
  - To further help address the costs associated with the Delivery line of the electricity bill, program such as the RRRP (previous slide) could be expanded to include other customers that may face higher costs.

- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.

- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation. Further changes to the tax incentives and/or revisiting legislated consolidation could be considered.

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

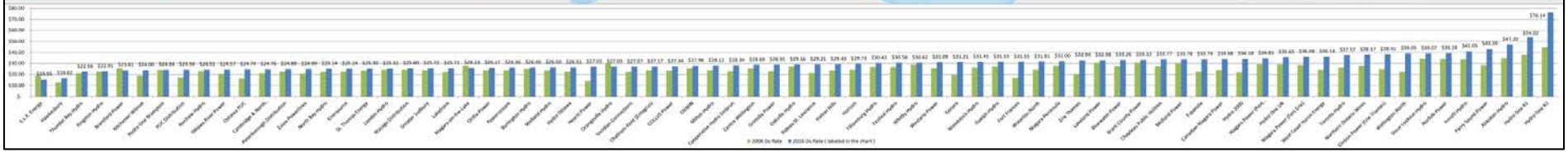
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# 6c. Empower Energy Agencies – OPG / Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

**Considerations**

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.
- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available, providing customers with pricing choice.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- Would provide consumers with electricity pricing choice.
- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro- November 2016 rates)

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7b. Give Consumers More Rate Choices and Greater Transparency – Detailed Global Adjustment

- Provide electricity consumers greater transparency with respect to electricity generation costs by providing more details regarding the Global Adjustment (e.g., adding a line on hydro bills, quarterly energy reports, etc).

**Considerations**

- As electricity bills have increased, many consumers have complained about a lack of transparency on the drivers of electricity costs. In particular, consumers and legislative officers have singled out the GA.

- Providing consumers with additional information on the cost components and amounts recovered through the GA would help consumers understand how the different forms of electricity generation in Ontario contribute to consumers costs.

- Providing additional information to consumers on electricity commodity cost drivers without sufficient context or background could simply lead to increased complaints about particular generating technologies that make up large shares of costs (e.g., nuclear).

- Adding a breakout of the amount of GA on residential electricity bills could lead to further confusion due to the existing breakout of multiple time-of-use buckets.

- Alternatively, the existing quarterly Ontario Energy Report, which provides various energy sector data, could be leveraged to show a breakout of quarterly GA costs by fuel type. A link on electricity bills could point to this information.

# 8. Help Small Business Manage Their Electricity Cost – End DRC Early for Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the proponents agreeing to a lower price in the near term.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period ; discussions/consultation may be required in advance of this potential option moving forward.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- Since the Minister of Energy is not a party, IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms would also reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.

- Projects over 500 kW would offer the most savings potential as they represent the majority of installed renewables capacity and are spread across fewer contracts.

- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.

- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh;
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
  - **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 million | $582 million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - For example, the New contract is $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 million | $632 million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# 10. Tax Relief for Solar and Wind Contracts

- In 2010 and 2011 Ontario procured large scale projects (>500 kW) through the FIT program at standard offer pricing.

- The FIT program was the centerpiece of the GEA which established the economic and social goals of growing the green economy, including establishing a local renewable energy manufacturing base, supporting the development of green energy jobs, and providing incentives for Indigenous participation.

- To help achieve these economic and social goals, the FIT program offered pricing at above competitive procurement rates, and provided Indigenous and Community participation adders, which resulted in economic benefits to all Ontarians, but resulted in additional costs borne by Ontario's electricity ratepayers.

- Ontario could fund the added cost of some or all of these economic and social incentives by shifting their costs from the rate-base to the tax-base.
    1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
    2. The tax base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT.

**Considerations**

- If applied to projects in commercial operation the benefit to the ratepayer would be immediate.
- Comparing FIT pricing to competitive procurement pricing could provide a reasonable representation of energy procurement without the added cost of economic and social incentives.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
   - For example, from 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
   - The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
   - If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
   - The $3.3 billion difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.
   - This represents estimated average ratepayer savings of $1.50/ month relative to OPO forecasts.
   - The same approach could be considered for solar projects however, prior to LRP I in 2016, Ontario had not procured solar capacity competitively and international cost comparisons are challenging given differences in regional development costs.
   - This example does not include the value of participation price adders available for community and indigenous participation.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

2. The tax-base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT 1 solar and wind projects.

   - For example, 17 large FIT 1 wind and solar projects have Indigenous and/or Community participation making them eligible for a price adder in addition to their base contract price.

   - The estimated value of these price adders is approximately $17.1 million (NPV 2017) over the expected remaining term of their contracts.

   - This represents estimated ratepayer savings of approximately $0.01/month relative to OPO forecasts.

# FIT 1 and GEIA Wind Projects in Commercial Operation
(source: IESO Active Contracts List, October 31, 2016)

| Count | Program | MW | COD |
|---|---|---|---|
| 1 | FIT 1 | 0.8 | Oct-10 |
| 2 | FIT 1 | 18 | Jul-15 |
| 3 | FIT 1 | 23 | Aug-15 |
| 4 | FIT 1 | 40 | Jan-15 |
| 5 | FIT 1 | 10 | Sep-14 |
| 6 | FIT 1 | 10 | Sep-14 |
| 7 | FIT 1 | 10 | Jun-14 |
| 8 | FIT 1 | 99 | May-13 |
| 9 | FIT 1 | 100 | Oct-15 |
| 10 | FIT 1 | 4 | Sep-12 |
| 11 | FIT 1 | 100 | Apr-16 |
| 12 | FIT 1 | 15 | Jun-15 |
| 13 | FIT 1 | 18 | Mar-12 |
| 14 | FIT 1 | 104.4 | Nov-13 |
| 15 | FIT 1 | 40 | Dec-15 |
| 16 | FIT 1 | 60 | May-14 |

| Count | Program | MW | COD |
|---|---|---|---|
| 17 | FIT 1 | 125 | Aug-13 |
| 18 | FIT 1 | 73.5 | Aug-14 |
| 19 | FIT 1 | 102 | Jan-15 |
| 20 | FIT 1 | 9 | Jan-12 |
| 21 | FIT 1 | 4.1 | Dec-15 |
| 22 | FIT 1 | 0.5 | Oct-13 |
| 23 | FIT 1 | 82.8 | Nov-11 |
| 24 | FIT 1 | 18.45 | Sep-16 |
| 25 | FIT 1 | 60 | Jul-14 |
| 26 | FIT 1 | 10 | Oct-16 |
| 27 | FIT 1 | 6.15 | Nov-14 |
| 28 | FIT 1 | 2.3 | Aug-15 |
| 29 | FIT 1 | 10 | Feb-16 |
| 30 | FIT 1 | 8.2 | Nov-14 |
| 31 | FIT 1 | 150 | Nov-14 |
| 32 | FIT 1 | 91.39 | Dec-14 |

| Count | Contract | MW | COD |
|---|---|---|---|
| 33 | FIT 1 | 25 | May-15 |
| 34 | FIT 1 | 82.8 | Nov-11 |
| 35 | FIT 1 | 30 | Mar-14 |
| 36 | FIT 1 | 17.6 | May-16 |
| 37 | FIT 1 | 23 | Dec-12 |
| 38 | FIT 1 | 99 | May-13 |
| 39 | FIT 1 | 48.6 | Dec-11 |
| 40 | FIT 1 | 19.44 | Aug-15 |
| 41 | FIT 1 | 10.8 | Mar-12 |
| 42 | FIT 1 | 38.88 | Sep-15 |
| 43 | FIT 1 | 60 | Aug-14 |
| 44 | GEIA | 270 | Mar-14 |
| 45 | GEIA | 180 | Dec-15 |
| 46 | GEIA | 148.6 | Dec-14 |
| 47 | GEIA | 270 | May-15 |

# Key Outcomes / Next Steps

- The proposed initiatives provide the following opportunities to:
  - Provide a greater focus on vulnerable consumers by funding electricity support programs through the tax-base.
    - Enhance existing and new support programs targeted at the most vulnerable consumers (i.e., OESP and RRRP); and
    - Better harmonize delivery rates across the province.
  - Re-set how energy infrastructure is funded by shifting costs to the tax-base from the rate-base.
  - Provide electricity consumers with greater choices and transparency (e.g., alternative rate plan based on a flat electricity rate, unpacking the Global Adjustment costs, etc);
  - Provide system benefits (e.g., market renewal);
  - Increase cost effectiveness and improve efficiency; and
  - Lower the cost of electricity for all consumers.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require legislative and/or regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

A. Rural or Remote Rate Protection (RRRP) – Overview and Enhancements
B. Fund Conservation Programs Through the Tax-Base
C. Eliminate the Industrial Conservation Initiative (ICI)
D. Cancel Large Renewable Procurement I (LRP I)

# A. RRRP Overview and Enhancements

- The Delivery line of the electricity bill is composed of Distribution and Transmission Costs. While transmission costs are uniform across the province, LDC costs vary by distributor and account for about 20% of the total bill for the electricity customers.
  - See slide X for a map of delivery rate increases between 2006 and 2016.
- The Rural or Remote Rate Protection (RRRP) framework was put in place in 2001 to help offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations.
- RRRP is available to: residential Hydro One R2 customers (~350,000 customers), Algoma Power customers (~11,600 customers); H1 remote customers (~3,500 customers).
  - To date, R2 customers receive a fixed amount of $125 million a year distributed amongst the customers. Algoma and Remote customers have RRRP calculated by the OEB each year that fluctuates based on average provincial distribution increases.
- Because the amount had been fixed for over a decade, the Province recently increased funding of the RRRP program for Hydro One R2 customers from $125 million to $240 million. This will be effective as of January 1, 2017, and will bring their delivery charges in line with the next highest charges from Hydro One's R1 customer class.

# B. Fund Conservation Programs Through the Tax-Base

- Propose to fund 2017-2020 electricity conservation and demand management program costs* using tax dollars instead of ratepayer dollars.
  - Funds received through the Hydro One Departure Tax could potentially be repurposed towards this.
- Total remaining 2017-2020 electricity conservation program costs are expected to be ~$2.1 billion.
- Post 2020, this option could evolve to funding conservation programs through the Greenhouse Gas Reduction Account.

**Considerations**

- Electricity conservation programs provide a number of benefits to society, however, Ontario's ratepayers have been covering these costs:
  - Avoiding/deferring future energy infrastructure investments, reducing disruption in communities (e.g., avoiding the need to build new natural gas generation);
  - Environmental benefits (e.g., reduced natural gas peaking generation and GHG emissions); and
  - Social and economic benefits (e.g., job creation and assistance managing electricity bills).
- There is precedence for using tax dollars to fund conservation programs.
  - Between 2007 and 2011, Ontario funded the Home Energy Savings retrofit program using tax dollars.
- Funding conservation programs though the tax-base is expected to result in a benefit of $3.40/month for residential electricity consumers in 2017. This could provide immediate short term relief to consumers while other rate mitigation initiatives are developed (e.g., market renewal, LDC efficiencies).

*** Note:** This includes costs towards the Conservation First Framework, Industrial Accelerator Program, Demand Response and the Conservation Fund)

# C. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

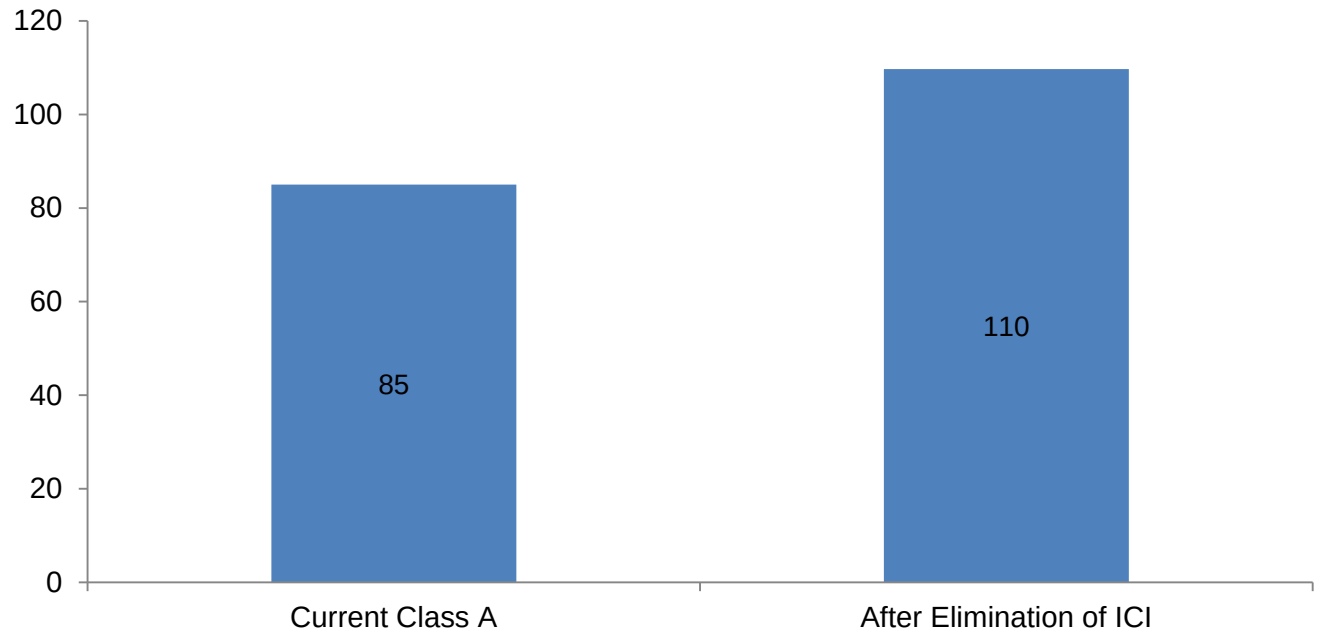
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# C. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# D. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period.
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g. rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

*Cancel/Adjust Announced Procurements:*

- Amendments to existing directions to IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

*Cancel Existing LRP I Contracts:*

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

**Legal Analysis**

- Any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements.
  - An amendment to an existing direction would not require Cabinet approval, however, further analysis is required to determine if direction to cancel LRP I contracts could be considered as amending existing direction.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights. This reasoning would likely apply equally to any direction to IESO to cancel LRP I contracts. Previous advice has also flagged a risk that the Province could be liable for damages in tort for inducing a breach of contract (or other claims).
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

**From:** Gavin He
**To:** John Kim
**Subject:** RE: Rate Mitigation
**Date:** Sunday, January 15, 2017 12:07:12 AM

---

Hi John,

Sure, no problem. I will review the note tomorrow too.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 12:02 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks. Will have a look tomorrow. If you get a chance do you mind adding the 4 options, shorter versions, in the larger note? It's save for in the folder. Tomorrow am is fine! No need to do today

---

**From:** Gavin He
**Sent:** January 14, 2017 11:56:10 PM
**To:** John Kim
**Subject:** RE: Rate Mitigation

Hi John,

Please find attached the draft note for your review. I have updated it based on the latest Debt-Financing GA deck provided this morning.

Please note that they have changed the scenarios, and now are only focusing on short-term cost reductions with and without limits scenarios.

The note is saved under below folder:
S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Saturday, January 14, 2017 10:19 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Yup, for sure. Let's try to get bulk of it done over the weekend so we have a finalized product by eod Monday.

---

**From:** Gavin He
**Sent:** Saturday, January 14, 2017 10:17 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: Rate Mitigation

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> **Sent:** Friday, January 13, 2017 2:07 PM

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**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
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**From:** Gavin He
**To:** John Kim
**Subject:** RE: Rate Mitigation
**Date:** Saturday, January 14, 2017 11:56:17 PM
**Attachments:** Debt Financing the Global Adjustment Proposal CEFD Comments_v3.docx

---

Hi John,

Please find attached the draft note for your review. I have updated it based on the latest Debt-Financing GA deck provided this morning.

Please note that they have changed the scenarios, and now are only focusing on short-term cost reductions with and without limits scenarios.

The note is saved under below folder:
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**Debt Financing the Global Adjustment Proposal**

**ISSUE**

The Ministry of Energy (ENERGY) has provided a presentation on an electricity price mitigation option to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.

The Ministry of Energy deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation.

**CONTENT**

- As discussed in ENERGY's proposal deck, some contracted generation and conservation initiatives provide benefits in longer term, so there might be an opportunity to recognize these longer-term benefits by deferring some of the current costs in GA.

- ENERGY has provided a presentation deck on an indicative GA financing proposal, including a qualitative discussion of the risks associated with the proposal. Four scenarios and sensitivities are presented, e.g., capped at different degrees of deferred GA amounts to be recovered. Energy's deck assumes 5% borrowing interest and the GA amount increases at 2% per year. The deck shows the cumulative amount of debt incurred, impact on total system cost, and impact on residential bills.

**CEFD STAFF COMMENTS**

- ENERGY's proposals generally involve reducing current costs and deferring part of the costs into long-term. While the proposals may have a fairly significant residential rate payer savings in short-term, e.g., $14 - $28/month decrease, but might have significant impact on rate payers in the long-term, up to $30/month increase.
- In addition, ENERGY's proposal will lead to significant accumulated debt in longer term. It involves borrowing large amounts of money over a long period of time, 16-30 years, depending on the scenario, which are highly sensitive to interest rates.
- It would be helpful to understand how much certainty there is that the debt could be paid off in the 25 or 30 year scenarios and how the Province would hedge against the various risks? Given the variability and relationship with HOEP, what ability would there be to predict these financing needs for the GA.
- There is significant risk where with potential future scenario of significant uptake in self-generation, net metering and due to other technological changes, the electricity load drops significantly from the base case scenario. It would then represent a new type of stranded debt scenario.
- IESO market transactions, including payments to generators above HOEP are not reflected as revenue or expenses in IESO's financial statements. IESO receives recovery of the GA amounts in each settlement period. It would be important to consult with OPCD on the accounting treatment if IESO did not recover the full GA costs each settlement period, or over a fiscal year.

- Cash from debt-financing to cover GA payments would not be expected to be recorded as revenue, leaving generation supply costs higher than the amounts recovered from the market plus the GA.
- Prior to pursuing the proposal, would also need to consult Constitutional Law Branch on risks related to the GA being charged to those who may not have as direct a link to those who benefited, i.e. the significant time lag between incurring of the costs and recovery of the costs.

**Detail on Proposals**

Status Quo:

Ratepayers continue to pay the full cost of GA each year until the debt is paid

- According to the graph provided by ENERGY, it seems that as GA decreases, the residential electricity bill increases. What's the cause of this?
- It would be helpful to understand what is driving the reduced IESO GA Costs up to 2035.

Moderate short-term cost reductions with limits (capped at no more than $2B above the true cost of GA)

The starting GA payment from all ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and is increased at inflation in subsequent years.

- The scenario shows that we are effectively shifting GA costs from today to future rate payers while incurring financing costs. It would appear that there would be no savings to the ratepayers, only a shift of cost from today into the future, with the financing cost as an additional component.

Maximized short-term cost reductions with limits (capped at no more than $2B above the true cost of GA)

The starting GA payment from all ratepayers in 2017 is lowered as much as possible and is increased at inflation in subsequent years.

- The scenario should provide the starting GA payment from all ratepayers in 2017, i.e., by how much it is lowered.
- How does the refinanced GA drop 25 and 30 years from now to match IESO's forecast? It would be helpful to understand the assumptions used in making this graph.
- In this scenario, the total debt was much higher than the previous scenario (up to $10.7B vs $23B), but it seems it will result in a similar increase in residential bills in the long-term. Wouldn't this scenario result in bigger increase in residential bills in long-term?

Maximized short-term cost reductions, no limits

The starting GA payment from all ratepayers in 2017 is lowered as much as possible and is increased at inflation in subsequent years such that the borrowed money is paid back in 25 and 30 years respectively.

**QUESTIONS**

- Do any of the scenarios account for the GA increasing more than the IESO's OPO? What are the chances of that occurring and how would that be mitigated in the long-term?
- Would Energy proposals potentially accept an introduction of a DRC version 2?
- How would the regulator or the government manage the long time horizon and the size of the new debt arising in the sector, as well as the mechanism(s) to pay for the debt? Intergenerational aspects to the incurring of the debt and paying down the debt would need to be considered in setting up the structure, as well as the Constitutional Law risk.

**Prepared by:** **Corporate and Electricity Finance Division**
**Date:** **January 14th, 2017**

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Gavin He |
| **Subject:** | RE: Rate Mitigation |
| **Date:** | Saturday, January 14, 2017 12:09:49 PM |

Ok, thanks

---

**From:** Gavin He
**Sent:** Saturday, January 14, 2017 12:06 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John,

Actually I just confirmed with Ron. He didn't finish the entire note, so I will keep on working on that later today.

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There are some changes in the part up top?

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**From:** Gavin He
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**Date:** Saturday, January 14, 2017 12:06:25 PM

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| **From:** | John Kim |
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| **From:** | Gavin He |
| **To:** | John Kim |
| **Cc:** | Shajee Kathirgamanathan |
| **Subject:** | RE: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 4:32:34 PM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup.docx<br>Proposed Initiatives to Transform Ontarios Electricity Sector 20170113_C....pptx<br>Debt Financing the Global Adjustment Proposal CEFD Comments_v3.docx |

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**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks....let's send to Ron. Pls. also include the deck from Francisco.

**From:** Gavin He
**Sent:** January 15, 2017 4:21 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

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Gavin He

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**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

No reason....updated the RRRP.

I took a look at the comments in the deck and the comments are good. Given the meeting is

on Monday, I am leaning towards not sending back comments on the deck back unless proposing to make edits to the text, like Francisco is in the attached.

I'm OK to send these back with cc: to Emily and Francisco unless you have additional comments, which would be welcome. Ideally would like to review further but I'm going to bed soon.

Thanks,

John.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:13 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

I reviewed the debt-financing GA sections and I am good with the edits.

I didn't review the other deck in details, but took a quick look on slide 7 and the new section at the end of the note. Just one question, is there a reason why the RRRP numbers for 2019-2021 were not updated?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:01 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Let me know what you think. If OK, could you save to the folder?

Going to quickly go through the deck.

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**From:** John Kim
**Sent:** January 15, 2017 3:32 PM
**To:** Gavin He; Shajee Kathirgamanathan

**Subject:** Re: Rate Mitigation

Yeah, I think Shajee's point on slide 7? might be the only path. I am about to take a crack at it but I don't want to minimize the fiscal impact by taking their numbers. Thus being deliberate. Shouldn't take long.

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**From:** Gavin He
**Sent:** January 15, 2017 3:30 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Based on Emily's update, the impact for OESP & RRRP will be $0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022, without detailed impact on each year. So it we are going to update the table, it seems we might need to make some assumption.

Regards,
Gavin He

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**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:17 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yes, the OESP and RRRP that Emily updated, kind of showed me there were updates.

Ok, I need to go back to that deck.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:13 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Are you referring to the numbers for OESP and RRRP?

Also, the $2B GA amount is from scenario 2 and 3. The cap for the maximum amount of GA above the true cost is $2B.

Regards,
Gavin He

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**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:10 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yeah, I'm trying to decide if it's worth adding that proposal. While I am trying to minimize work, it's fiscal impact stuff.

And the table. I'm trying to assess if not updating that is an option as I'm getting tired.

What's your sense?

---

**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 3:06 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

If you're referring to #10 on renewables/wind contracts, I think it's not so much tax exempting renewables, but rather paying through the tax base the amounts above competitive electricity rates. (Eg. If competitive amount is say $80/mwh. And they have a community/indigenous adder of $40/mwh. Therefore a total contract price is $120/mwh. The proposal would shift the $40/mwh to the tax base). That's my interpretation at least.

Again it's just another way to transfer to the tax base from the rate base.

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 2:57 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks.....I think we should send the note in for about 6pm so don't worry about it. I will have a look at the deck.

The only thing that concerns me is the additional proposals like tax exempting of renewable contracts, etc. I'm debating whether they need coverage but likely to try to dodge it. I think the table at the bottom needs updating but I'm currently still assessing it.

---

**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 2:54 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

I finished with my comments on the power point file. I think there were some CEFD and Energy Comments from before.

Only way to distinguish are my comments are "**CEFD Comments**" (bold), whereas before it was evidently bold and underlined.

Will take a quick review of the document, but heading out shortly for the evening. Will try to get done what I can.

Thanks,
Shajee

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**From:** John Kim
**Sent:** Sunday, January 15, 2017 2:45 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks....saw this after sending the other.

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**From:** Gavin He
**Sent:** January 15, 2017 2:41 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

Emily just finished the file. I have copied my edits in her version and saved it as v9.

Thanks,
Gavin He

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**From:** Gavin He
**Sent:** Sunday, January 15, 2017 2:24 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

In the interest of time, I have worked on v8 from my personal drive, as Emily is still in the note. I have reviewed and updated sections related to debt-financing GA.

John – for the numbers, I wasn't involved in providing the updates, so don't have much knowledge on how the numbers were put together, and the presentation decks don't provide update on those numbers, so I didn't make any update there.

Please review and let me know if you have any questions. I can consolidate my edits once Emily is done.

Thanks,
Gavin He

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**From:** John Kim
**Sent:** Sunday, January 15, 2017 10:01 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation

FYI.

Hoping to finalize on our end by early afternoon…..Emily might have other comments.

I think what things need to be checked against the updated deck, as well.

John.

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**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 9:59 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John, Emily,

I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.

I also made some edits to Energy's slides but not sure those are needed.

Thanks,

Francisco

-----Original Message-----
From: John Kim
Sent: Saturday, January 14, 2017 11:45 PM
To: Emily Kerr <Emily.Kerr@ofina.on.ca>
Subject: RE: Rate Mitigation

Hi Emily,

Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.

Thanks,

John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>

Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation
>
> Good morning,
>
> Attached are materials for Monday's rate mitigation meeting.
>
> Keley
>
> Original Message
>
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
>
> Sent: Saturday, January 14, 2017 7:49 AM
>
> To: Orsini, Steve (CAB)
>
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
>
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

In addition, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to ~~over~~or more than $2 billion annually during the period that GA costs are deferred depending on the scenario.

**Commented [GH1]:** This was included in the debt-financing GA section below, so not sure if we need to mention it here.

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility, and provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.** | • Significant fiscal exposure -- $0.42-0.845 bn in 2017 to $0.62-1.18 bn in 2022, ~~at current levels,~~ higher if OESP is enhanced. On-bill benefits.<br>• Funding programs through tax base estimated to reduce average monthly residential bill by approximately $2 in 2017, increasing to approximately $3 in 2022.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Amortize ~~Fund~~ **conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account. ~~programs through the tax base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time~~** | • It is unclear whether consevation costs could be amortized according to accounting standards. If this option was pursued without establishing Provincial Controller agreement on accounting, there could be a fiscal risk. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base. ~~Potentially significant fiscal impact – current program costs are about $0.45 bn~~<br>o Conservation programs do provide an electricity system benefits, but ~~would now be~~ fiscal~~ly~~-funding~~ed, so~~ would result in a cross-subsidisation from tax-base |

**Commented [EK2]:** Updated based on slide 12 in Energy's updated deck.

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|---|---|
| | ○ Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value (share price) and impact fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• In the case of projects located in First Nation territories it could have an upfront fiscal impact if Province is not able to amortize those projects (TBC with OPCD).<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a windfall. It was fiscally neutral, it represented revenue to OEFC and an expense to Hydro One.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates<br>• OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding th Global Adjustment (GA) |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some** | • Incurring debt to pay the generators their contracted or regulated payments |

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| **generation supply costs by partially financing the cost of the global adjustment (GA)** | • Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022~~Total of about $0.4 to 0.45 Billion/year~~):

~~This w~~Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), ~~-~~and ~~the~~ Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs. ~~Energy notes that~~
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
  - ~~The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).~~
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- ~~o~~ The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

~~Fund~~ Amortize Conservation Program~~s~~ Costs ~~through the Tax Base~~:

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Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization of conservation costs was not permitted, a fiscal impact could result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

~~This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.~~

- ~~Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.~~

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.

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  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income (revenue) to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income (expense) of Hydro One.
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- Having OEFC help implement this measure may require introducing changes to OEFC's objects as is legal mandate is to help reduce and pay down stranded debt.
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."

**Commented [JK3]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

**Commented [JK4]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
  - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
  - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost~~delay recovery of part~~ of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.~~by~~ This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to or more than $2 billion annually during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA

- Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
- Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years

- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

~~[Check and Update]~~

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ~~OEBT~~ RRRP ~~Pilot Nationwide~~ | | ~~398~~666 | ~~419~~684 | ~~433~~700 | ~~447~~719 |
| ~~OEBT – Enhance Benefit~~ | | 162 | 226 | 279 | 322 |
| ~~OEBT – Expand Eligibility~~ | | TBD | TBD | TBD | TBD |
| ~~Conservation Programs through Tax-Base~~ | ~~110~~ | ~~450~~ | ~~450~~ | ~~450~~ | ~~450~~ |
| [Trillium Trust] | ~~TBD~~100 | ~~TBD~~390 | ~~TBD~~390 | ~~TBD~~390 | ~~TBD~~390 |
| Departure Tax | 260 | ~~TBD~~260 | ~~TBD~~260 | ~~TBD~~260 | ~~TBD~~260 |
| DRC removal for Class B | 110 | 450 | | | |
| ~~Tax Relief for Solar and Wind~~ | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total: | ~~220~~470 | ~~1,298~~1,927 | ~~869~~1,560 | ~~883~~1,362 | ~~897~~1,419 |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total:[3] | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| TOTAL[3] | **1,** | **3,** | | | |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**~~December 12~~January 15, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

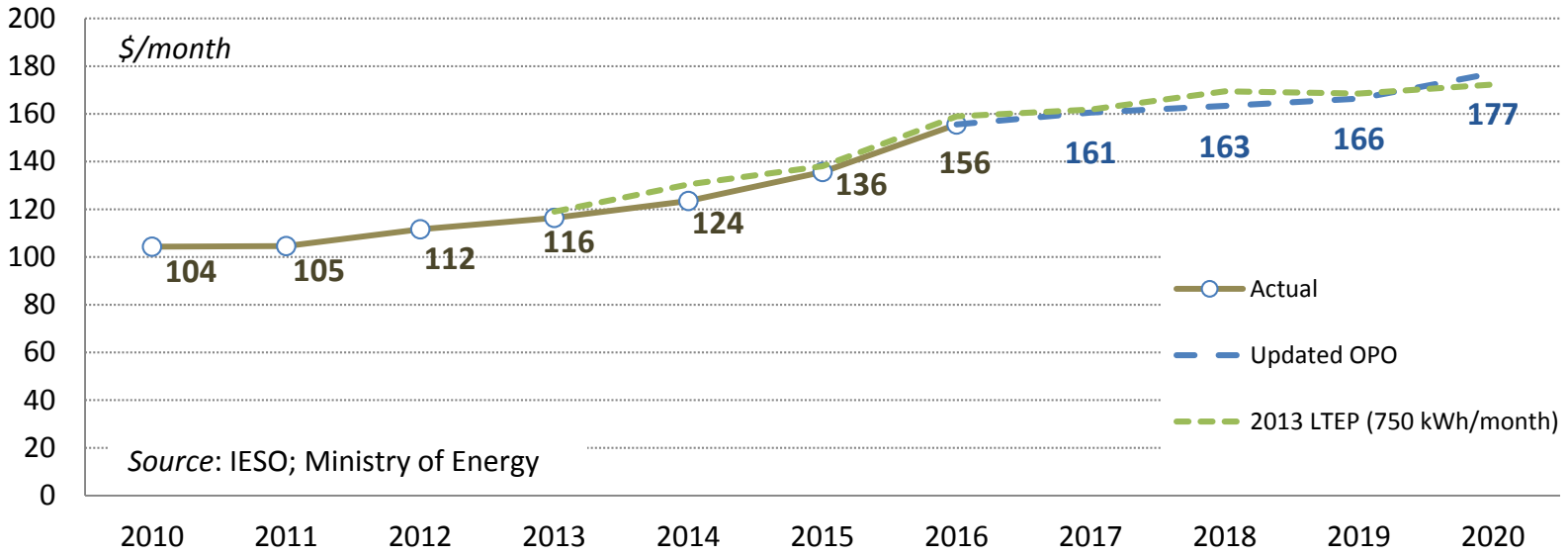
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast*




**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Broad Policy Themes / Rationale

- Support the continued reduction in the differential across distribution rates (as charged by Local Distribution Companies) across the Province through the potential enhancement of Rural or Remote Electricity Rate Protection, (RRRP). In order to not increase regulatory costs to customers as a result, this program can be moved to the tax-base.
- Provide a greater focus and support on lower income Ontarians by funding the Ontario Electricity Support Program (OESP) through the tax-base, as well as enhancing the support available through the program.
- Amortize electricity conservation and demand management (DM) programs over 15-years to provide lower costs for electricity consumers.
  - Alternatively, pay for conservation/DM programs through the tax-base and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties and expansion of natural gas to underserved areas (i.e., rural and remote communities), etc.
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" an alternative rate plan, based on a flat electricity rate, as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time. Also give consumer greater transparency with respect to electricity costs by providing more details regarding the Global Adjustment (GA).
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers, a benefit of $7/MWh.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 1.53 | 1.58 | 1.61 | 1.66 | 1.70 | 1.74 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.57 | 0.79 | 0.98 | 1.13 | 1.29 | 1.44 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC Efficiencies/Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.71 | 0.89 | 1.08 | 1.22 | 1.35 | 1.24 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. v Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 2.04 | 2.10 | 2.15 | 2.22 | 2.27 | 2.32 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.76 | 1.05 | 1.31 | 1.51 | 1.71 | 1.92 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC Efficiencies / Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.59 | 0.74 | 0.89 | 1.01 | 1.12 | 1.03 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Taxpayer Funded Electricity Price Mitigation

| *$M* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. Fund RRRP through the Tax-Base* | - | 666 | 684 | 700 | 719 |
| 2. Fund OESP through the Tax-Base | | | | | |
| a. Enhance OESP Benefit | | 162 | 226 | 279 | 322 |
| b. Expand OESP Eligibility | | TBD | TBD | TBD | TBD |
| 3. Conservation Funding Options | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | - | - | - | - | - |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | 100 | 390 | 390 | 390 | 390 |
| 5. Dedicate Departure Tax | 260 | 260 | 260 | 260 | 260 |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC Efficiencies / Rates | - | - | - | - | - |
| c. OPG – Operational Efficiencies | - | - | - | - | - |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers) | 110 | 450 | - | - | - |
| 9. Extend the Length of Existing Wind/Solar Contracts at Lower Prices | - | - | - | - | - |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| Fund Conservation Programs Through The Tax-Base | 154 | 632 | 649 | 567 | 568 |
| Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy
**Note:** *Assumes RRRP enhancement to reduce distribution rates to $30 for LDCs and **Assumes increase OESP credit by 50%.
Not included in chart is additional $18M/year to fund potential First Nations rate program through the Tax-Base.

# Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are aimed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

- Given that these programs focus on promoting equity between different areas of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.
  - These enhancements would also work in conjunction with the Ontario Energy Board's focus on reducing LDC costs outlined in option 6b.

# 1. Rural or Remote Rate Protection (RRRP) Expansion

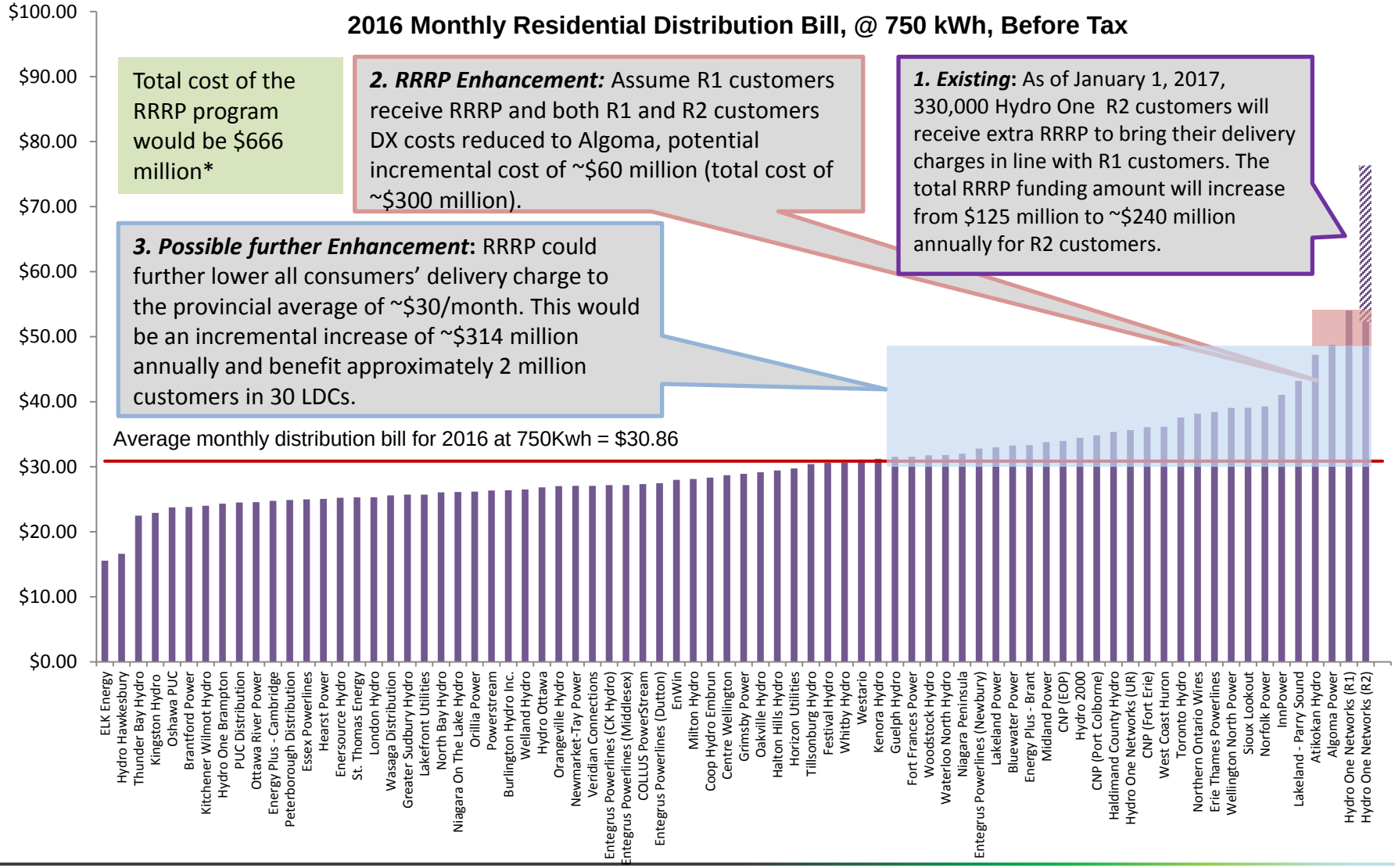
- The Rural or Remote Rate Protection (RRRP) program supports the most costly-to-serve distribution customers in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
  - Costs to these Hydro One customers are higher than average because of their relatively low density. The OEB mandates that they pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies.
  - To mitigate these costs, the RRRP was recently enhanced to help lower the bills of Hydro One's R2 customers to around those of its R1 (medium density) customers.
- Although other LDCs do not have medium- and high-density rates, there is a wide range of distribution costs between LDCs. The RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - Could be done on its own or as part of exploring an Ontario-wide uniform "postage stamp" delivery rate.

**Considerations**

- RRRP will be enhanced for R2 customers on January 1, 2017 to have their costs reduced to approximately R1 distribution costs levels. The RRRP could be further enhanced to include R1 customers, and have R2 and R1 customers reduce their costs down to Algoma (see next slide). This would cost $300 million in the first year (and would adjust year over year).
- If there was a desire to reduce costs for all LDCs, a simple average of distribution cost before tax, across all rate zones is $30.86 per month, for a residential customer consuming 750 kWh per month.** Bringing all delivery rates down to this average would cost approximately $500 million for the first year, with escalation in line with average distribution rate increases.
  - This assumes Hydro One R2 consume 1,200 kWh and H1 R1 customers consume 1,000 kWh per month.
- If all customers were brought down to the average costs (see the chart on the next slide for more detail):
  - It is assumed that residential customers with bills less than the provincial average see no change;
  - Majority of the enhanced benefit would go to Hydro One R1 and Toronto Hydro customers; and
  - Mechanism to ensure that LDCs continue to be motivated to achieve efficiencies would need to be designed (see section 4).
- Enhanced RRRP support may be best provided from the tax-base, because if funded from the rate-base, it would increase the costs for all customers who may argue that it is unfair that they are being asked to pay more to subsidize those in other LDCs.
- In conjunction with using the tax-base to reduce delivery charges to the provincial average, the OEB could be asked to explore moving to a province-wide "postage stamp" delivery rate that would be the same across the province to be implemented over time.
  - Could be "winners and losers" as delivery rates less than the average would go up in a postage stamp model;
  - A "postage stamp" model could help incent LDC consolidation.

**Note:** This is based on preliminary estimates and the amount will fluctuate on monthly consumption from customers and LDCs have different customer base with different consumption types.

# 1. Rural or Remote Rate Protection (RRRP) Expansion (cont'd)




*Note: this includes the ~$50M currently supporting Algoma Power and Hydro One Remotes.*

# 2a. Enhance Ontario Electricity Support Program (OESP) Benefit

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills. The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices and at launch, it was estimated ~560,000 families could be eligible and some 261,000 applications have been submitted.

- The OESP program benefits could be increased across the board by 50%, which would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).

- The OESP program could also be further enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).

**Considerations**

- If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible.
  - At the time of program design, advice was given that a 40-50% participation rate would be high for an application-based program delivered through electricity bills.
  - The province would need to work with LDCs if the rebate was to appear on electricity bills rather than be delivered via the income tax system (e.g., through the Trillium Benefit).

# 1 & 2a. Fiscal Impacts of RRRP, OESP and First Nation Rate

- Table below shows estimates of program costs up to 2022:

| Year | OESP ($M) | OESP + 50%($M) | RRRP($M) | RRRP Enhancement ($M) | First Nations Delivery Rate($M) | TOTAL RANGE ($M) (from status quo to OESP and RRRP enhancements) |
|---|---|---|---|---|---|---|
| 2017 | $108 | $162 | $292 | $374 | $18 | $418 to $846 |
| 2018 | $150 | $226 | $300 | $384 | $18 | $468 to $928 |
| 2019 | $186 | $279 | $306 | $394 | $18 | $510 to $997 |
| 2020 | $215 | $322 | $315 | $404 | $18 | $548 to $1,059 |
| 2021 | $243 | $365 | $322 | $415 | $18 | $583 to $1,120 |
| 2022 | $272 | $408 | $329 | $426 | $18 | $619 to $1,181 |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections above assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
   - The second column forecast also assumes the existing credit amounts increase by 50%.
     - Forecast assumes 10% administration costs
     - Forecast does not account for the approximately 142,000 low-income households that OEB estimated are not eligible because they do not directly receive an electricity bill.

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.
   - Expansion to cap distribution rates for other customers is based at $374M and assumes escalation of 2.6% (historical average dx rate increase). This is a conservative estimate, as Hydro One and Toronto Hydro increases could drive program costs beyond the average increase.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 2b. Expand OESP Eligibility

**Expanded Coverage**

- When OESP was being created, the OEB estimated that are 713,000 low-income households, of which 20% do not receive electricity bills. Thus, only 571,000 would potentially be eligible for OESP.
- If moved to the tax base, the OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity.

**Eligibility Categories**

- OESP has two credits amounts:
    1) Basic credit of $30-50 per month, based on the level of income and the number of residents.
    2) Enhanced credit of $45-75 per month for those with unique electricity needs:
        a) Electric heating,
        b) Indigenous customers, and
        c) Certain electrically intensive medical devices.
- The enhanced credit can be expanded to include additional eligibility categories of customers. For example, a new “Low Density Consumer” category could be introduced that provides Hydro One R2 customers (highest distribution rates) eligible for OESP the enhanced credit.

**Considerations**

- Potential costs for expanded coverage and new eligibility categories depend on updated estimates and changes to program design and delivery.
- There would be value in keeping the OESP as an income-tested program to distinguish it from other initiatives (e.g. RRRP, which is designed to address disparity between rural and urban distribution costs).

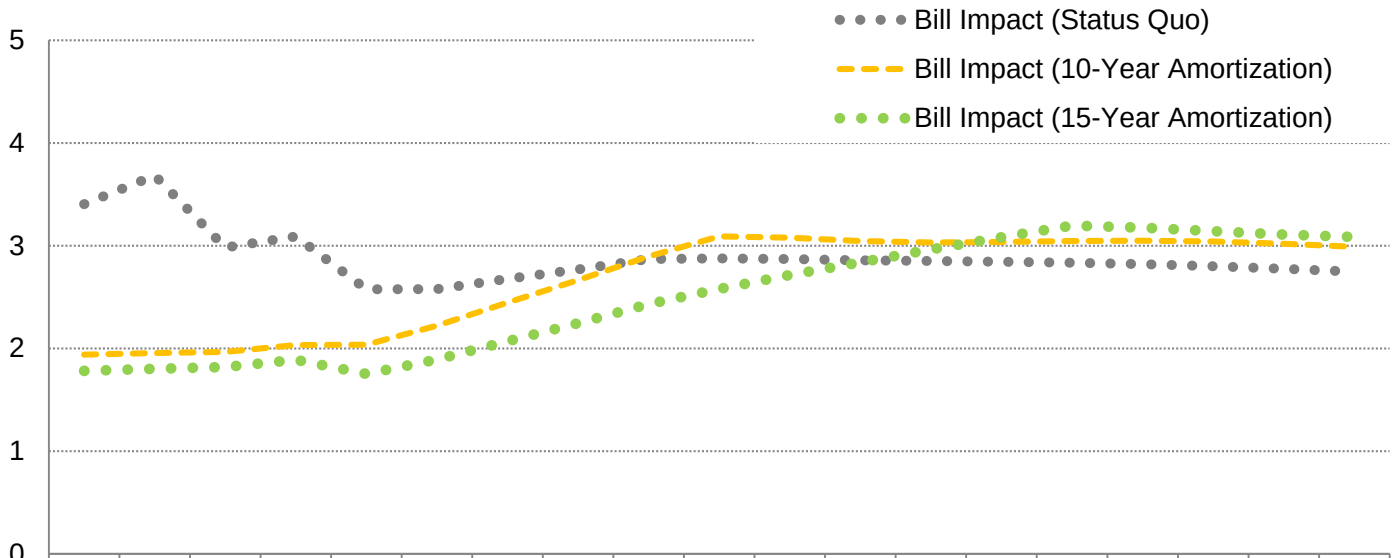
# 3a. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized. This would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs).
  - The time period over which costs could be amortized would be over the lifetime of funded CDM measures.
  - ENERGY is working with IESO to determine the appropriate lifetime period – the graph on the next slide, which illustrates residential bill impacts, presents two cases: **10-year and 15-year measure lifetimes**.
- In both cases, amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020. Over time the benefit would decrease and turn into a cost (higher electricity rates than would otherwise occur), as interest charges begin to grow. Estimated interest charges are as follows (a 3% interest rate is assumed; increases in interest rates could result in higher overall interest charges):
  - $712 million ($2016) – Amortizing eligible 2017-2035 CDM costs for 10-year period; and
  - $1.3 billion ($2016) – Amortizing eligible 2017-2035 CDM costs for 15-year period .
- Legislative changes would be needed to allow recovery of interest payments from ratepayers, or these costs could be recovered from the Consolidated Revenue Fund (CRF, or taxes).
- An alternative that could be explored would be to pay for CDM costs, or for a portion of these, from the tax-base (*see Appendix for more detail on tax funding option*).

# 3a. Amortize Conservation Program Costs (cont'd)

## Conservation Residential Bill Impact – Status Quo, 10-Year and 15-Year Amortization

***CDM Bill Impact ($/month)***




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bill Impact (Status Quo) | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | 2.68 | 2.77 | 2.87 | 2.88 | 2.87 | 2.86 | 2.85 | 2.84 | 2.83 | 2.82 | 2.80 | 2.78 | 2.75 |
| Bill Impact (10-Year Amortization) | 1.94 | 1.95 | 1.97 | 2.03 | 2.04 | 2.22 | 2.45 | 2.67 | 2.90 | 3.09 | 3.08 | 3.05 | 3.03 | 3.04 | 3.04 | 3.05 | 3.04 | 3.02 | 2.99 |
| Bill Impact (15-Year Amortization) | 1.78 | 1.80 | 1.82 | 1.89 | 1.75 | 1.89 | 2.07 | 2.25 | 2.43 | 2.58 | 2.71 | 2.84 | 2.96 | 3.08 | 3.20 | 3.18 | 3.14 | 3.11 | 3.09 |

Source: IESO; Ministry of Energy

**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10 of 15-year borrowing rate of 3.0%.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.
- Legislative amendments would be needed to allow recovery of loan interest charges from GA.
- ENERGY staff have developed a note to seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
- ENERGY is working with IESO to seek an opinion on the proposal from IESO's external auditor.
- ENERGY would then send the IESO external auditor's opinion along with ENERGY's explanatory note to the Ontario Provincial Controller (OPC) to seek a formal opinion on whether CDM costs could be amortized according to rate-regulated accounting standards.
- Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 3b. Rate Smoothing of Conservation Program Costs

- "Rate smoothing" could achieve the same rate reduction effect as amortization.
- Instead of taking out a loan to amortize conservation costs, a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Each year, IESO would defer recovery of a portion of annual conservation costs. Financing would also be required, such as from the OFA, to pay the interest on the deferral account. Interest would accrue on the deferred amounts, likely at the same rates as for the amortization option.
- Deferred costs could be recovered over any time period. If a 10 or 15 year-period was chosen, the rate impacts would be the same as in the amortization option.

**Considerations**

- Option would **not** require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open the Ministry to criticism by the Controller and/or Auditor General since the rate impact is the same.
- The Ministry would have more control under this option to change deferred amounts each year, as opposed to the terms set by a loan agreement under the amortization example.
- There is precedence to this approach for nuclear investments, which otherwise would result in volatile increases and decreases for Ontario ratepayers over the investment period. In 2015, the Ministry amended a regulation that requires the Ontario Energy Board (OEB) to set "smoothed" nuclear rates for OPG's Darlington and Pickering nuclear stations over a 20-year period.
  - The regulation allows OPG to defer recovery in rates of a portion of its nuclear revenue during the Darlington refurbishment (expected to be complete in 2026) and recover these deferred costs over the remaining ten years.
  - OPG will establish a "deferral account" to record the deferred amounts each year up to 2026 plus accumulated interest on the balance to reflect OPG's financing costs as a result of rate smoothing. The deferral account is then drawn down on a straight-line basis between 2026 and 2036.
- At minimum, new regulation would be required. However, further analysis is needed to determine the relevant regulation or legislation, to be amended for IESO (e.g., OEB regulation of IESO costs and fees, GA regulation for how IESO recovers its conservation costs from ratepayers).

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure

- Fund investments in specific energy infrastructure projects through the tax-base. **Note:** This could include the provincial portion of funding for the Remote First Nation Connection Project, a fund to support projects that improve adequacy and reliability in areas where new transmission would unlock economic growth and expansion of natural gas service to underserved communities.

**Considerations**

- Tax-base funding would allow for energy infrastructure to be built without impacting electricity and natural gas rates.
- Would require increasing the amount of funding committed to the Trillium Trust. All fiscal impacts from broadening Hydro One have been committed to the Trillium Trust $5.7 billion target and allocated to Moving Ontario Forward projects.
- There would be an ongoing fiscal impact from the amortization and funding of the investments. Where amortization is not possible there would be an upfront fiscal impact.

*Remote Connection Project:*

- Ontario ratepayers currently support costs of remote electricity service through RRRP on the order of $28 million/year
- Connecting 21 remote communities to the Ontario grid is supported by a positive business case due to diesel cost savings over time. If RRRP is funded through the tax base as proposed above, this project represents an opportunity to reduce impacts from RRRP.
- Direct investment in Ontario's portion of the capital costs of the project through a provincial fund (e.g., Trillium Trust) could also be considered along with mechanisms for cost recovery through transmission rates to refresh the fund as industry benefits from the transmission investment.
- The amount of investment and long-term savings depend on a federal contribution to the project and ENERGY is currently in discussions with Canada with the goal of concluding a cost-sharing agreement by spring 2017.
- A move to tax-based funding may have implications for cost oversight, since the OEB's mandate is to have oversight of ratepayer impacts. Alternative methods to review cost prudence of tax-based funding may be needed.

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (cont'd)

**Considerations (cont'd)**

*Transmission Projects to Enhance Economic Growth:*

- A tax-based fund could target investments in projects that have been identified in IESO regional plans and that would stimulate economic growth but are not proceeding due to cost barriers under the OEB's beneficiary pays principle. Investments could also target areas where the existing system poses challenges for delivering reliable service such as in parts of Northern Ontario with long single circuits.
- Potential opportunities for investment could include a transmission reinforcement in the **Greenstone area**, upgrades south of **Red Lake** and others TBD based on program design.
- This approach would allow a potion of project costs to be socialized to advance key projects without impacting rates or OEB's principles of cost allocation. Scope and scale of fund would be refined through program design.

*Natural Gas Expansion to Underserved Communities:*

- The Government has currently committed to expanding natural gas access to more communities in Ontario (i.e., $200 million Natural Gas Access Loan and $30 million Natural Gas Economic Development Grant).
  - Natural gas is an affordable heating source in Ontario. Its continues to be less expensive than alternative sources such as electric baseboards, heating oil and propane. For example, switching from oil to natural gas can save an average consumer an estimated $1,500 annually.
  - Increasing access to other energy sources such as natural gas, provides Ontarians with more options to meet their needs, reduce their energy costs and improve their quality of life.
  - Expansion of natural gas delivery infrastructure is widely supported in underserved communities (i.e., a recurring theme at ROMA) as a means to provide consumers and businesses in underserved communities with more affordable energy choices, attract new industry to Ontario and benefit agricultural producers.
- A grant program complements the Ontario Energy Board's recent decision enabling greater rate-based expansion to unserved areas, including rural and remote communities.
  - Applying Trillium Trust funding would make it possible to enhance the Grant Program and service more communities.

# 5. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.
- If the Province were to transfer $2.6 billion in economic benefits to the rate base over 10 years suggest the following fiscal impacts (assuming 140TWh per year):
  - Residential Ratepayer Impact (if spread over 10 years): up to $1.39 per month on a typical bill; and
  - Industrial Ratepayer Impact (if spread over 10 years): up to $1.86 / MWh
- There would be no certainty that the OEB could still decide to allocate some or all of Hydro One's deferred tax benefit to ratepayers which would have fiscal impact (lower share price and lower net income over time).

**Considerations**

- Cost savings to ratepayers and associated fiscal impacts would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- The departure tax was effectively a true-up for lower PILs payments from Hydro One in previous years – it was not a one-time windfall for the Province. In other words, it ensures that Hydro One paid all its tax obligations under the PILs regime before moving into the normal corporate tax regime.
- The related ~$2.4 billion fiscal benefit to the Province (from the deferred tax benefit) has already been credited to the Trillium Trust to be used to build infrastructure under Moving Ontario Forward.
- Repurposing funds paid to OEFC would ~~may~~ have an impact on the defeasance of electricity stranded debt and would cause the first increase in stranded debt since 2004.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to ~~infrastructure investments already made in the sector, or to specific initiatives such as conservation~~).

# 6a. Empower Energy Agencies – IESO / Market Renewal

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 6b. LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
  - Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
    - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.

**Considerations**

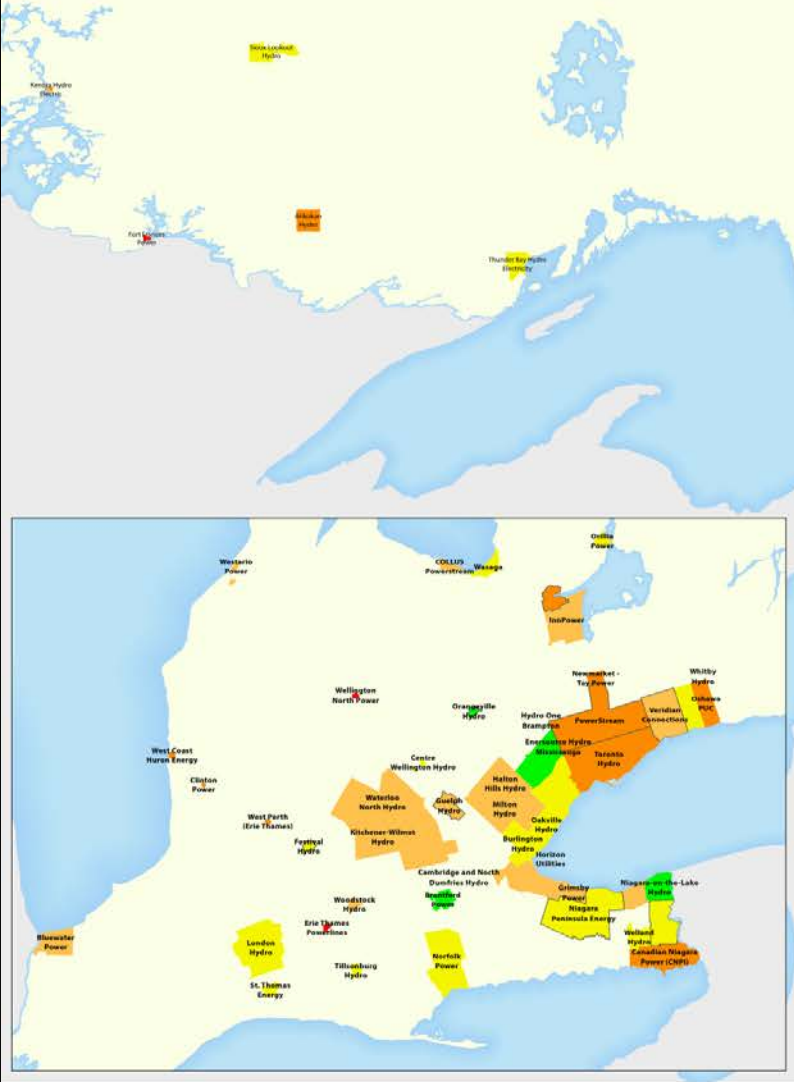
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.

- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
  - To further help address the costs associated with the Delivery line of the electricity bill, program such as the RRRP (previous slide) could be expanded to include other customers that may face higher costs.

- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.

- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation. Further changes to the tax incentives and/or revisiting legislated consolidation could be considered.

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

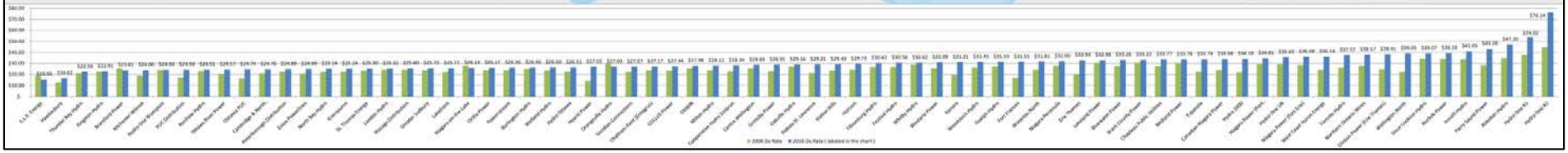
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# 6c. Empower Energy Agencies – OPG / Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

**Considerations**

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.
- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available, providing customers with pricing choice.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- Would provide consumers with electricity pricing choice.
- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro- November 2016 rates)

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7b. Give Consumers More Rate Choices and Greater Transparency – Detailed Global Adjustment

- Provide electricity consumers greater transparency with respect to electricity generation costs by providing more details regarding the Global Adjustment (e.g., adding a line on hydro bills, quarterly energy reports, etc).

**Considerations**

- As electricity bills have increased, many consumers have complained about a lack of transparency on the drivers of electricity costs. In particular, consumers and legislative officers have singled out the GA.

- Providing consumers with additional information on the cost components and amounts recovered through the GA would help consumers understand how the different forms of electricity generation in Ontario contribute to consumers costs.

- Providing additional information to consumers on electricity commodity cost drivers without sufficient context or background could simply lead to increased complaints about particular generating technologies that make up large shares of costs (e.g., nuclear).

- Adding a breakout of the amount of GA on residential electricity bills could lead to further confusion due to the existing breakout of multiple time-of-use buckets.

- Alternatively, the existing quarterly Ontario Energy Report, which provides various energy sector data, could be leveraged to show a breakout of quarterly GA costs by fuel type. A link on electricity bills could point to this information.

# 8. Help Small Business Manage Their Electricity Cost – End DRC Early for Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the proponents agreeing to a lower price in the near term.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period ; discussions/consultation may be required in advance of this potential option moving forward.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- Since the Minister of Energy is not a party, IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms would also reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.

- Projects over 500 kW would offer the most savings potential as they represent the majority of installed renewables capacity and are spread across fewer contracts.

- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.

- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh;
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
  - **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 million | $582 million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - For example, the New contract is $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 million | $632 million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# 10. Tax Relief for Solar and Wind Contracts

- In 2010 and 2011 Ontario procured large scale projects (>500 kW) through the FIT program at standard offer pricing.

- The FIT program was the centerpiece of the GEA which established the economic and social goals of growing the green economy, including establishing a local renewable energy manufacturing base, supporting the development of green energy jobs, and providing incentives for Indigenous participation.

- To help achieve these economic and social goals, the FIT program offered pricing at above competitive procurement rates, and provided Indigenous and Community participation adders, which resulted in economic benefits to all Ontarians, but resulted in additional costs borne by Ontario's electricity ratepayers.

- Ontario could fund the added cost of some or all of these economic and social incentives by shifting their costs from the rate-base to the tax-base.
    1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
    2. The tax base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT.

**Considerations**

- If applied to projects in commercial operation the benefit to the ratepayer would be immediate.
- Comparing FIT pricing to competitive procurement pricing could provide a reasonable representation of energy procurement without the added cost of economic and social incentives.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
   - For example, from 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
   - The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
   - If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
   - The $3.3 billion difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.
   - This represents estimated average ratepayer savings of $1.50/ month relative to OPO forecasts.
   - The same approach could be considered for solar projects however, prior to LRP I in 2016, Ontario had not procured solar capacity competitively and international cost comparisons are challenging given differences in regional development costs.
   - This example does not include the value of participation price adders available for community and indigenous participation.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

2. The tax-base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT 1 solar and wind projects.

   - For example, 17 large FIT 1 wind and solar projects have Indigenous and/or Community participation making them eligible for a price adder in addition to their base contract price.

   - The estimated value of these price adders is approximately $17.1 million (NPV 2017) over the expected remaining term of their contracts.

   - This represents estimated ratepayer savings of approximately $0.01/month relative to OPO forecasts.

# FIT 1 and GEIA Wind Projects in Commercial Operation
(source: IESO Active Contracts List, October 31, 2016)

| Count | Program | MW | COD |
|---|---|---|---|
| 1 | FIT 1 | 0.8 | Oct-10 |
| 2 | FIT 1 | 18 | Jul-15 |
| 3 | FIT 1 | 23 | Aug-15 |
| 4 | FIT 1 | 40 | Jan-15 |
| 5 | FIT 1 | 10 | Sep-14 |
| 6 | FIT 1 | 10 | Sep-14 |
| 7 | FIT 1 | 10 | Jun-14 |
| 8 | FIT 1 | 99 | May-13 |
| 9 | FIT 1 | 100 | Oct-15 |
| 10 | FIT 1 | 4 | Sep-12 |
| 11 | FIT 1 | 100 | Apr-16 |
| 12 | FIT 1 | 15 | Jun-15 |
| 13 | FIT 1 | 18 | Mar-12 |
| 14 | FIT 1 | 104.4 | Nov-13 |
| 15 | FIT 1 | 40 | Dec-15 |
| 16 | FIT 1 | 60 | May-14 |

| Count | Program | MW | COD |
|---|---|---|---|
| 17 | FIT 1 | 125 | Aug-13 |
| 18 | FIT 1 | 73.5 | Aug-14 |
| 19 | FIT 1 | 102 | Jan-15 |
| 20 | FIT 1 | 9 | Jan-12 |
| 21 | FIT 1 | 4.1 | Dec-15 |
| 22 | FIT 1 | 0.5 | Oct-13 |
| 23 | FIT 1 | 82.8 | Nov-11 |
| 24 | FIT 1 | 18.45 | Sep-16 |
| 25 | FIT 1 | 60 | Jul-14 |
| 26 | FIT 1 | 10 | Oct-16 |
| 27 | FIT 1 | 6.15 | Nov-14 |
| 28 | FIT 1 | 2.3 | Aug-15 |
| 29 | FIT 1 | 10 | Feb-16 |
| 30 | FIT 1 | 8.2 | Nov-14 |
| 31 | FIT 1 | 150 | Nov-14 |
| 32 | FIT 1 | 91.39 | Dec-14 |

| Count | Contract | MW | COD |
|---|---|---|---|
| 33 | FIT 1 | 25 | May-15 |
| 34 | FIT 1 | 82.8 | Nov-11 |
| 35 | FIT 1 | 30 | Mar-14 |
| 36 | FIT 1 | 17.6 | May-16 |
| 37 | FIT 1 | 23 | Dec-12 |
| 38 | FIT 1 | 99 | May-13 |
| 39 | FIT 1 | 48.6 | Dec-11 |
| 40 | FIT 1 | 19.44 | Aug-15 |
| 41 | FIT 1 | 10.8 | Mar-12 |
| 42 | FIT 1 | 38.88 | Sep-15 |
| 43 | FIT 1 | 60 | Aug-14 |
| 44 | GEIA | 270 | Mar-14 |
| 45 | GEIA | 180 | Dec-15 |
| 46 | GEIA | 148.6 | Dec-14 |
| 47 | GEIA | 270 | May-15 |

# Key Outcomes / Next Steps

- The proposed initiatives provide the following opportunities to:
  - Provide a greater focus on vulnerable consumers by funding electricity support programs through the tax-base.
    - Enhance existing and new support programs targeted at the most vulnerable consumers (i.e., OESP and RRRP); and
    - Better harmonize delivery rates across the province.
  - Re-set how energy infrastructure is funded by shifting costs to the tax-base from the rate-base.
  - Provide electricity consumers with greater choices and transparency (e.g., alternative rate plan based on a flat electricity rate, unpacking the Global Adjustment costs, etc);
  - Provide system benefits (e.g., market renewal);
  - Increase cost effectiveness and improve efficiency; and
  - Lower the cost of electricity for all consumers.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require legislative and/or regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

A. Rural or Remote Rate Protection (RRRP) – Overview and Enhancements
B. Fund Conservation Programs Through the Tax-Base
C. Eliminate the Industrial Conservation Initiative (ICI)
D. Cancel Large Renewable Procurement I (LRP I)

# A. RRRP Overview and Enhancements

- The Delivery line of the electricity bill is composed of Distribution and Transmission Costs. While transmission costs are uniform across the province, LDC costs vary by distributor and account for about 20% of the total bill for the electricity customers.
  - See slide X for a map of delivery rate increases between 2006 and 2016.
- The Rural or Remote Rate Protection (RRRP) framework was put in place in 2001 to help offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations.
- RRRP is available to: residential Hydro One R2 customers (~350,000 customers), Algoma Power customers (~11,600 customers); H1 remote customers (~3,500 customers).
  - To date, R2 customers receive a fixed amount of $125 million a year distributed amongst the customers. Algoma and Remote customers have RRRP calculated by the OEB each year that fluctuates based on average provincial distribution increases.
- Because the amount had been fixed for over a decade, the Province recently increased funding of the RRRP program for Hydro One R2 customers from $125 million to $240 million. This will be effective as of January 1, 2017, and will bring their delivery charges in line with the next highest charges from Hydro One's R1 customer class.

# B. Fund Conservation Programs Through the Tax-Base

- Propose to fund 2017-2020 electricity conservation and demand management program costs* using tax dollars instead of ratepayer dollars.
  - Funds received through the Hydro One Departure Tax could potentially be repurposed towards this.
- Total remaining 2017-2020 electricity conservation program costs are expected to be ~$2.1 billion.
- Post 2020, this option could evolve to funding conservation programs through the Greenhouse Gas Reduction Account.

**Considerations**

- Electricity conservation programs provide a number of benefits to society, however, Ontario's ratepayers have been covering these costs:
  - Avoiding/deferring future energy infrastructure investments, reducing disruption in communities (e.g., avoiding the need to build new natural gas generation);
  - Environmental benefits (e.g., reduced natural gas peaking generation and GHG emissions); and
  - Social and economic benefits (e.g., job creation and assistance managing electricity bills).
- There is precedence for using tax dollars to fund conservation programs.
  - Between 2007 and 2011, Ontario funded the Home Energy Savings retrofit program using tax dollars.
- Funding conservation programs though the tax-base is expected to result in a benefit of $3.40/month for residential electricity consumers in 2017. This could provide immediate short term relief to consumers while other rate mitigation initiatives are developed (e.g., market renewal, LDC efficiencies).

*** Note:** This includes costs towards the Conservation First Framework, Industrial Accelerator Program, Demand Response and the Conservation Fund)

# C. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

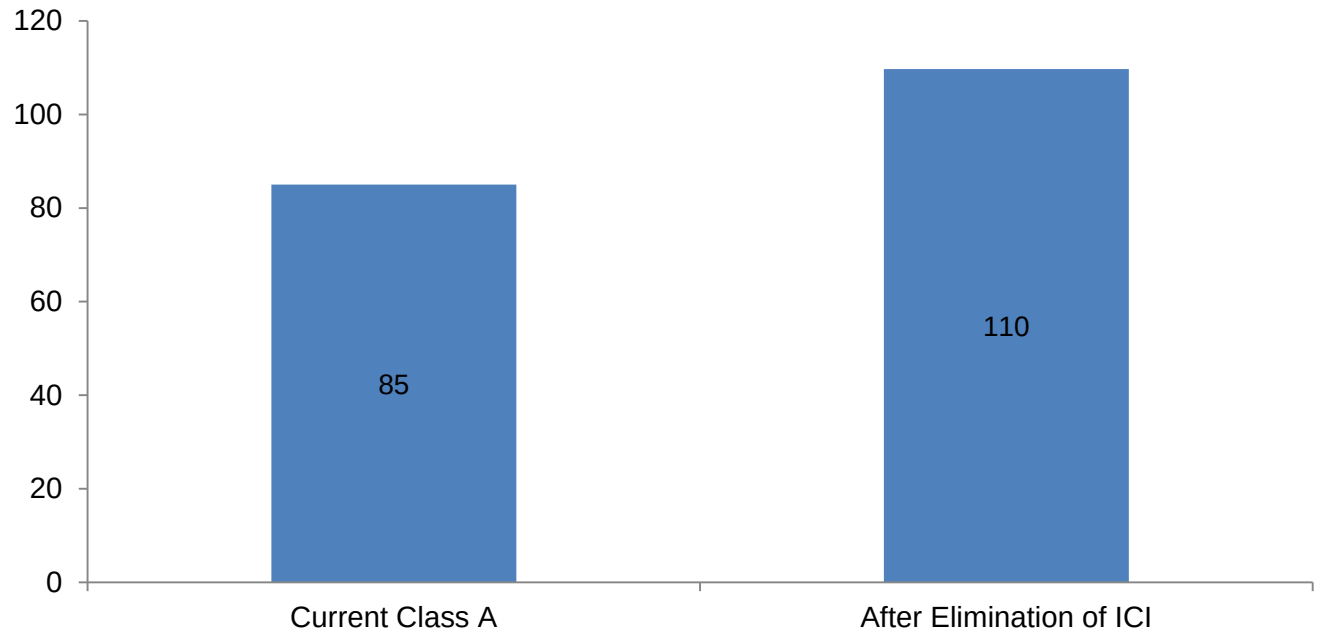
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# C. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# D. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period.
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g. rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

*Cancel/Adjust Announced Procurements:*

- Amendments to existing directions to IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

*Cancel Existing LRP I Contracts:*

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

**Legal Analysis**

- Any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements.
  - An amendment to an existing direction would not require Cabinet approval, however, further analysis is required to determine if direction to cancel LRP I contracts could be considered as amending existing direction.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights. This reasoning would likely apply equally to any direction to IESO to cancel LRP I contracts. Previous advice has also flagged a risk that the Province could be liable for damages in tort for inducing a breach of contract (or other claims).
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

**Debt Financing the Global Adjustment Proposal**

**ISSUE**

The Ministry of Energy (ENERGY) has provided a presentation on an electricity price mitigation option to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.

The Ministry of Energy deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation.

**CONTENT**

- As discussed in ENERGY's proposal deck, some contracted generation and conservation initiatives provide benefits in longer term, so there might be an opportunity to recognize these longer-term benefits by deferring some of the current costs in GA.

- ENERGY has provided a presentation deck on an indicative GA financing proposal, including a qualitative discussion of the risks associated with the proposal. Four scenarios and sensitivities are presented, e.g., capped at different degrees of deferred GA amounts to be recovered. Energy's deck assumes 5% borrowing interest and the GA amount increases at 2% per year. The deck shows the cumulative amount of debt incurred, impact on total system cost, and impact on residential bills.

**CEFD STAFF COMMENTS**

- ENERGY's proposals generally involve reducing current costs and deferring part of the costs into long-term. While the proposals may have a fairly significant residential rate payer savings in short-term, e.g., $14 - $28/month decrease, but might have significant impact on rate payers in the long-term, up to $30/month increase.
- In addition, ENERGY's proposal will lead to significant accumulated debt in longer term. It involves borrowing large amounts of money over a long period of time, 16-30 years, depending on the scenario, which are highly sensitive to interest rates.
- It would be helpful to understand how much certainty there is that the debt could be paid off in the 25 or 30 year scenarios and how the Province would hedge against the various risks? Given the variability and relationship with HOEP, what ability would there be to predict these financing needs for the GA.
- There is significant risk where with potential future scenario of significant uptake in self-generation, net metering and due to other technological changes, the electricity load drops significantly from the base case scenario. It would then represent a new type of stranded debt scenario.
- IESO market transactions, including payments to generators above HOEP are not reflected as revenue or expenses in IESO's financial statements. IESO receives recovery of the GA amounts in each settlement period. It would be important to consult with OPCD on the accounting treatment if IESO did not recover the full GA costs each settlement period, or over a fiscal year.

- Cash from debt-financing to cover GA payments would not be expected to be recorded as revenue, leaving generation supply costs higher than the amounts recovered from the market plus the GA.
- Prior to pursuing the proposal, would also need to consult Constitutional Law Branch on risks related to the GA being charged to those who may not have as direct a link to those who benefited, i.e. the significant time lag between incurring of the costs and recovery of the costs.

**Detail on Proposals**

Status Quo:

Ratepayers continue to pay the full cost of GA each year until the debt is paid

- According to the graph provided by ENERGY, it seems that as GA decreases, the residential electricity bill increases. What's the cause of this?
- It would be helpful to understand what is driving the reduced IESO GA Costs up to 2035.

Moderate short-term cost reductions with limits (capped at no more than $2B above the true cost of GA)

The starting GA payment from all ratepayers in 2017 is lowered by $2.5 billion below the true cost of GA and is increased at inflation in subsequent years.

- The scenario shows that we are effectively shifting GA costs from today to future rate payers while incurring financing costs. It would appear that there would be no savings to the ratepayers, only a shift of cost from today into the future, with the financing cost as an additional component.

Maximized short-term cost reductions with limits (capped at no more than $2B above the true cost of GA)

The starting GA payment from all ratepayers in 2017 is lowered as much as possible and is increased at inflation in subsequent years.

- The scenario should provide the starting GA payment from all ratepayers in 2017, i.e., by how much it is lowered.
- How does the refinanced GA drop 25 and 30 years from now to match IESO's forecast? It would be helpful to understand the assumptions used in making this graph.
- In this scenario, the total debt was much higher than the previous scenario (up to $10.7B vs $23B), but it seems it will result in a similar increase in residential bills in the long-term. Wouldn't this scenario result in bigger increase in residential bills in long-term?

Maximized short-term cost reductions, no limits

The starting GA payment from all ratepayers in 2017 is lowered as much as possible and is increased at inflation in subsequent years such that the borrowed money is paid back in 25 and 30 years respectively.

**QUESTIONS**

- Do any of the scenarios account for the GA increasing more than the IESO's OPO? What are the chances of that occurring and how would that be mitigated in the long-term?
- Would Energy proposals potentially accept an introduction of a DRC version 2?
- How would the regulator or the government manage the long time horizon and the size of the new debt arising in the sector, as well as the mechanism(s) to pay for the debt? Intergenerational aspects to the incurring of the debt and paying down the debt would need to be considered in setting up the structure, as well as the Constitutional Law risk.

**Prepared by:** **Corporate and Electricity Finance Division**
**Date:** **January 14th, 2017**

| | |
|---|---|
| **From:** | Gavin He |
| **To:** | John Kim |
| **Subject:** | RE: Rate Mitigation |
| **Date:** | Saturday, January 14, 2017 12:04:02 PM |
| **Attachments:** | Debt Financing the Global Adjustment Proposal CEFD Comments_v2.docx |

Hi John,

It seems that Ron already reviewed the BN that I drafted yesterday because I saw he created a v2 there and updated the note.

I didn't see anything additional comments in the note. Not sure if he was okay with that version?

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Saturday, January 14, 2017 10:19 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Yup, for sure. Let's try to get bulk of it done over the weekend so we have a finalized product by eod Monday.

---

**From:** Gavin He
**Sent:** Saturday, January 14, 2017 10:17 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Hi John,

Sorry I didn't get a chance to work on that before I left yesterday, but I am planning to update it later today, if that's ok?

Thanks,
Gavin He

On Jan 14, 2017, at 10:07, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Gavin,
>
> How did this go? Let me know where things are….I can jump on it too once you've had a crack at it.
>
> Thanks,

John.

---

**From:** Gavin He
**Sent:** Friday, January 13, 2017 3:20 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John,

Please take a look and let me know if this would work. Also saved under below folder:

S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, January 13, 2017 2:07 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Hi,

Would you put down the key issues, comments, questions in a Word document.

Thanks,
Ron

On Jan 13, 2017, at 1:34 PM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Ron,
>
> Pls. see attached with comments from both SPFB and EFB.
>
> Thanks,
>
> John.
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Thursday, January 12, 2017 11:42 AM
> **To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
> **Subject:** FW: Rate Mitigation

Hi John, Emily,

Please review and let's discuss. Energy has asked to keep this tightly held and not discuss with, e.g., OPCD at this point.

Ron

---

**From:** Gadi Mayman
**Sent:** January-12-17 11:27
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
**Subject:** FW: Rate Mitigation

Here it is. I haven't looked at it, but wanted to send it to you right away

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**From:** Imbrogno, Serge (ENERGY) [mailto:Serge.Imbrogno@ontario.ca]
**Sent:** Thursday, January 12, 2017 11:26 AM
**To:** Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>
**Subject:** Rate Mitigation

Hi,

Attached is a rate mitigation idea we've been asked to work on related to financing the global adjustment. Ideally, it would provide immediate rate relief without having a fiscal impact. The amounts are scalable but we've provided some illustrative numbers.

Serge

<Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup v1.pptx>

**Debt Financing the Global Adjustment Proposal**

**ISSUE**

The Ministry of Energy has provided a presentation on an electricity price mitigation option to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.

The Ministry of Energy deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation.

**CONTENT**

The Ministry of Energy (ENERGY) has provided a presentation deck on an indicative GA financing proposal, including a qualitative discussion of the risks associated with the proposal. Four scenarios and sensitivities are presented, e.g., at different degrees of deferred GA amounts to be recovered (capped at $2 billion deferral or not capped) and different assumed financing costs (3% and 5%). Energy's deck shows the cumulative amount of debt incurred, impact on total system cost, and impact on residential bills.

**CEFD STAFF COMMENTS**

Slide 3:

- It would be helpful for the graph to show the financing cost component in the increasing debt or accumulated debt.

Slide 4:

- It would be helpful to understand how much certainty there is that the debt could be paid off in the 25 or 30 year scenarios and how the Province would hedge against the various risks? Given the variability and relationship with HOEP, what ability would there be to predict these financing needs for the GA.
- There is significant risk related to the last bullet where with potential future scenario of significant uptake in self-generation, net metering and due to other technological changes, the electricity load drops significantly from the base case scenario. It would then represent a new type of stranded debt scenario.

Slide 5:

- IESO market transactions, including payments to generators above HOEP are not reflected as revenue or expenses in IESO's financial statements. IESO receives recovery of the GA amounts in each settlement period. It would be important to consult with OPCD on the accounting treatment if IESO did not recover the full GA costs each settlement period, or over a fiscal year.

- Cash from debt-financing to cover GA payments would not be expected to be recorded as revenue, leaving generation supply costs higher than the amounts recovered from the market plus the global adjustment.
- Prior to pursuing the proposal, would also need to consult Constitutional Law Branch on risks related to the GA being charged to those who may not have as direct a link to those who benefited, i.e. the significant time lag between incurring of the costs and recovery of the costs.

Slide 6:

- Adding a high GA/low HOEP sensitivity would help illustrative the size of the identified risk.

Slide 8:

- It would be helpful to provide more details about the scenario, including how the range of 40-46% would apply throughout the time horizon, interest component related to the accumulated debt, etc. How would the differences be financed (i.e. the funding mechanism or organizations involved)?
- The assumed 3% interest cost could be considered already too low in today's rising interest rate expectations, with the 30 year rate already above 3% (about 3.2%).
- The analysis should also factor in the effect of higher debt on the Province's credit rating and the potential impact of the overall debt costs (IOD) for the Province rising as a result of the GA-related debt.

Slide 9:

- The graph shows that we are effectively shifting GA costs from today to future rate payers while incurring financing costs. As mentioned above, it would appear that there would be no savings to the ratepayers, only a shift of cost from today into the future, with the financing cost as an additional component.
- How does the refinanced GA drop 25 and 30 years from now to match IESO's forecast? It would be helpful to understand the assumptions used in making this graph.

Slide 10:

- The scenarios in the slide deck separate the 3% and the 5% examples whereas the more realistic outcome would be to go from the current interest rate of, say 3.2%, to higher rates over time.
- The analysis should also factor in the effect of higher debt on the Province's credit rating and the potential impact of the overall debt costs (IOD) for the Province rising as a result of the GA-related debt.

**QUESTIONS**

- Do any of the scenarios account for the GA increasing more than the IESO's OPO? What are the chances of that occurring and how would that be mitigated in the long-term?
- Would Energy proposals potentially accept an introduction of a DRC version 2?
- On slide 7, as GA decreases, what is the cause of the increased residential electricity bill?

- How would the regulator or the government manage the long time horizon and the size of the new debt arising in the sector, as well as the mechanism(s) to pay for the debt? Intergenerational aspects to the incurring of the debt and paying down the debt would need to be considered in setting up the structure, as well as the Constitutional Law risk.

**Prepared by:** **Corporate and Electricity Finance Division**
**Date:** **January 13th, 2017**

**From:** John Kim
**To:** Gavin He
**Subject:** RE: Rate Mitigation
**Date:** Saturday, January 14, 2017 12:02:28 PM

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Thanks!

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**From:** Gavin He
**Sent:** Saturday, January 14, 2017 12:01 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John,

I was going through the emails and attached are the materials that were shared with DMO on proposed initiatives from ENERGY. I think that's what Ron was referring to.

Regards,
Gavin He

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**From:** John Kim
**Sent:** Saturday, January 14, 2017 11:46 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Do you know which product it is from December Ron is referring to?

On Jan 14, 2017, at 10:25 AM, Gavin He <Gavin.He@ofina.on.ca> wrote:

> Yup.
>
> On Jan 14, 2017, at 10:19, John Kim <John.Kim@ofina.on.ca> wrote:
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> > ---
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> > **From:** Gavin He
> > **Sent:** Saturday, January 14, 2017 10:17 AM
> > **To:** John Kim <John.Kim@ofina.on.ca>
> > **Subject:** Re: Rate Mitigation
> >
> > Hi John,
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> > Sorry I didn't get a chance to work on that before I left yesterday, but I am planning to update it later today, if that's ok?

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> John.
>
> ---
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> **Sent:** Friday, January 13, 2017 3:20 PM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Subject:** RE: Rate Mitigation
>
> Hi John,
>
> Please take a look and let me know if this would work. Also saved under below folder:
>
> S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA
>
> Thanks,
> Gavin He
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Friday, January 13, 2017 2:07 PM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
> **Subject:** Re: Rate Mitigation
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> Hi,
>
> Would you put down the key issues, comments, questions in a Word document.
>
> Thanks,

Ron

On Jan 13, 2017, at 1:34 PM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Ron,
>
> Pls. see attached with comments from both SPFB and EFB.
>
> Thanks,
>
> John.

---

**From:** Ronald Kwan
**Sent:** Thursday, January 12, 2017 11:42 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** FW: Rate Mitigation

> Hi John, Emily,
>
> Please review and let's discuss. Energy has asked to keep this tightly held and not discuss with, e.g., OPCD at this point.
>
> Ron

---

**From:** Gadi Mayman
**Sent:** January-12-17 11:27
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
**Subject:** FW: Rate Mitigation

> Here it is. I haven't looked at it, but wanted to send it to you right away

---

**From:** Imbrogno, Serge (ENERGY) [mailto:Serge.Imbrogno@ontario.ca]
**Sent:** Thursday, January 12, 2017 11:26 AM
**To:** Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>
**Subject:** Rate Mitigation

Hi,

Attached is a rate mitigation idea we've been asked to work on related to financing the global adjustment. Ideally, it would provide immediate rate relief without having a fiscal impact. The amounts are scalable but we've provided some illustrative numbers.

Serge

<Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup v1.pptx>

**From:** Gavin He
**To:** John Kim
**Subject:** RE: Rate Mitigation
**Date:** Saturday, January 14, 2017 12:01:14 PM
**Attachments:** Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx
Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy_SIFBEFBmarkup.pptx

---

Hi John,

I was going through the emails and attached are the materials that were shared with DMO on proposed initiatives from ENERGY. I think that's what Ron was referring to.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Saturday, January 14, 2017 11:46 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Do you know which product it is from December Ron is referring to?

On Jan 14, 2017, at 10:25 AM, Gavin He <Gavin.He@ofina.on.ca> wrote:

> Yup.
>
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Gavin He

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Serge

<Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup v1.pptx>

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its deck.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

## COMMENTS

Energy's proposals generally involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility | • Significant fiscal exposure -- $0.4-0.45 bn at current levels, higher if enhanced. On-bill benefits.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time | • Potentially significant fiscal impact – current program costs are about $0.45 bn<br>• Conservation programs do provide an electricity system benefits, but would now be fiscally-funded, so a cross-subsidisation from tax-base<br>• Accessing the cap&trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value, including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return |
| **E**nd the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

<u>OESP & RRRP (Total of about $0.4 to 0.45 Billion/year</u>):

This would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and the Rural or Remote Electricity Rate Program (RRRP), to the tax base. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Energy notes that
  - The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).
  - The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

<u>Fund Conservation Programs through the Tax-Base</u>:

This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.

- Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward.

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income of Hydro One.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| OESP, RRRP, First Nation rate | | 398 | 419 | 433 | 447 |
| Conservation Programs through Tax Base | 110 | 450 | 450 | 450 | 450 |
| [Trillium Trust] | TBD | TBD | TBD | TBD | TBD |
| Departure Tax | | TBD | TBD | TBD | TBD |
| DRC removal for Class B | 110 | 450 | | | |
| **Proposed Program Total:** | **220** | **1,298** | **869** | **883** | **897** |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL[3]** | **1,445** | **3,303** | **2,584** | **2,709** | **2,723** |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**December 12, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8%  per cent rebate ($11/month savings), updating RRRP ($45/month savings, combined with the 8% rebate), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured,  the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP),  which provides an opportunity to consider a range of policy changes to  how the Ontario energy sector operates.

# Broad Policy Themes / Rationale

- No longer use rate-base to pay for social programs [despite the system benefit rationale] by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.
- Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.
- Fund conservation programs through the tax-base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" beyond the Moving Ontario Forward initiative to make certain investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties ~~and expansion of natural gas to rural areas~~, etc. (note that expanding access to natural gas is already included under Moving Ontario Forward.)
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" a single rate plan as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time.
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.16 | 2.31 | 2.41 | 2.49 | 2.54 | 2.58 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.13 | 0.13 | 0.14 | 0.14 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | 2.88 | 3.08 | 3.21 | 3.33 | 3.39 | 3.44 | Immediate |
| 2. Expand the OESP (i.e., 50% increase) | - | - | - | - | - | - | n/a |
| 3. Fund Conservation Programs Through The Tax-Base | 2.82 | 3.05 | 2.47 | 2.56 | 2.13 | 2.14 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational efficiencies | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - | - | n/a |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 8. Cancel / Adjust FIT | - | - | 0.10 | 0.10 | 0.11 | 0.11 | Long-Term |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD | TBD | Immediate |
| **Considered but not Recommended** | | | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |
| 2. Cancel LRP I | - | - | TBD | TBD | TBD | TBD | Medium-Term |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 1 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs).

# Proposed Taxpayer Funded Electricity Price Mitigation

| *($M)* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. No Longer Fund Social Programs Through the Rate-Base (i.e., OESP, RRRP, First Nations rate) | | 398 | 419 | 433 | 447 |
| 2. Expand the OESP (i.e., 50% increase) | TBD | TBD | TBD | TBD | TBD |
| 3. Fund Conservation Programs Through The Tax-Base | 110 | 450 | 450 | 450 | 450 |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, etc) | TBD | TBD | TBD | TBD | TBD |
| 5. Empower Energy Agencies to Increase Cost Effectiveness and Improve efficiency* | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC efficiencies | - | - | - | - | - |
| c. OPG – Borrowing | - | - | - | - | - |
| 6. Give Residential Consumers More Rate Choices | - | - | - | - | - |
| 7. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | 110 | 450 | - | - | - |
| 8. Cancel / Adjust FIT | - | - | - | - | - |
| 9. Dedicate Departure Tax | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| 1. Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| 2. Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy

# Considerations / Outcomes

- The proposed initiatives provide the following opportunities to:
  - Lower the cost of electricity for all consumers;
  - Re-set how electricity programs and energy infrastructure is funded (i.e., shifting costs to the tax-base from rate-base);
  - Provide electricity consumers with greater choices (i.e., signal rate plan);
  - Provide system benefits (e.g., market renewal); and
  - Increase cost effectiveness and improve efficiency.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

**From:** John Kim
**To:** Gavin He
**Subject:** RE: Rate Mitigation
**Date:** Saturday, January 14, 2017 10:19:22 AM

---

Yup, for sure. Let's try to get bulk of it done over the weekend so we have a finalized product by eod Monday.

---

**From:** Gavin He
**Sent:** Saturday, January 14, 2017 10:17 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Hi John,

Sorry I didn't get a chance to work on that before I left yesterday, but I am planning to update it later today, if that's ok?

Thanks,
Gavin He

On Jan 14, 2017, at 10:07, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Gavin,
>
> How did this go? Let me know where things are….I can jump on it too once you've had a crack at it.
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> Thanks,
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> John.
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> **From:** Gavin He
> **Sent:** Friday, January 13, 2017 3:20 PM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Subject:** RE: Rate Mitigation
>
> Hi John,
>
> Please take a look and let me know if this would work. Also saved under below folder:
>
> S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA
>
> Thanks,
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**From:** Ronald Kwan
**Sent:** Friday, January 13, 2017 2:07 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Hi,

Would you put down the key issues, comments, questions in a Word document.

Thanks,
Ron

On Jan 13, 2017, at 1:34 PM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Ron,
>
> Pls. see attached with comments from both SPFB and EFB.
>
> Thanks,
>
> John.
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Thursday, January 12, 2017 11:42 AM
> **To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
> **Subject:** FW: Rate Mitigation
>
> Hi John, Emily,
>
> Please review and let's discuss. Energy has asked to keep this tightly held and not discuss with, e.g., OPCD at this point.
>
> Ron
>
> ---
>
> **From:** Gadi Mayman
> **Sent:** January-12-17 11:27
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
> **Subject:** FW: Rate Mitigation
>
> Here it is. I haven't looked at it, but wanted to send it to you right away

**From:** Imbrogno, Serge (ENERGY) [mailto:Serge.Imbrogno@ontario.ca]
**Sent:** Thursday, January 12, 2017 11:26 AM
**To:** Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>
**Subject:** Rate Mitigation

Hi,

Attached is a rate mitigation idea we've been asked to work on related to financing the global adjustment. Ideally, it would provide immediate rate relief without having a fiscal impact. The amounts are scalable but we've provided some illustrative numbers.

Serge

<Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup v1.pptx>

**From:** John Kim
**To:** Gavin He
**Subject:** RE: Rate Mitigation
**Date:** Saturday, January 14, 2017 10:07:53 AM

---

Hi Gavin,

How did this go? Let me know where things are….I can jump on it too once you've had a crack at it.

Thanks,

John.

---

**From:** Gavin He
**Sent:** Friday, January 13, 2017 3:20 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Rate Mitigation

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S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA

Thanks,
Gavin He

---

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**Sent:** Friday, January 13, 2017 2:07 PM
**To:** John Kim <John.Kim@ofina.on.ca>
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<Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup v1.pptx>

**From:** Gavin He
**To:** John Kim
**Subject:** RE: Rate Mitigation
**Date:** Friday, January 13, 2017 3:19:44 PM
**Attachments:** Debt Financing the Global Adjustment Proposal CEFD Comments.docx

---

Hi John,

Please take a look and let me know if this would work. Also saved under below folder:

S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, January 13, 2017 2:07 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

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<Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup v1.pptx>

**Debt Financing the Global Adjustment Proposal**

**ISSUE**

To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.

**CONTENT**

The Ministry of Energy (ENERGY) has provided a presentation deck on an indicative GA financing proposal, including a qualitative discussion of the risks associated with the proposal. Four scenarios were presented and discussed as part of the proposal, outlining the amount of debt incurred, impact on total system cost, and impact on residential bills.

**CEFD STAFF COMMENTS**

Slide 3:

- It would be helpful to understand who would pay for the cost of financing the GA - would it be the ratepayers or taxpayers?
- It would be helpful for the graph to show the financing cost component in the increasing debt or accumulated debt.

Slide 4:

- The risks mentioned are difficult to quantify and entail significant levels of uncertainty. Proposals represent delaying of the GA costs to later years and not necessarily accurate to describe as 'price mitigation'.
- It would be helpful to understand how much certainty there is that the debt could be paid off in the 25 or 30 year scenarios and how the Province would hedge against the various risks? Given the variability and relationship with HOEP, what ability would there be to predict these financing needs for the GA.
- There is significant risk related to the last bullet where with potential future scenario of significant uptake in self-generation, net metering and due to other technological changes, the electricity load drops significantly from the base case scenario. It would then represent a new type of stranded debt scenario.

Slide 5:

- IESO market transactions, including payments to generators above HOEP are not recognized as revenue or expenses in IESO's transactions. Any potential debt-financed payments to IESO would need to consider the revenue recognition limitations of IESO.
- Prior to pursuing the proposal, would also need to consult Constitutional Law Branch on risks related to the GA being charged to those who may not have as direct a link to those who benefited, i.e. the significant time lag between incurring of the costs and recovery of the costs.

Slide 6:

- There should be a High GA/Low HOEP scenario, as this is an identified risk.

Slide 7:

- It would be helpful to understand what is driving the reduced IESO GA Costs up to 2035.

Slide 8:

- It would be helpful to provide more details about the scenario, including how the range of 40-46% would apply throughout the time horizon, interest component related to the accumulated debt, etc. How would the differences be financed (i.e. the funding mechanism or organizations involved)?
- The scenario assumes that a portion of the GA would be financed each year and added to the outstanding debt – does this mean that we would be increasing our debt until 2033 and then start repaying the debt up to 2047?
- The 3% interest cost could be considered already too low in today's rising interest rate expectations, with the 30 year rate already above 3% (about 3.2%).
- The analysis should also factor in the effect of higher debt on the Province's credit rating and the potential impact of the overall debt costs (IOD) for the Province rising as a result of the GA-related debt.

Slide 9:

- The graph shows that we are effectively shifting GA costs from today to future rate payers while incurring financing costs. As mentioned above, it would appear that there would be no savings to the ratepayers, only a shift of cost from today into the future, with the financing cost as an additional component.
- How does the refinanced GA drop 25 and 30 years from now to match IESO's forecast? It would be helpful to understand the assumptions used in making this graph.

Slide 10:

- The scenarios in the slide deck separate the 3% and the 5% examples whereas the more realistic outcome would be to go from the current interest rate of, say 3.2%, to higher rates over time.
- The analysis should also factor in the effect of higher debt on the Province's credit rating and the potential impact of the overall debt costs (IOD) for the Province rising as a result of the GA-related debt.

**QUESTIONS**

- Do any of the scenarios account for the GA increasing more than the IESO's OPO? What are the chances of that occurring and how would that be mitigated in the long-term?
- Would Energy proposals potentially accept an introduction of a DRC version 2?
- On slide 7, as GA decreases, what is the cause of the increased residential electricity bill?

- How would the regulator or the government manage the long time horizon and the size of the new debt arising in the sector, as well as the mechanism(s) to pay for the debt? Intergenerational aspects to the incurring of the debt and paying down the debt would need to be considered in setting up the structure, as well as the Constitutional Law risk.

**Prepared by:** **Corporate and Electricity Finance Division**
**Date:** **January 13th, 2017**

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Ronald Kwan |
| **Cc:** | Emily Kerr; Gavin He |
| **Subject:** | RE: Rate Mitigation |
| **Date:** | Friday, January 13, 2017 1:34:46 PM |
| **Attachments:** | Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup v1.pptx |

Hi Ron,

Pls. see attached with comments from both SPFB and EFB.

Thanks,

John.

---

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**Subject:** Rate Mitigation

Hi,

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Serge

Ontario

MINISTRY OF
ENERGY

# Debt Financing the Global Adjustment

January 10, 2017

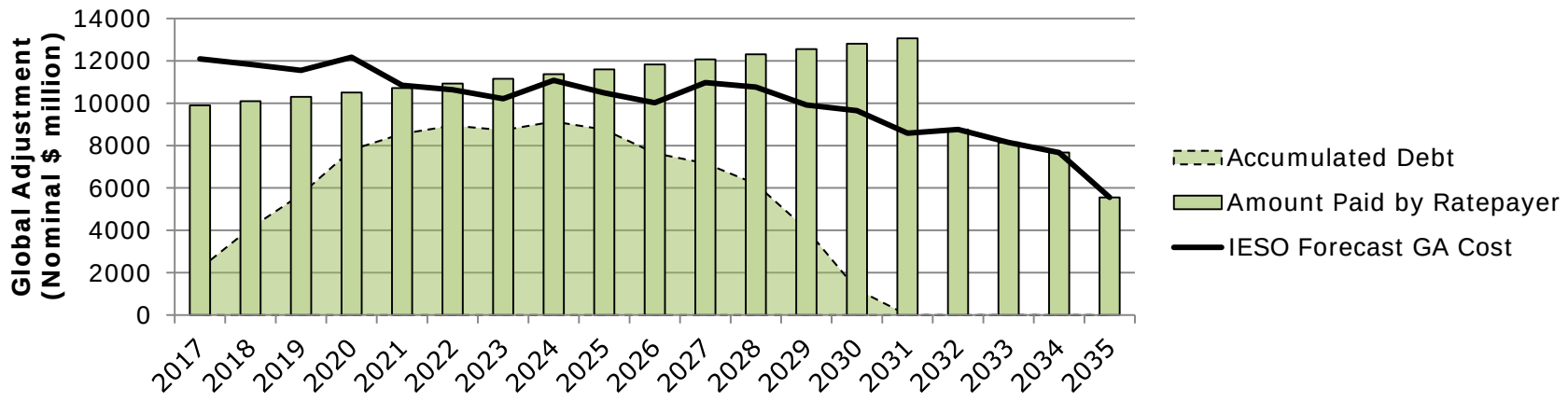
*Working Draft for Discussion Purposes Only*

# Purpose

- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.
- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.
- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

# Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.




**Sample debt financing**: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

# Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

# Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

# GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

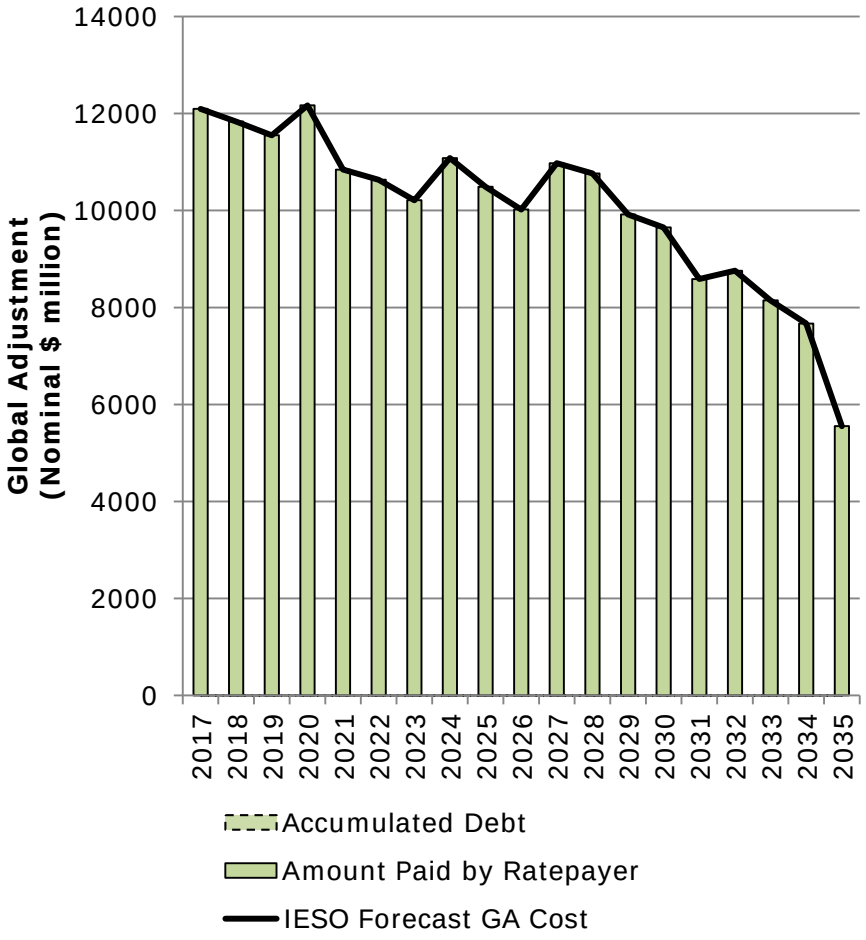
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

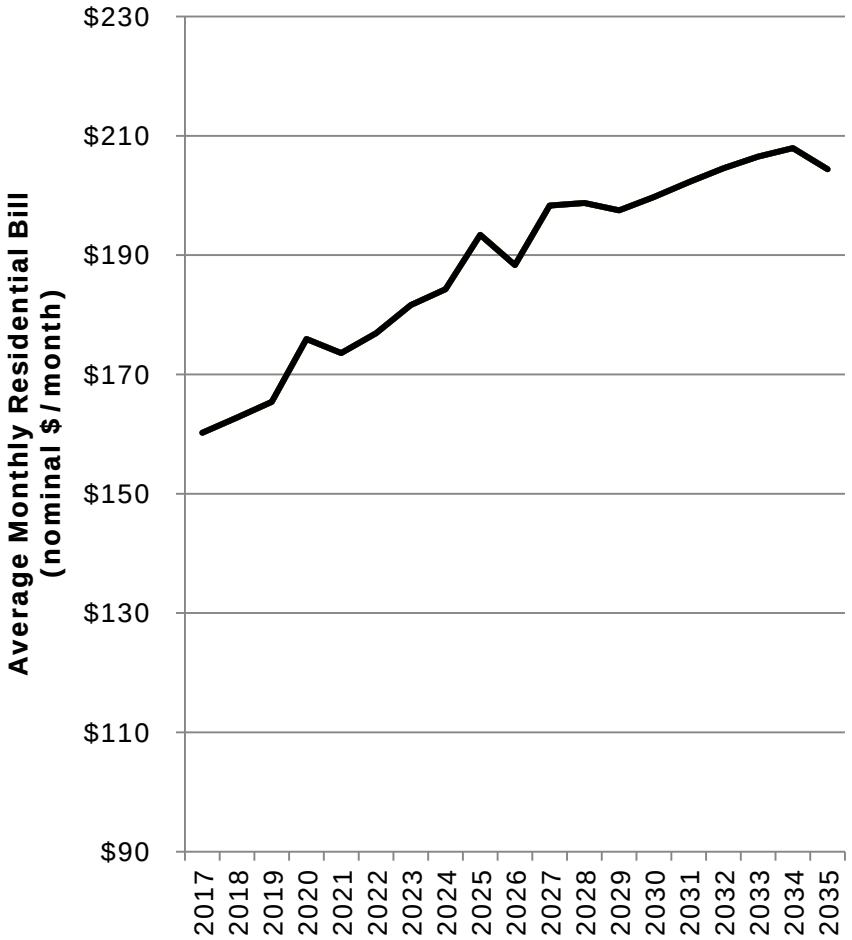
3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

# 1. Status Quo – Global and Residential Impacts

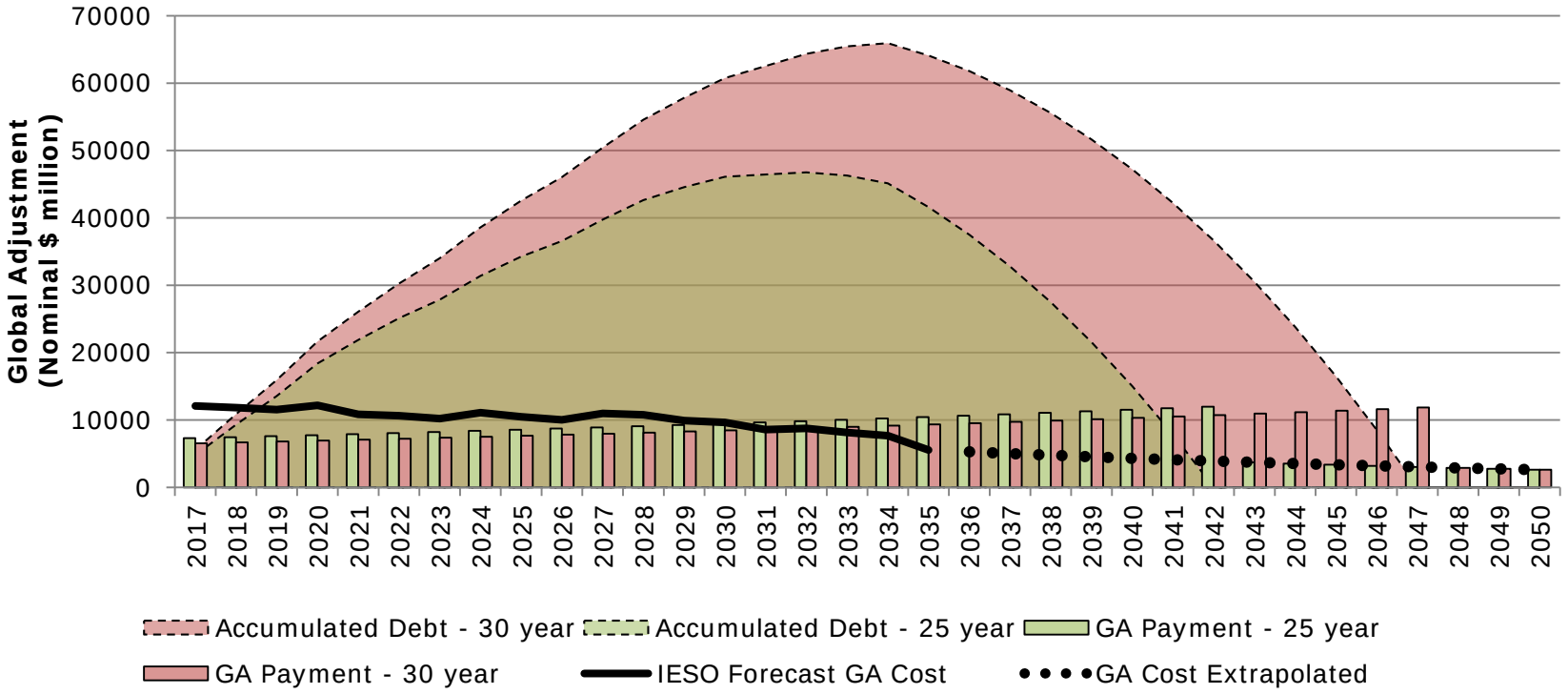
- Ratepayers continue paying the true cost of GA.



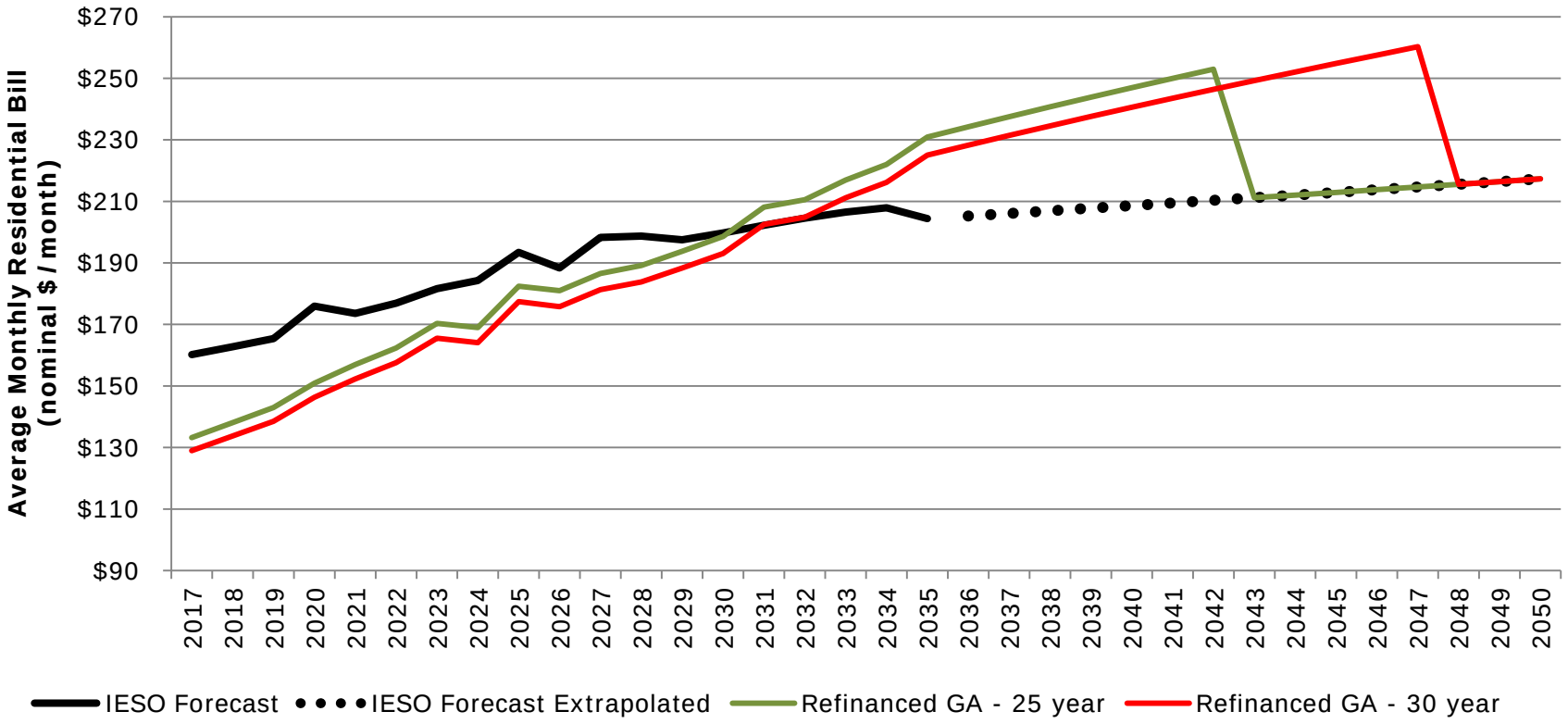
# 2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.




- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

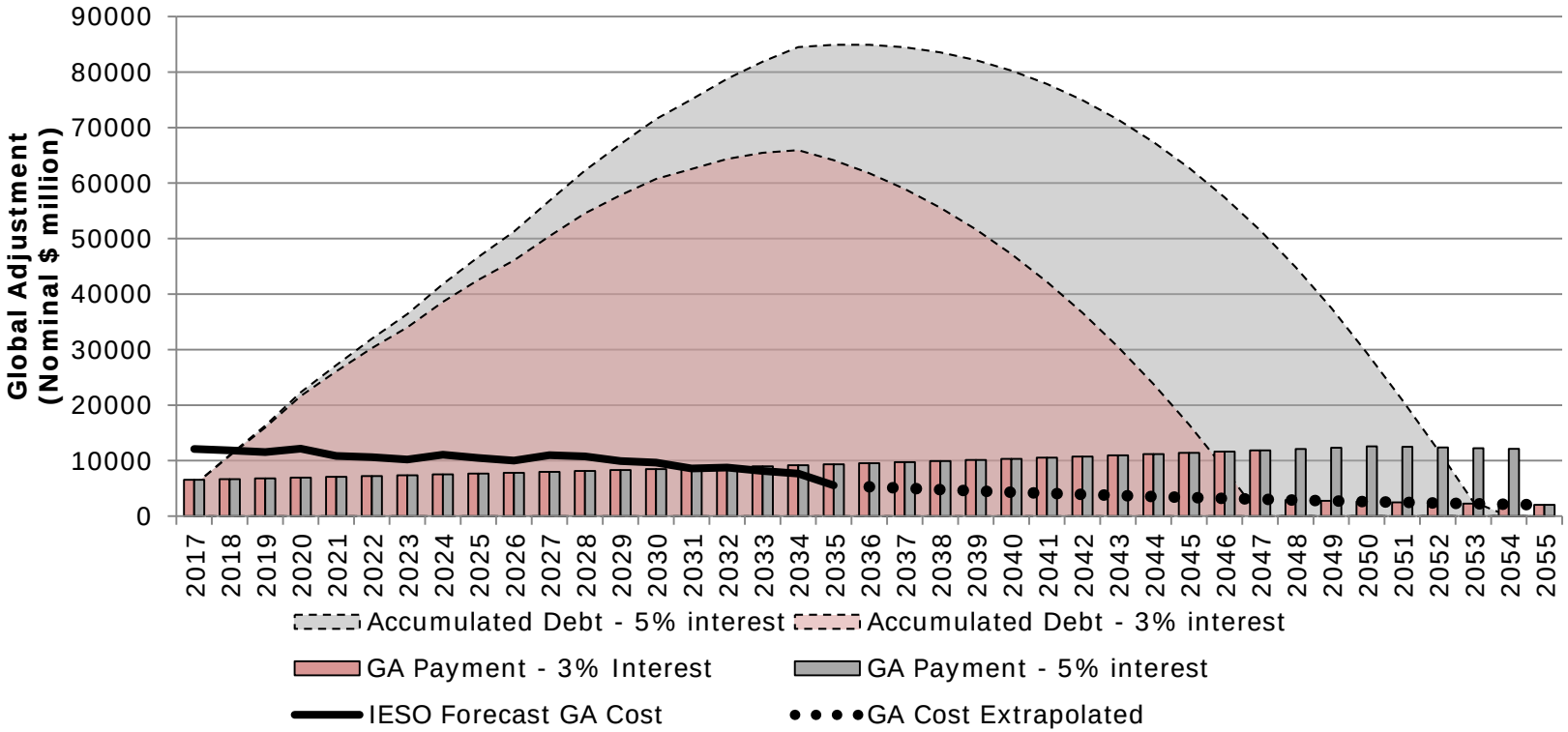
# 2. Maximize Short-term Cost Reduction – Residential Impacts




- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

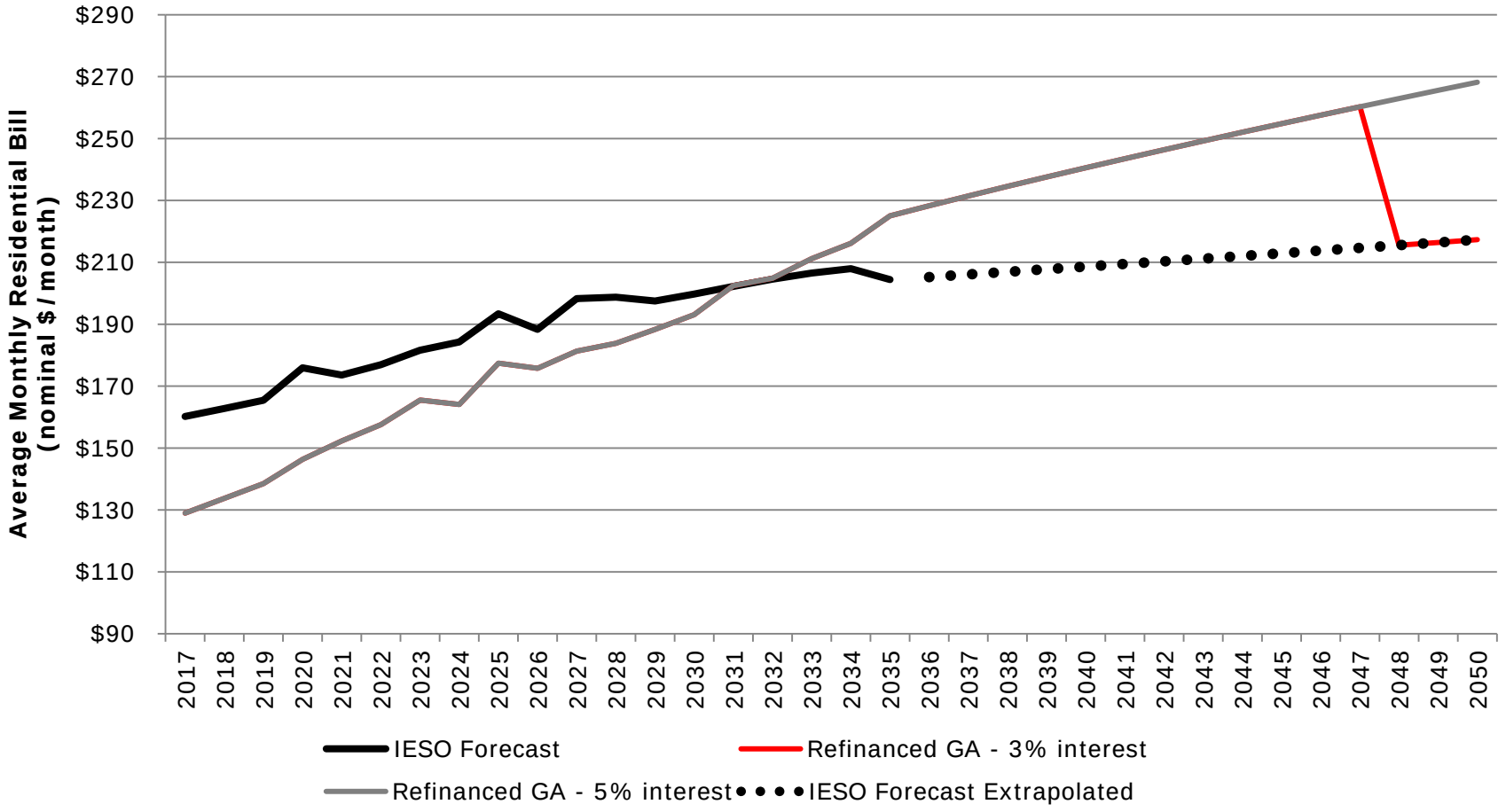
# 3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).




- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

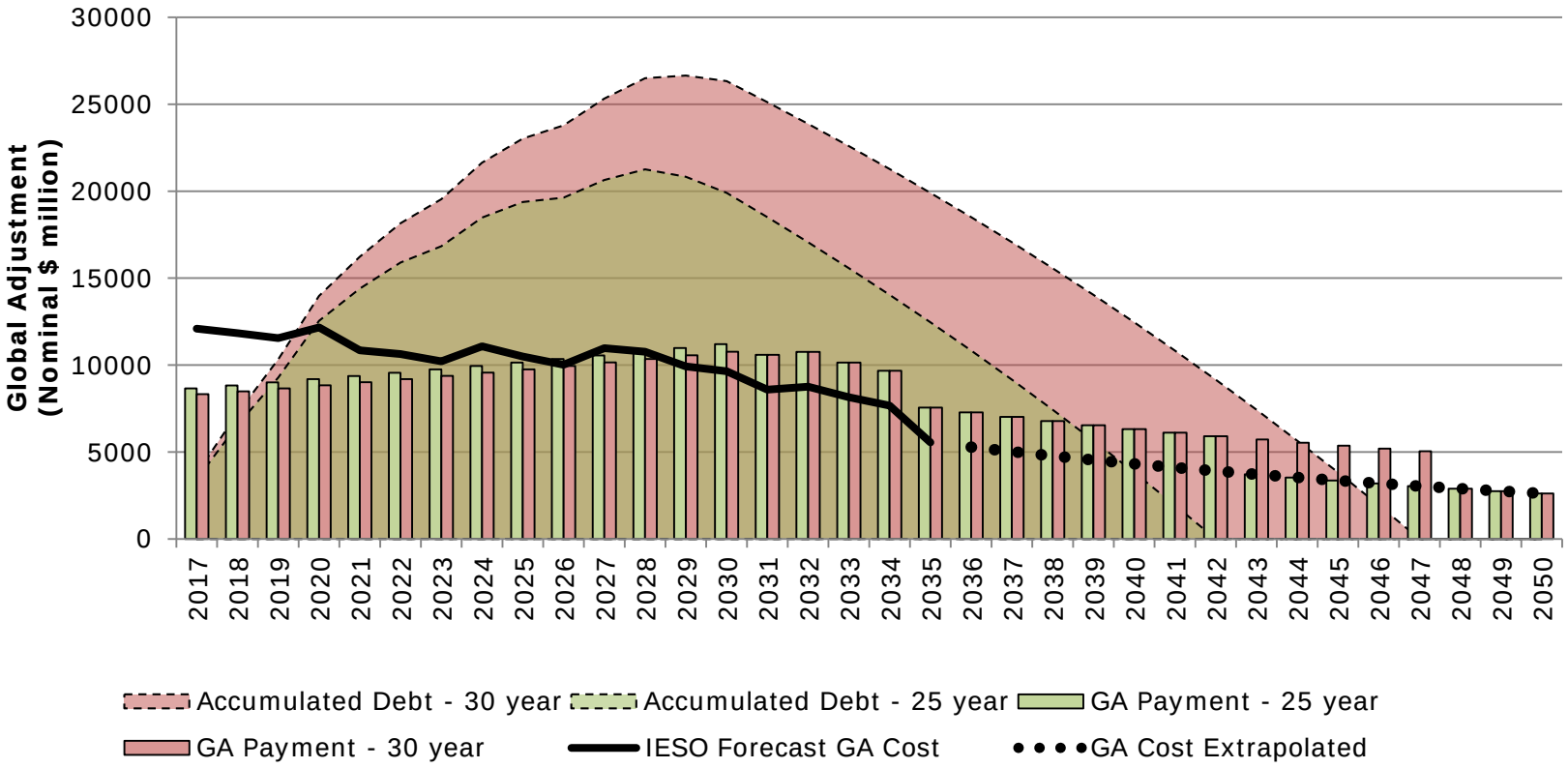
# 3. Interest Rate Risk – Residential Impacts




- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

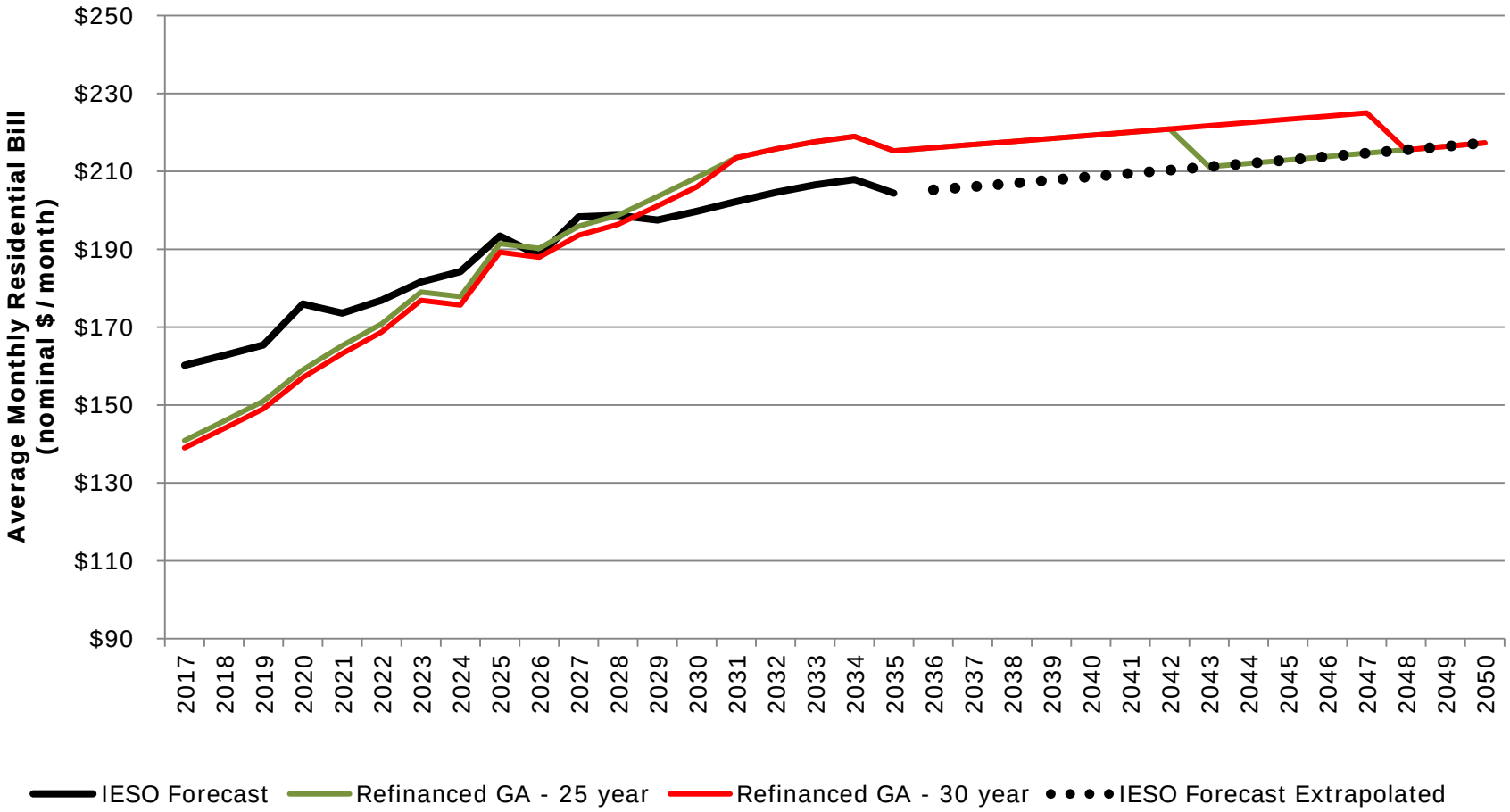
# 4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.




- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

# 4. Maximize Short-term Cost Reduction with Limits – Residential Impacts




- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

| | |
|---|---|
| **From:** | Salman Qadir |
| **To:** | John Kim; Gavin He; Shajee Kathirgamanathan |
| **Cc:** | Adam Prokop |
| **Subject:** | RE: Rate Mitigation |
| **Date:** | Thursday, January 12, 2017 1:39:47 PM |

I can volunteer to consolidate the comments.

---

**From:** John Kim
**Sent:** Thursday, January 12, 2017 1:24 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Thanks….could we consolidate our comments and questions in some form of annotated version for tomorrow?

Ron is of the view that there likely will be fiscal hit. I commented that it would depend on how the proposals are structured and the related certainty of recovery.

John.

---

**From:** Gavin He
**Sent:** Thursday, January 12, 2017 12:21 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi Team,

I have included my comments in the attached version.

Regards,
Gavin He

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, January 12, 2017 12:07 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Not sure where to begin with this proposal….

Just a few quick issues to chew on:

- Will the debt be held on the province's books?
  - Wouldn't this affect the province's path to balance?
  - I'm sure there's people upstairs more familiar, but what would be the province's capacity to borrow this amount?

- Slide 7: What's the driver of reduced IESO GA Costs up to 2035. Note the monthly residential prices will not be decreasing as a result.
- In the out years, once the current 20 yrs contracts expire, wouldn't there be new contracts which would in turn increase the GA once again?
  - What is the thinking behind the dramatic drop in Monthly prices in the later years in Slides 9, 11, and to a lesser extent Slide 13.
- Related to the above, how much of the GA financing would be ongoing?

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Thursday, January 12, 2017 11:44 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** FW: Rate Mitigation

Pls. have a look.

---

**From:** Ronald Kwan
**Sent:** Thursday, January 12, 2017 11:42 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** FW: Rate Mitigation

Hi John, Emily,

Please review and let's discuss. Energy has asked to keep this tightly held and not discuss with, e.g., OPCD at this point.

Ron

**From:** Gadi Mayman
**Sent:** January-12-17 11:27
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
**Subject:** FW: Rate Mitigation

Here it is. I haven't looked at it, but wanted to send it to you right away

---

**From:** Imbrogno, Serge (ENERGY) [mailto:Serge.Imbrogno@ontario.ca]
**Sent:** Thursday, January 12, 2017 11:26 AM
**To:** Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>
**Subject:** Rate Mitigation

Hi,

Attached is a rate mitigation idea we've been asked to work on related to financing the global adjustment. Ideally, it would provide immediate rate relief without having a fiscal impact. The amounts are scalable but we've provided some illustrative numbers.

Serge

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Gavin He; Shajee Kathirgamanathan; Salman Qadir |
| **Cc:** | Adam Prokop |
| **Subject:** | RE: Rate Mitigation |
| **Date:** | Thursday, January 12, 2017 1:24:29 PM |

Thanks….could we consolidate our comments and questions in some form of annotated version for tomorrow?

Ron is of the view that there likely will be fiscal hit. I commented that it would depend on how the proposals are structured and the related certainty of recovery.

John.

---

**From:** Gavin He
**Sent:** Thursday, January 12, 2017 12:21 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi Team,

I have included my comments in the attached version.

Regards,
Gavin He

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, January 12, 2017 12:07 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Not sure where to begin with this proposal….

Just a few quick issues to chew on:

- Will the debt be held on the province's books?
  - Wouldn't this affect the province's path to balance?
  - I'm sure there's people upstairs more familiar, but what would be the province's capacity to borrow this amount?

- Slide 7: What's the driver of reduced IESO GA Costs up to 2035. Note the monthly

residential prices will not be decreasing as a result.

- In the out years, once the current 20 yrs contracts expire, wouldn't there be new contracts which would in turn increase the GA once again?
    - What is the thinking behind the dramatic drop in Monthly prices in the later years in Slides 9, 11, and to a lesser extent Slide 13.
- Related to the above, how much of the GA financing would be ongoing?

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

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**Sent:** Thursday, January 12, 2017 11:44 AM
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| **From:** | Gavin He |
| **To:** | Shajee Kathirgamanathan; John Kim; Salman Qadir |
| **Cc:** | Adam Prokop |
| **Subject:** | RE: Rate Mitigation |
| **Date:** | Thursday, January 12, 2017 12:21:01 PM |
| **Attachments:** | Debt-Financing GA - Sent to MO on 2017-01-10_EFB_v1.pptx |

Hi Team,

I have included my comments in the attached version.

Regards,
Gavin He

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, January 12, 2017 12:07 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
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  - What is the thinking behind the dramatic drop in Monthly prices in the later years in Slides 9, 11, and to a lesser extent Slide 13.
- Related to the above, how much of the GA financing would be ongoing?

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

**From:** John Kim
**Sent:** Thursday, January 12, 2017 11:44 AM
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**Subject:** Rate Mitigation

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Serge

Ontario

MINISTRY OF
ENERGY

# Debt Financing the Global Adjustment

January 10, 2017

*Working Draft for Discussion Purposes Only*

# Purpose

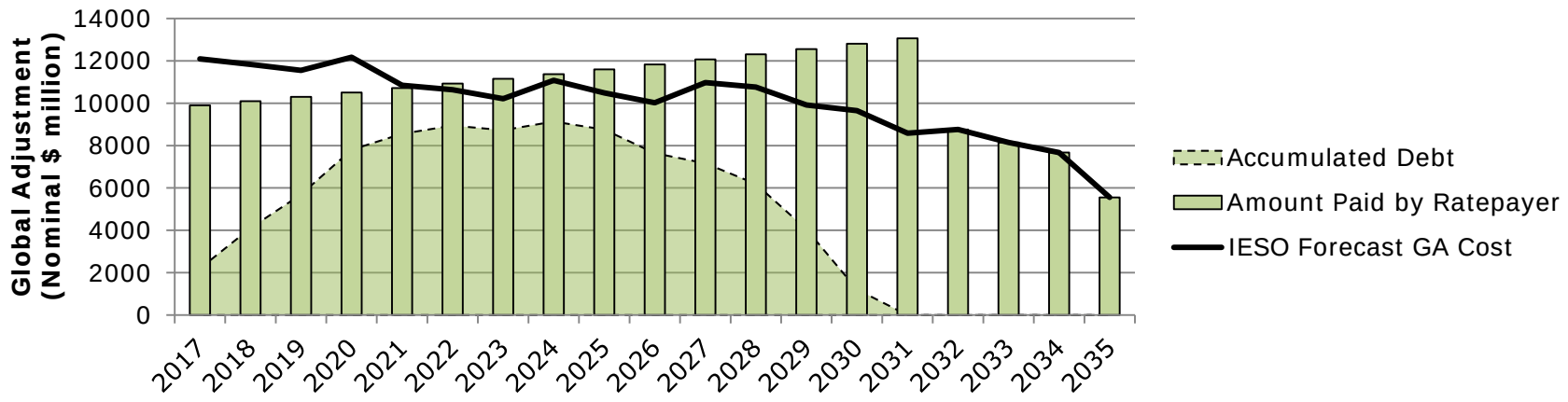
- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.

- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.

- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

# Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.




**Sample debt financing**: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

# Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

# Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

# GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

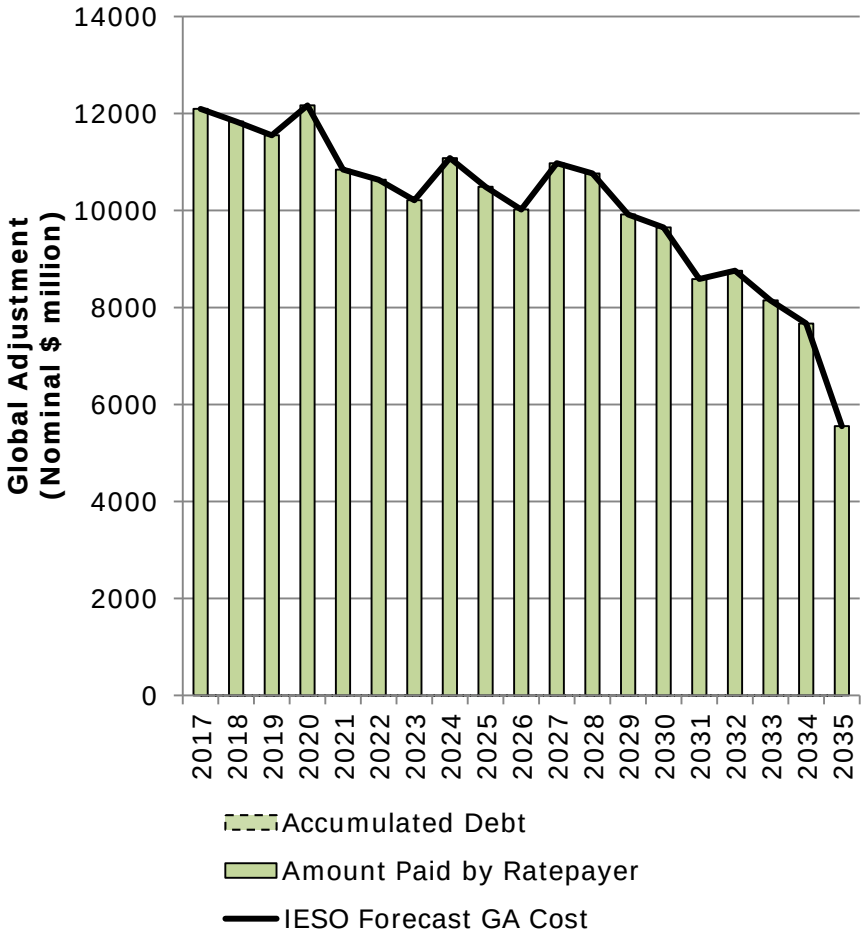
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

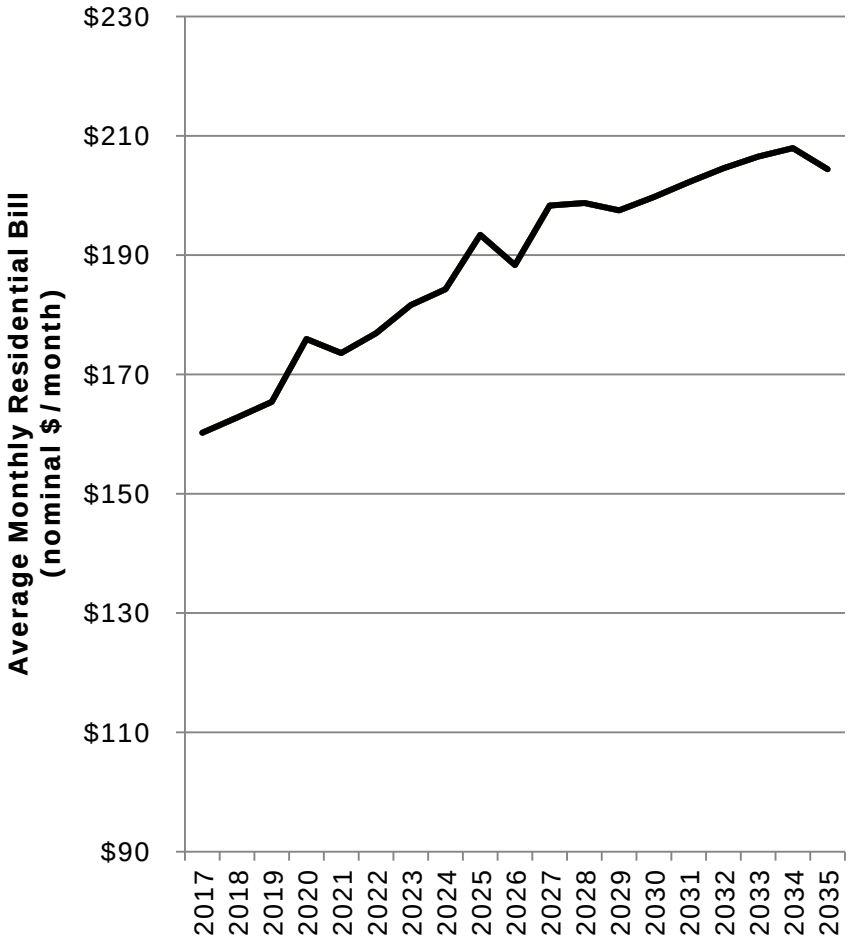
3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

# 1. Status Quo – Global and Residential Impacts

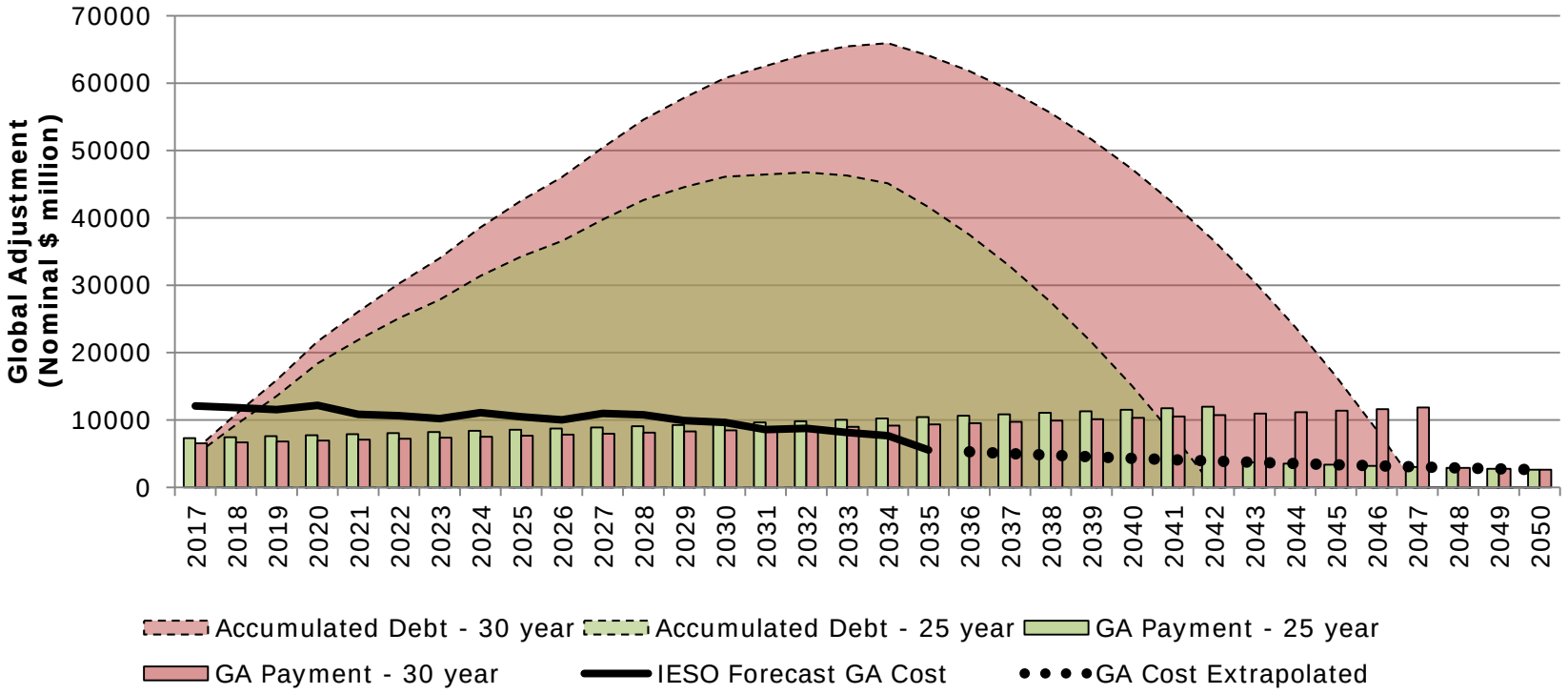
- Ratepayers continue paying the true cost of GA.



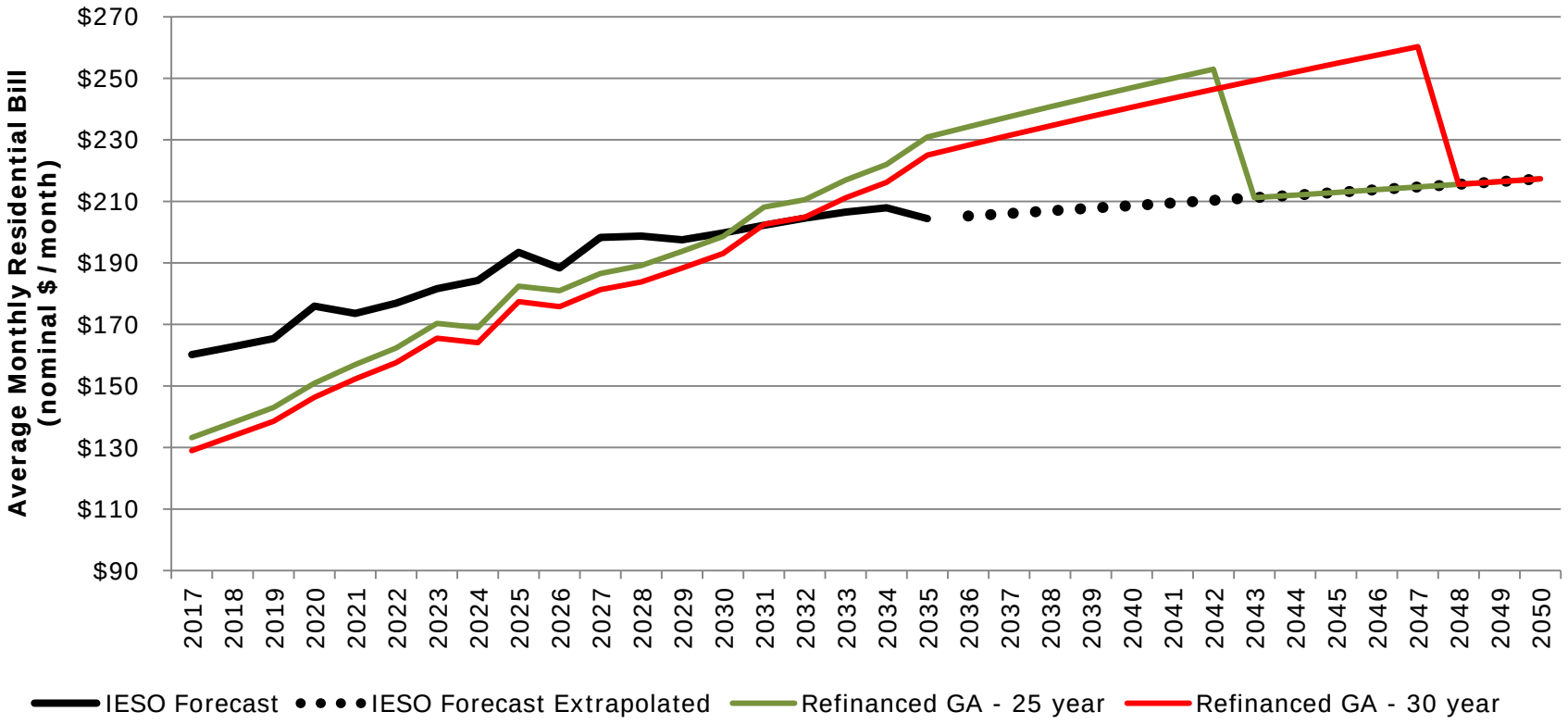
# 2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.




- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

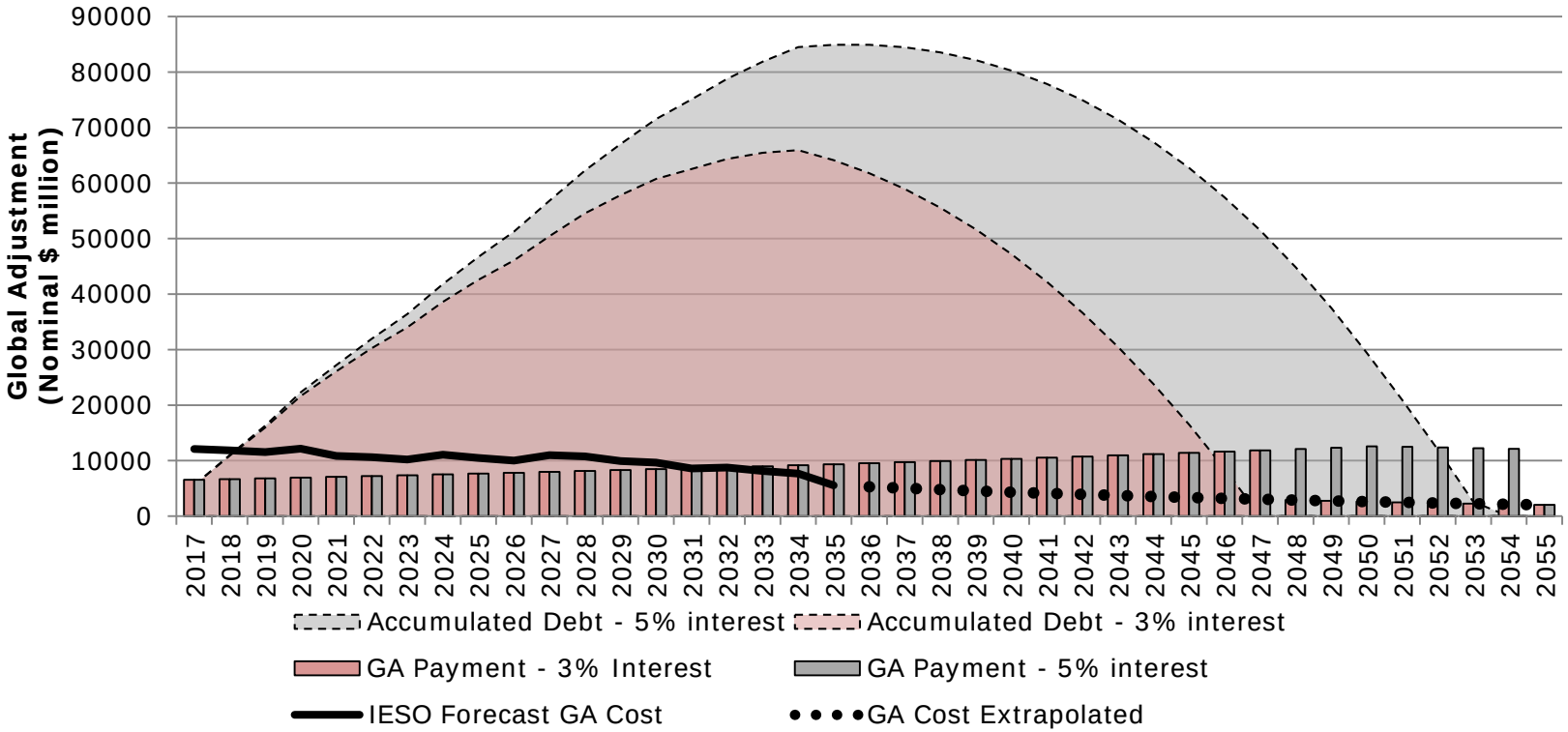
# 2. Maximize Short-term Cost Reduction – Residential Impacts




- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

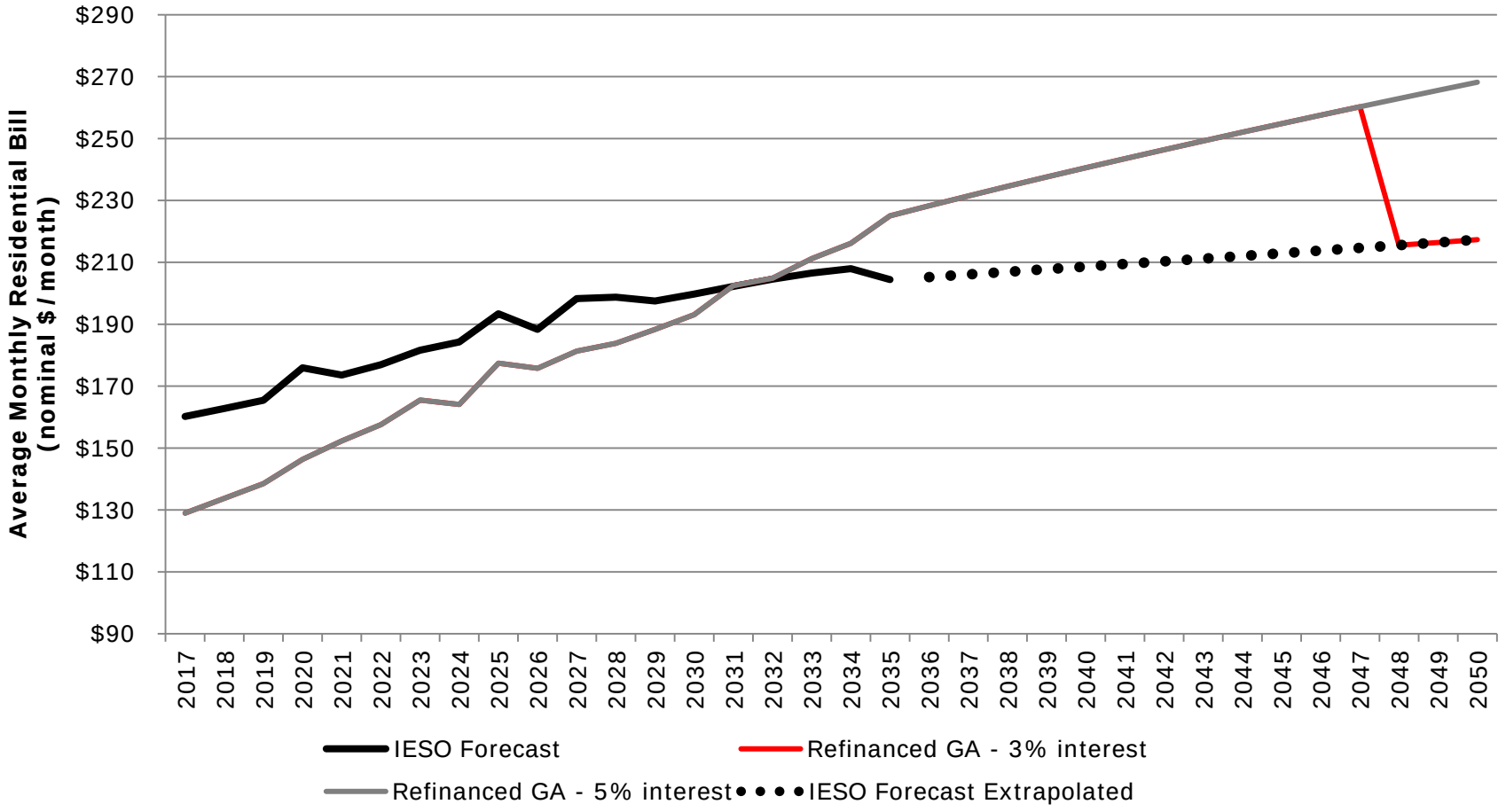
# 3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).




- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

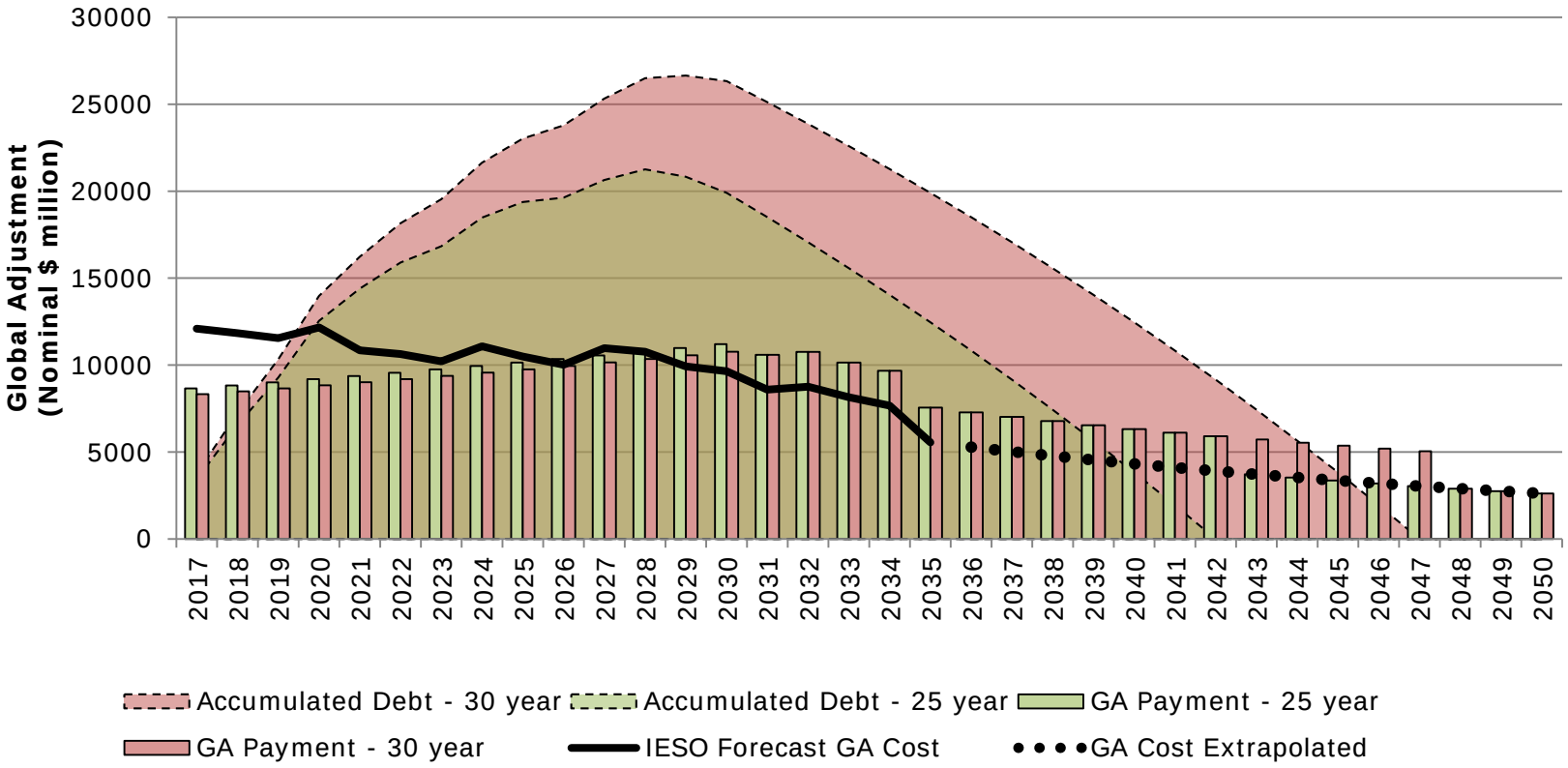
# 3. Interest Rate Risk – Residential Impacts




- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

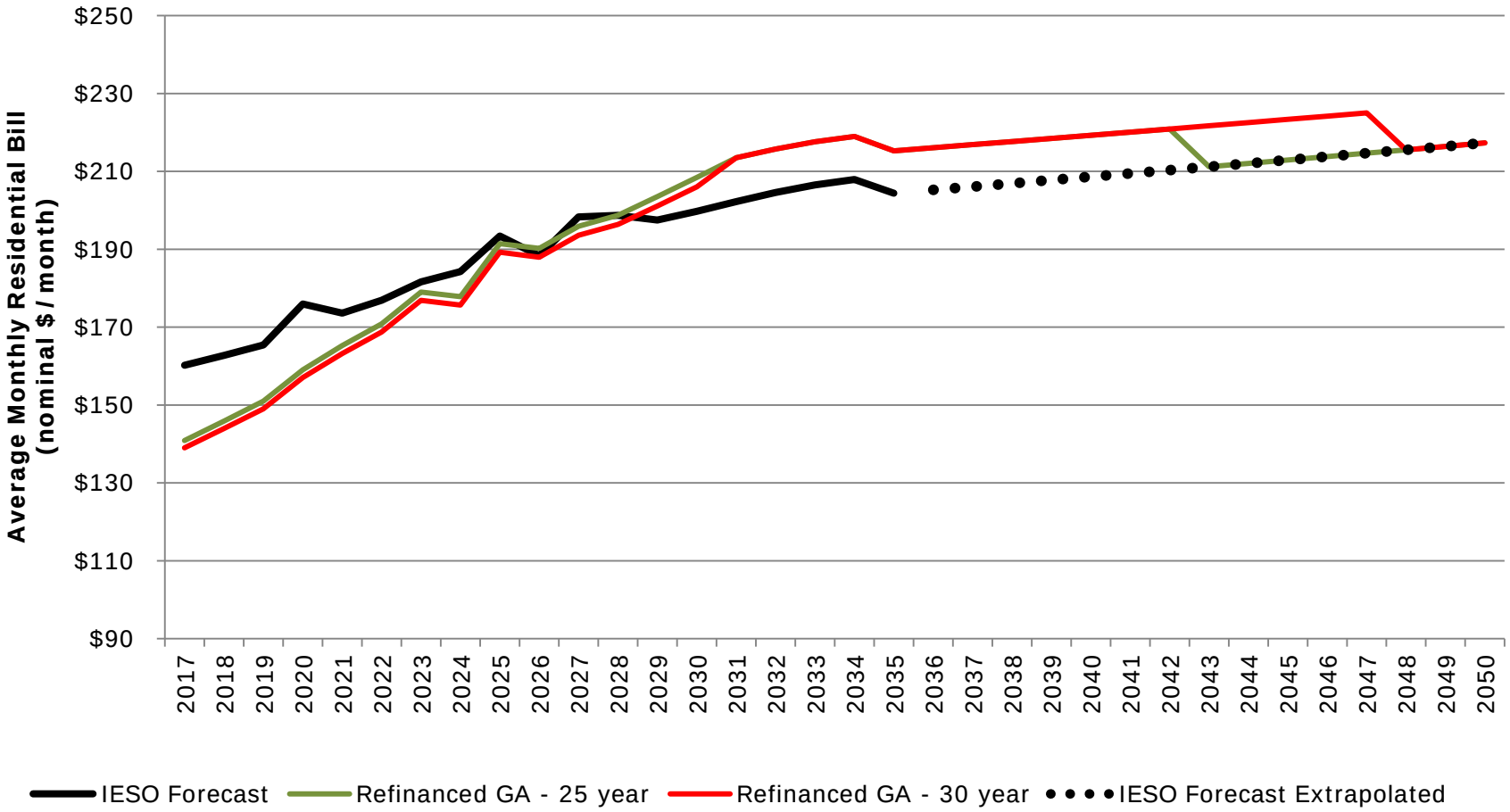
# 4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.




- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

# 4. Maximize Short-term Cost Reduction with Limits – Residential Impacts




- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

**From:** Gavin He
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation
**Date:** Sunday, January 15, 2017 4:21:07 PM

---

Hi John,

I am good with the notes and I don't have any additional comments, saved that in the folder.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:19 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

No reason....updated the RRRP.

I took a look at the comments in the deck and the comments are good. Given the meeting is on Monday, I am leaning towards not sending back comments on the deck back unless proposing to make edits to the text, like Francisco is in the attached.

I'm OK to send these back with cc: to Emily and Francisco unless you have additional comments, which would be welcome. Ideally would like to review further but I'm going to bed soon.

Thanks,

John.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:13 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

I reviewed the debt-financing GA sections and I am good with the edits.

I didn't review the other deck in details, but took a quick look on slide 7 and the new section at the

end of the note.  Just one question, is there a reason why the RRRP numbers for 2019-2021 were not updated?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:01 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Let me know what you think.  If OK, could you save to the folder?

Going to quickly go through the deck.

---

**From:** John Kim
**Sent:** January 15, 2017 3:32 PM
**To:** Gavin He; Shajee Kathirgamanathan
**Subject:** Re: Rate Mitigation

Yeah, I think Shajee's point on slide 7? might be the only path.  I am about to take a crack at it but I don't want to minimize the fiscal impact by taking their numbers.  Thus being deliberate. Shouldn't take long.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:30 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Based on Emily's update, the impact for OESP & RRRP will be $0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022, without detailed impact on each year.  So it we are going to update the table, it seems we might need to make some assumption.

Regards,
Gavin He

---

**From:** John Kim

**Sent:** Sunday, January 15, 2017 3:17 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yes, the OESP and RRRP that Emily updated, kind of showed me there were updates.

Ok, I need to go back to that deck.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:13 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Are you referring to the numbers for OESP and RRRP?

Also, the $2B GA amount is from scenario 2 and 3. The cap for the maximum amount of GA above the true cost is $2B.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:10 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yeah, I'm trying to decide if it's worth adding that proposal. While I am trying to minimize work, it's fiscal impact stuff.

And the table. I'm trying to assess if not updating that is an option as I'm getting tired.

What's your sense?

---

**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 3:06 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

If you're referring to #10 on renewables/wind contracts, I think it's not so much tax exempting renewables, but rather paying through the tax base the amounts above competitive electricity rates. (Eg. If competitive amount is say $80/mwh. And they have a community/indigenous adder of $40/mwh. Therefore a total contract price is $120/mwh. The proposal would shift the $40/mwh to the tax base). That's my interpretation at least.

Again it's just another way to transfer to the tax base from the rate base.

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 2:57 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks.....I think we should send the note in for about 6pm so don't worry about it. I will have a look at the deck.

The only thing that concerns me is the additional proposals like tax exempting of renewable contracts, etc. I'm debating whether they need coverage but likely to try to dodge it. I think the table at the bottom needs updating but I'm currently still assessing it.

---

**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 2:54 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

I finished with my comments on the power point file. I think there were some CEFD and Energy Comments from before.

Only way to distinguish are my comments are "**CEFD Comments**" (bold), whereas before it was evidently bold and underlined.

Will take a quick review of the document, but heading out shortly for the evening. Will try to get done what I can.

Thanks,
Shajee

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 2:45 PM

**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks....saw this after sending the other.

---

**From:** Gavin He
**Sent:** January 15, 2017 2:41 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

Emily just finished the file. I have copied my edits in her version and saved it as v9.

Thanks,
Gavin He

---

**From:** Gavin He
**Sent:** Sunday, January 15, 2017 2:24 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

In the interest of time, I have worked on v8 from my personal drive, as Emily is still in the note. I have reviewed and updated sections related to debt-financing GA.

John – for the numbers, I wasn't involved in providing the updates, so don't have much knowledge on how the numbers were put together, and the presentation decks don't provide update on those numbers, so I didn't make any update there.

Please review and let me know if you have any questions. I can consolidate my edits once Emily is done.

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 10:01 AM

**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation

FYI.

Hoping to finalize on our end by early afternoon…..Emily might have other comments.

I think what things need to be checked against the updated deck, as well.

John.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 9:59 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John, Emily,

I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.

I also made some edits to Energy's slides but not sure those are needed.

Thanks,

Francisco

> -----Original Message-----
> From: John Kim
> Sent: Saturday, January 14, 2017 11:45 PM
> To: Emily Kerr <Emily.Kerr@ofina.on.ca>
> Subject: RE: Rate Mitigation
>
> Hi Emily,
>
> Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.
>
> Thanks,

John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation

Good morning,

Attached are materials for Monday's rate mitigation meeting.

Keley

Original Message

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>

Sent: Saturday, January 14, 2017 7:49 AM

To: Orsini, Steve (CAB)

Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

Hi Steve,

Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan |
| **Subject:** | RE: Rate Mitigation |
| **Date:** | Thursday, January 12, 2017 12:19:52 PM |

Was there a note you did on the electricity contracts? I thought I got something but couldn't find the material when I was searching for it while I was away.

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, January 12, 2017 12:07 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Not sure where to begin with this proposal….

Just a few quick issues to chew on:

- Will the debt be held on the province's books?
  - Wouldn't this affect the province's path to balance?
  - I'm sure there's people upstairs more familiar, but what would be the province's capacity to borrow this amount?

- Slide 7: What's the driver of reduced IESO GA Costs up to 2035. Note the monthly residential prices will not be decreasing as a result.
- In the out years, once the current 20 yrs contracts expire, wouldn't there be new contracts which would in turn increase the GA once again?
  - What is the thinking behind the dramatic drop in Monthly prices in the later years in Slides 9, 11, and to a lesser extent Slide 13.
- Related to the above, how much of the GA financing would be ongoing?

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Thursday, January 12, 2017 11:44 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Adam Prokop <Adam.Prokop@ofina.on.ca>

**Subject:** FW: Rate Mitigation

Pls. have a look.

---

**From:** Ronald Kwan
**Sent:** Thursday, January 12, 2017 11:42 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** FW: Rate Mitigation

Hi John, Emily,

Please review and let's discuss. Energy has asked to keep this tightly held and not discuss with, e.g., OPCD at this point.

Ron

---

**From:** Gadi Mayman
**Sent:** January-12-17 11:27
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
**Subject:** FW: Rate Mitigation

Here it is. I haven't looked at it, but wanted to send it to you right away

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**From:** Imbrogno, Serge (ENERGY) [mailto:Serge.Imbrogno@ontario.ca]
**Sent:** Thursday, January 12, 2017 11:26 AM
**To:** Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>
**Subject:** Rate Mitigation

Hi,

Attached is a rate mitigation idea we've been asked to work on related to financing the global adjustment. Ideally, it would provide immediate rate relief without having a fiscal impact. The amounts are scalable but we've provided some illustrative numbers.

Serge

**From:** Shajee Kathirgamanathan
**To:** John Kim; Gavin He; Salman Qadir
**Cc:** Adam Prokop
**Subject:** RE: Rate Mitigation
**Date:** Thursday, January 12, 2017 12:06:31 PM

---

Not sure where to begin with this proposal….

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Serge

**From:** Adam Prokop
**To:** John Kim
**Subject:** RE: Rate Mitigation
**Date:** Thursday, January 12, 2017 12:04:31 PM

---

Sure John,

I don't really see any long-term benefit for this plan for ratepayers. Since the debt will be on the books that will be used to payoff part of the GA, I think this will accurately reflect the liability. Accounting impacts would definitely be related to interest rate risk.

Kind regards,

Adam Prokop

---

**From:** John Kim
**Sent:** Thursday, January 12, 2017 11:49 AM
**To:** Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Don't worry about this too much now but next week, could you look at the accounting implications of these proposals?

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**From:** John Kim
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Serge

**From:** John Kim
**To:** Adam Prokop
**Subject:** RE: Rate Mitigation
**Date:** Thursday, January 12, 2017 11:48:38 AM

---

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---

**From:** John Kim
**Sent:** Thursday, January 12, 2017 11:44 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** FW: Rate Mitigation

Pls. have a look.

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Attached is a rate mitigation idea we've been asked to work on related to financing the global adjustment. Ideally, it would provide immediate rate relief without having a fiscal impact. The amounts are scalable but we've provided some illustrative numbers.

Serge

**From:** Gavin He
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation
**Date:** Sunday, January 15, 2017 4:13:33 PM

---

Hi John/Shajee,

I reviewed the debt-financing GA sections and I am good with the edits.

I didn't review the other deck in details, but took a quick look on slide 7 and the new section at the end of the note. Just one question, is there a reason why the RRRP numbers for 2019-2021 were not updated?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:01 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Let me know what you think. If OK, could you save to the folder?

Going to quickly go through the deck.

---

**From:** John Kim
**Sent:** January 15, 2017 3:32 PM
**To:** Gavin He; Shajee Kathirgamanathan
**Subject:** Re: Rate Mitigation

Yeah, I think Shajee's point on slide 7? might be the only path. I am about to take a crack at it but I don't want to minimize the fiscal impact by taking their numbers. Thus being deliberate. Shouldn't take long.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:30 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Based on Emily's update, the impact for OESP & RRRP will be $0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022, without detailed impact on each year. So it we are going to update the table, it seems we might need to make some assumption.

Regards,
Gavin He

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**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yes, the OESP and RRRP that Emily updated, kind of showed me there were updates.

Ok, I need to go back to that deck.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:13 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Are you referring to the numbers for OESP and RRRP?

Also, the $2B GA amount is from scenario 2 and 3. The cap for the maximum amount of GA above the true cost is $2B.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:10 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yeah, I'm trying to decide if it's worth adding that proposal. While I am trying to minimize work, it's fiscal impact stuff.

And the table.  I'm trying to assess if not updating that is an option as I'm getting tired.

What's your sense?

---

**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 3:06 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

If you're referring to #10 on renewables/wind contracts, I think it's not so much tax exempting renewables, but rather paying through the tax base the amounts above competitive electricity rates. (Eg. If competitive amount is say $80/mwh. And they have a community/indigenous adder of $40/mwh. Therefore a total contract price is $120/mwh. The proposal would shift the $40/mwh to the tax base). That's my interpretation at least.

Again it's just another way to transfer to the tax base from the rate base.

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 2:57 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks.....I think we should send the note in for about 6pm so don't worry about it.  I will have a look at the deck.

The only thing that concerns me is the additional proposals like tax exempting of renewable contracts, etc.  I'm debating whether they need coverage but likely to try to dodge it.  I think the table at the bottom needs updating but I'm currently still assessing it.

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**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 2:54 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

I finished with my comments on the power point file. I think there were some CEFD and Energy Comments from before.

Only way to distinguish are my comments are "**CEFD Comments**" (bold), whereas before it was

evidently bold and underlined.

Will take a quick review of the document, but heading out shortly for the evening. Will try to get done what I can.

Thanks,
Shajee

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**Subject:** Re: Rate Mitigation

Thanks....saw this after sending the other.

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**Subject:** RE: Rate Mitigation

Hi John/Shajee,

Emily just finished the file. I have copied my edits in her version and saved it as v9.

Thanks,
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---

**From:** Gavin He
**Sent:** Sunday, January 15, 2017 2:24 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

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John – for the numbers, I wasn't involved in providing the updates, so don't have much knowledge on how the numbers were put together, and the presentation decks don't provide update on those numbers, so I didn't make any update there.

Please review and let me know if you have any questions.  I can consolidate my edits once Emily is done.

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**Sent:** Sunday, January 15, 2017 10:01 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation

FYI.

Hoping to finalize on our end by early afternoon…..Emily might have other comments.

I think what things need to be checked against the updated deck, as well.

John.

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**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 9:59 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John, Emily,

I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.

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Thanks,

Francisco

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Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

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To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

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**From:** Shajee Kathirgamanathan
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation
**Date:** Sunday, January 15, 2017 3:19:10 PM

---

Agreed. I think we're laying out the case and the issues and there isn't much analysis provided yet on it..

But we might be spinning our wheels…If any we can just extract slide 7 and put it in the deck. And go back if there's additional requests/follow up?

---

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Hi John,

Are you referring to the numbers for OESP and RRRP?

Also, the $2B GA amount is from scenario 2 and 3. The cap for the maximum amount of GA above the true cost is $2B.

Regards,
Gavin He

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> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

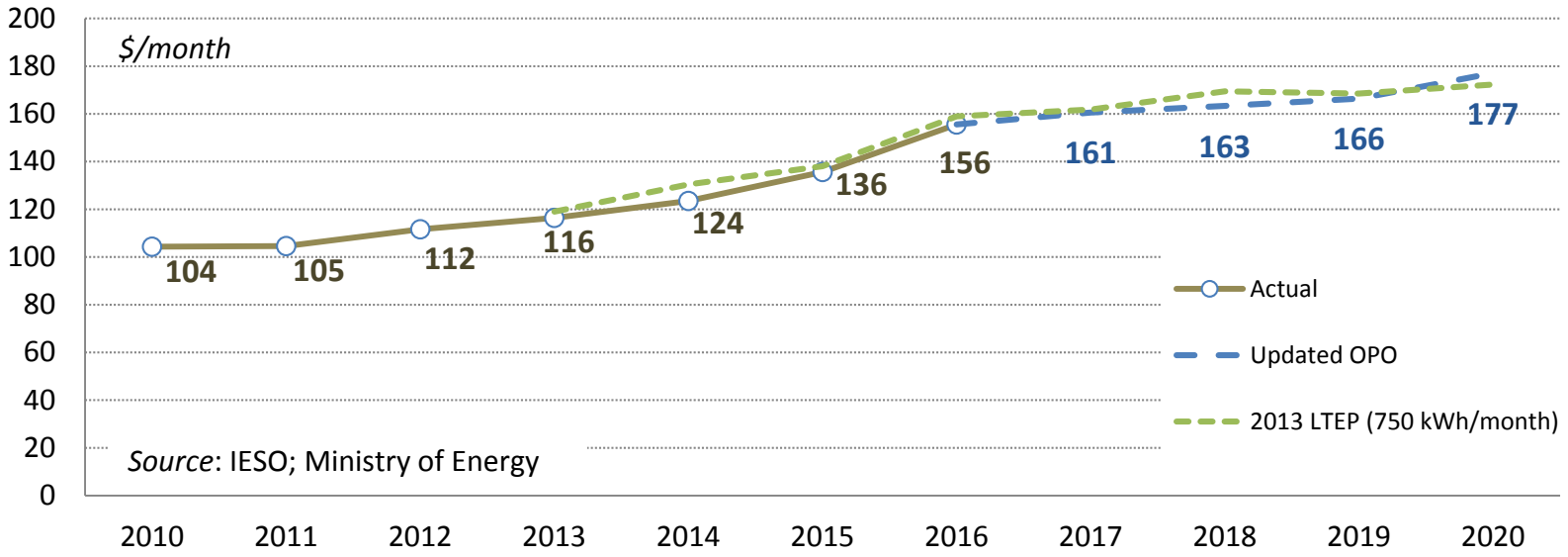
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast*




**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Broad Policy Themes / Rationale

- Support the continued reduction in the differential across distribution rates (as charged by Local Distribution Companies) across the Province through the potential enhancement of Rural or Remote Electricity Rate Protection, (RRRP). In order to not increase regulatory costs to customers as a result, this program can be moved to the tax-base.
- Provide a greater focus and support on lower income Ontarians by funding the Ontario Electricity Support Program (OESP) through the tax-base, as well as enhancing the support available through the program.
- Amortize electricity conservation and demand management (DM) programs over 15-years to provide lower costs for electricity consumers.
  - Alternatively, pay for conservation/DM programs through the tax-base and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties and expansion of natural gas to underserved areas (i.e., rural and remote communities), etc.
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" an alternative rate plan, based on a flat electricity rate, as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time. Also give consumer greater transparency with respect to electricity costs by providing more details regarding the Global Adjustment (GA).
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers, a benefit of $7/MWh.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 1.53 | 1.58 | 1.61 | 1.66 | 1.70 | 1.74 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.57 | 0.79 | 0.98 | 1.13 | 1.29 | 1.44 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC Efficiencies/Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.71 | 0.89 | 1.08 | 1.22 | 1.35 | 1.24 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. v Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 2.04 | 2.10 | 2.15 | 2.22 | 2.27 | 2.32 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.76 | 1.05 | 1.31 | 1.51 | 1.71 | 1.92 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC Efficiencies / Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.59 | 0.74 | 0.89 | 1.01 | 1.12 | 1.03 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Taxpayer Funded Electricity Price Mitigation

| *$M* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. Fund RRRP through the Tax-Base* | - | 666 | 684 | 700 | 719 |
| 2. Fund OESP through the Tax-Base | | | | | |
| a. Enhance OESP Benefit | | 162 | 226 | 279 | 322 |
| b. Expand OESP Eligibility | | TBD | TBD | TBD | TBD |
| 3. Conservation Funding Options | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | - | - | - | - | - |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | 100 | 390 | 390 | 390 | 390 |
| 5. Dedicate Departure Tax | 260 | 260 | 260 | 260 | 260 |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC Efficiencies / Rates | - | - | - | - | - |
| c. OPG – Operational Efficiencies | - | - | - | - | - |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers) | 110 | 450 | - | - | - |
| 9. Extend the Length of Existing Wind/Solar Contracts at Lower Prices | - | - | - | - | - |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| Fund Conservation Programs Through The Tax-Base | 154 | 632 | 649 | 567 | 568 |
| Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy
**Note:** *Assumes RRRP enhancement to reduce distribution rates to $30 for LDCs and **Assumes increase OESP credit by 50%.
Not included in chart is additional $18M/year to fund potential First Nations rate program through the Tax-Base.

# Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are aimed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

- Given that these programs focus on promoting equity between different areas of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.
  - These enhancements would also work in conjunction with the Ontario Energy Board's focus on reducing LDC costs outlined in option 6b.

# 1. Rural or Remote Rate Protection (RRRP) Expansion

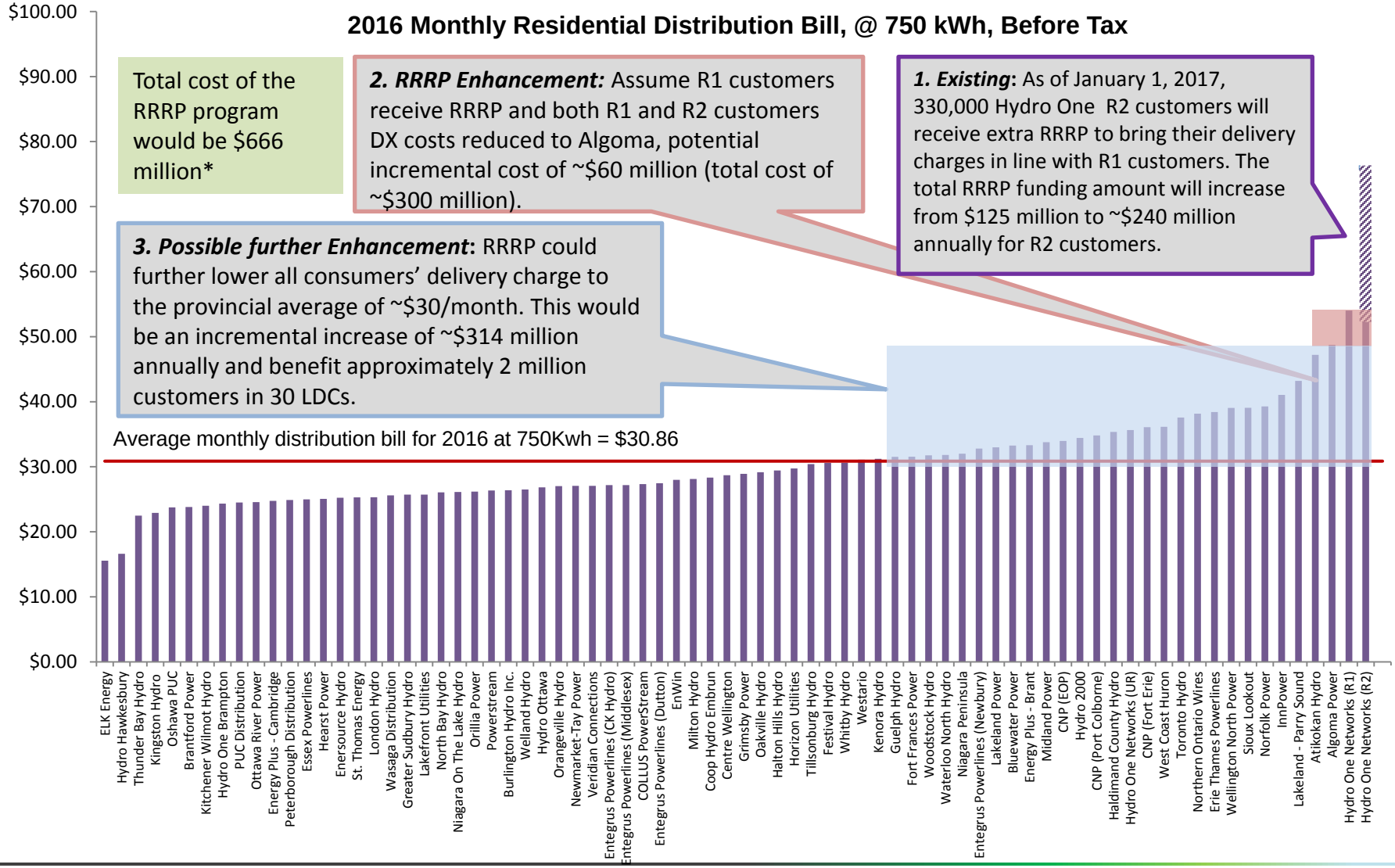
- The Rural or Remote Rate Protection (RRRP) program supports the most costly-to-serve distribution customers in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
  - Costs to these Hydro One customers are higher than average because of their relatively low density. The OEB mandates that they pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies.
  - To mitigate these costs, the RRRP was recently enhanced to help lower the bills of Hydro One's R2 customers to around those of its R1 (medium density) customers.
- Although other LDCs do not have medium- and high-density rates, there is a wide range of distribution costs between LDCs. The RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - Could be done on its own or as part of exploring an Ontario-wide uniform "postage stamp" delivery rate.

**Considerations**

- RRRP will be enhanced for R2 customers on January 1, 2017 to have their costs reduced to approximately R1 distribution costs levels. The RRRP could be further enhanced to include R1 customers, and have R2 and R1 customers reduce their costs down to Algoma (see next slide). This would cost $300 million in the first year (and would adjust year over year).
- If there was a desire to reduce costs for all LDCs, a simple average of distribution cost before tax, across all rate zones is $30.86 per month, for a residential customer consuming 750 kWh per month.** Bringing all delivery rates down to this average would cost approximately $500 million for the first year, with escalation in line with average distribution rate increases.
  - This assumes Hydro One R2 consume 1,200 kWh and H1 R1 customers consume 1,000 kWh per month.
- If all customers were brought down to the average costs (see the chart on the next slide for more detail):
  - It is assumed that residential customers with bills less than the provincial average see no change;
  - Majority of the enhanced benefit would go to Hydro One R1 and Toronto Hydro customers; and
  - Mechanism to ensure that LDCs continue to be motivated to achieve efficiencies would need to be designed (see section 4).
- Enhanced RRRP support may be best provided from the tax-base, because if funded from the rate-base, it would increase the costs for all customers who may argue that it is unfair that they are being asked to pay more to subsidize those in other LDCs.
- In conjunction with using the tax-base to reduce delivery charges to the provincial average, the OEB could be asked to explore moving to a province-wide "postage stamp" delivery rate that would be the same across the province to be implemented over time.
  - Could be "winners and losers" as delivery rates less than the average would go up in a postage stamp model;
  - A "postage stamp" model could help incent LDC consolidation.

**Note:** This is based on preliminary estimates and the amount will fluctuate on monthly consumption from customers and LDCs have different customer base with different consumption types.

# 1. Rural or Remote Rate Protection (RRRP) Expansion (cont'd)




*Note: this includes the ~$50M currently supporting Algoma Power and Hydro One Remotes.*

# 2a. Enhance Ontario Electricity Support Program (OESP) Benefit

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills. The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices and at launch, it was estimated ~560,000 families could be eligible and some 261,000 applications have been submitted.

- The OESP program benefits could be increased across the board by 50%, which would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).

- The OESP program could also be further enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).

**Considerations**

- If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible.
  - At the time of program design, advice was given that a 40-50% participation rate would be high for an application-based program delivered through electricity bills.
  - The province would need to work with LDCs if the rebate was to appear on electricity bills rather than be delivered via the income tax system (e.g., through the Trillium Benefit).

# 1 & 2a. Fiscal Impacts of RRRP, OESP and First Nation Rate

- Table below shows estimates of program costs up to 2022:

| Year | OESP ($M) | OESP + 50%($M) | RRRP($M) | RRRP Enhancement ($M) | First Nations Delivery Rate($M) | TOTAL RANGE ($M) (from status quo to OESP and RRRP enhancements) |
|---|---|---|---|---|---|---|
| 2017 | $108 | $162 | $292 | $374 | $18 | $418 to $846 |
| 2018 | $150 | $226 | $300 | $384 | $18 | $468 to $928 |
| 2019 | $186 | $279 | $306 | $394 | $18 | $510 to $997 |
| 2020 | $215 | $322 | $315 | $404 | $18 | $548 to $1,059 |
| 2021 | $243 | $365 | $322 | $415 | $18 | $583 to $1,120 |
| 2022 | $272 | $408 | $329 | $426 | $18 | $619 to $1,181 |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections above assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
   - The second column forecast also assumes the existing credit amounts increase by 50%.
     - Forecast assumes 10% administration costs
     - Forecast does not account for the approximately 142,000 low-income households that OEB estimated are not eligible because they do not directly receive an electricity bill.

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.
   - Expansion to cap distribution rates for other customers is based at $374M and assumes escalation of 2.6% (historical average dx rate increase). This is a conservative estimate, as Hydro One and Toronto Hydro increases could drive program costs beyond the average increase.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 2b. Expand OESP Eligibility

**Expanded Coverage**

- When OESP was being created, the OEB estimated that are 713,000 low-income households, of which 20% do not receive electricity bills. Thus, only 571,000 would potentially be eligible for OESP.
- If moved to the tax base, the OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity.

**Eligibility Categories**

- OESP has two credits amounts:
    1) Basic credit of $30-50 per month, based on the level of income and the number of residents.
    2) Enhanced credit of $45-75 per month for those with unique electricity needs:
        a) Electric heating,
        b) Indigenous customers, and
        c) Certain electrically intensive medical devices.
- The enhanced credit can be expanded to include additional eligibility categories of customers. For example, a new “Low Density Consumer” category could be introduced that provides Hydro One R2 customers (highest distribution rates) eligible for OESP the enhanced credit.

**Considerations**

- Potential costs for expanded coverage and new eligibility categories depend on updated estimates and changes to program design and delivery.
- There would be value in keeping the OESP as an income-tested program to distinguish it from other initiatives (e.g. RRRP, which is designed to address disparity between rural and urban distribution costs).

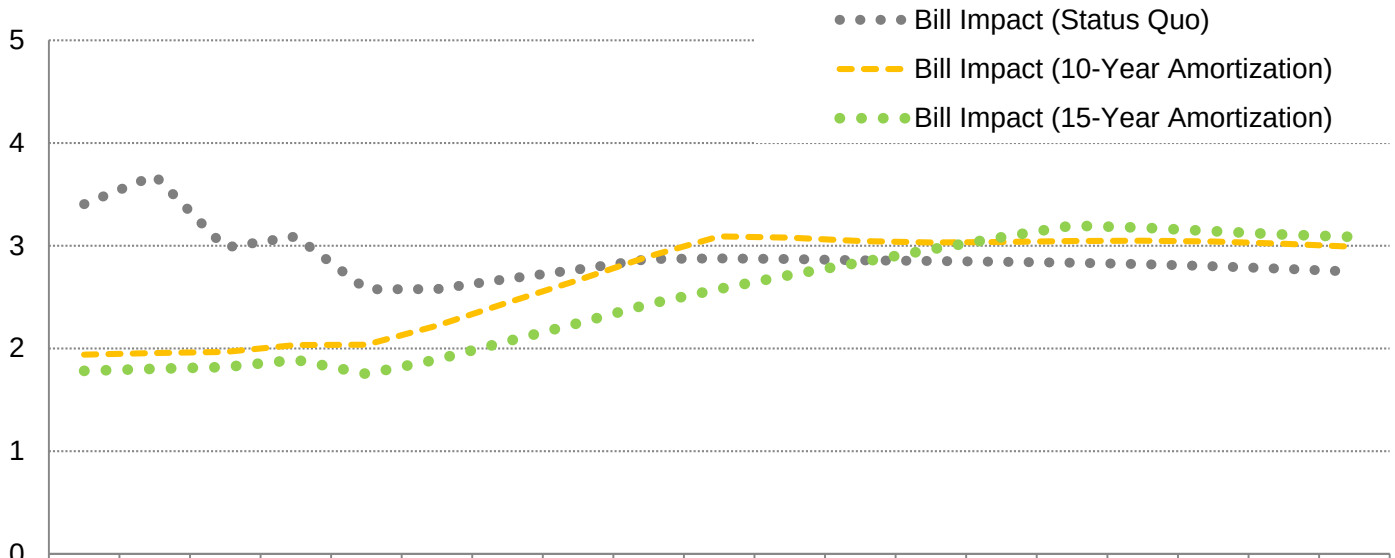
# 3a. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized. This would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs).
  - The time period over which costs could be amortized would be over the lifetime of funded CDM measures.
  - ENERGY is working with IESO to determine the appropriate lifetime period – the graph on the next slide, which illustrates residential bill impacts, presents two cases: **10-year and 15-year measure lifetimes**.
- In both cases, amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020. Over time the benefit would decrease and turn into a cost (higher electricity rates than would otherwise occur), as interest charges begin to grow. Estimated interest charges are as follows (a 3% interest rate is assumed; increases in interest rates could result in higher overall interest charges):
  - $712 million ($2016) – Amortizing eligible 2017-2035 CDM costs for 10-year period; and
  - $1.3 billion ($2016) – Amortizing eligible 2017-2035 CDM costs for 15-year period .
- Legislative changes would be needed to allow recovery of interest payments from ratepayers, or these costs could be recovered from the Consolidated Revenue Fund (CRF, or taxes).
- An alternative that could be explored would be to pay for CDM costs, or for a portion of these, from the tax-base (*see Appendix for more detail on tax funding option*).

# 3a. Amortize Conservation Program Costs (cont'd)

## Conservation Residential Bill Impact – Status Quo, 10-Year and 15-Year Amortization

***CDM Bill Impact ($/month)***




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bill Impact (Status Quo) | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | 2.68 | 2.77 | 2.87 | 2.88 | 2.87 | 2.86 | 2.85 | 2.84 | 2.83 | 2.82 | 2.80 | 2.78 | 2.75 |
| Bill Impact (10-Year Amortization) | 1.94 | 1.95 | 1.97 | 2.03 | 2.04 | 2.22 | 2.45 | 2.67 | 2.90 | 3.09 | 3.08 | 3.05 | 3.03 | 3.04 | 3.04 | 3.05 | 3.04 | 3.02 | 2.99 |
| Bill Impact (15-Year Amortization) | 1.78 | 1.80 | 1.82 | 1.89 | 1.75 | 1.89 | 2.07 | 2.25 | 2.43 | 2.58 | 2.71 | 2.84 | 2.96 | 3.08 | 3.20 | 3.18 | 3.14 | 3.11 | 3.09 |

Source: IESO; Ministry of Energy

**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10 of 15-year borrowing rate of 3.0%.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.
- Legislative amendments would be needed to allow recovery of loan interest charges from GA.
- ENERGY staff have developed a note to seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
- ENERGY is working with IESO to seek an opinion on the proposal from IESO's external auditor.
- ENERGY would then send the IESO external auditor's opinion along with ENERGY's explanatory note to the Ontario Provincial Controller (OPC) to seek a formal opinion on whether CDM costs could be amortized according to rate-regulated accounting standards.
- Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 3b. Rate Smoothing of Conservation Program Costs

- "Rate smoothing" could achieve the same rate reduction effect as amortization.
- Instead of taking out a loan to amortize conservation costs, a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Each year, IESO would defer recovery of a portion of annual conservation costs. Financing would also be required, such as from the OFA, to pay the interest on the deferral account. Interest would accrue on the deferred amounts, likely at the same rates as for the amortization option.
- Deferred costs could be recovered over any time period. If a 10 or 15 year-period was chosen, the rate impacts would be the same as in the amortization option.

**Considerations**

- Option would **not** require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open the Ministry to criticism by the Controller and/or Auditor General since the rate impact is the same.
- The Ministry would have more control under this option to change deferred amounts each year, as opposed to the terms set by a loan agreement under the amortization example.
- There is precedence to this approach for nuclear investments, which otherwise would result in volatile increases and decreases for Ontario ratepayers over the investment period. In 2015, the Ministry amended a regulation that requires the Ontario Energy Board (OEB) to set "smoothed" nuclear rates for OPG's Darlington and Pickering nuclear stations over a 20-year period.
  - The regulation allows OPG to defer recovery in rates of a portion of its nuclear revenue during the Darlington refurbishment (expected to be complete in 2026) and recover these deferred costs over the remaining ten years.
  - OPG will establish a "deferral account" to record the deferred amounts each year up to 2026 plus accumulated interest on the balance to reflect OPG's financing costs as a result of rate smoothing. The deferral account is then drawn down on a straight-line basis between 2026 and 2036.
- At minimum, new regulation would be required. However, further analysis is needed to determine the relevant regulation or legislation, to be amended for IESO (e.g., OEB regulation of IESO costs and fees, GA regulation for how IESO recovers its conservation costs from ratepayers).

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure

- Fund investments in specific energy infrastructure projects through the tax-base. **Note:** This could include the provincial portion of funding for the Remote First Nation Connection Project, a fund to support projects that improve adequacy and reliability in areas where new transmission would unlock economic growth and expansion of natural gas service to underserved communities.

**Considerations**

- Tax-base funding would allow for energy infrastructure to be built without impacting electricity and natural gas rates.

*Remote Connection Project:*

- Ontario ratepayers currently support costs of remote electricity service through RRRP on the order of $28 million/year
- Connecting 21 remote communities to the Ontario grid is supported by a positive business case due to diesel cost savings over time. If RRRP is funded through the tax base as proposed above, this project represents an opportunity to reduce impacts from RRRP.
- Direct investment in Ontario's portion of the capital costs of the project through a provincial fund (e.g., Trillium Trust) could also be considered along with mechanisms for cost recovery through transmission rates to refresh the fund as industry benefits from the transmission investment.
- The amount of investment and long-term savings depend on a federal contribution to the project and ENERGY is currently in discussions with Canada with the goal of concluding a cost-sharing agreement by spring 2017.
- A move to tax-based funding may have implications for cost oversight, since the OEB's mandate is to have oversight of ratepayer impacts. Alternative methods to review cost prudence of tax-based funding may be needed.

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (cont'd)

**Considerations (cont'd)**

*Transmission Projects to Enhance Economic Growth:*

- A tax-based fund could target investments in projects that have been identified in IESO regional plans and that would stimulate economic growth but are not proceeding due to cost barriers under the OEB's beneficiary pays principle. Investments could also target areas where the existing system poses challenges for delivering reliable service such as in parts of Northern Ontario with long single circuits.
- Potential opportunities for investment could include a transmission reinforcement in the **Greenstone area**, upgrades south of **Red Lake** and others TBD based on program design.
- This approach would allow a potion of project costs to be socialized to advance key projects without impacting rates or OEB's principles of cost allocation. Scope and scale of fund would be refined through program design.

*Natural Gas Expansion to Underserved Communities:*

- The Government has currently committed to expanding natural gas access to more communities in Ontario (i.e., $200 million Natural Gas Access Loan and $30 million Natural Gas Economic Development Grant).
  - Natural gas is an affordable heating source in Ontario. Its continues to be less expensive than alternative sources such as electric baseboards, heating oil and propane. For example, switching from oil to natural gas can save an average consumer an estimated $1,500 annually.
  - Increasing access to other energy sources such as natural gas, provides Ontarians with more options to meet their needs, reduce their energy costs and improve their quality of life.
  - Expansion of natural gas delivery infrastructure is widely supported in underserved communities (i.e., a recurring theme at ROMA) as a means to provide consumers and businesses in underserved communities with more affordable energy choices, attract new industry to Ontario and benefit agricultural producers.
- A grant program complements the Ontario Energy Board's recent decision enabling greater rate-based expansion to unserved areas, including rural and remote communities.
  - Applying Trillium Trust funding would make it possible to enhance the Grant Program and service more communities.

# 5. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt.
- The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.
- If the Province were to transfer $2.6 billion in economic benefits to the rate base over 10 years suggest the following impacts (assuming 140TWh per year):
  - Residential Ratepayer Impact (if spread over 10 years): up to $1.39 per month on a typical bill; and
  - Industrial Ratepayer Impact (if spread over 10 years): up to $1.86 / MWh

**Considerations**

- Cost savings to ratepayers and associated fiscal impacts would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- The departure tax was effectively a true-up for lower PILs payments from Hydro One in previous years – it was not a one-time windfall for the Province. In other words, it ensures that Hydro One paid all its tax obligations under the PILs regime before moving into the normal corporate tax regime.
- The related ~$2.4 billion fiscal benefit to the Province (from the deferred tax benefit) has already been credited to the Trillium Trust to be used to build infrastructure under Moving Ontario Forward.
- Repurposing funds paid to OEFC may have an impact on the defeasance of electricity stranded debt.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to infrastructure investments already made in the sector, or to specific initiatives such as conservation).

# 6a. Empower Energy Agencies – IESO / Market Renewal

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 6b. LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
  - Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
    - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.

**Considerations**

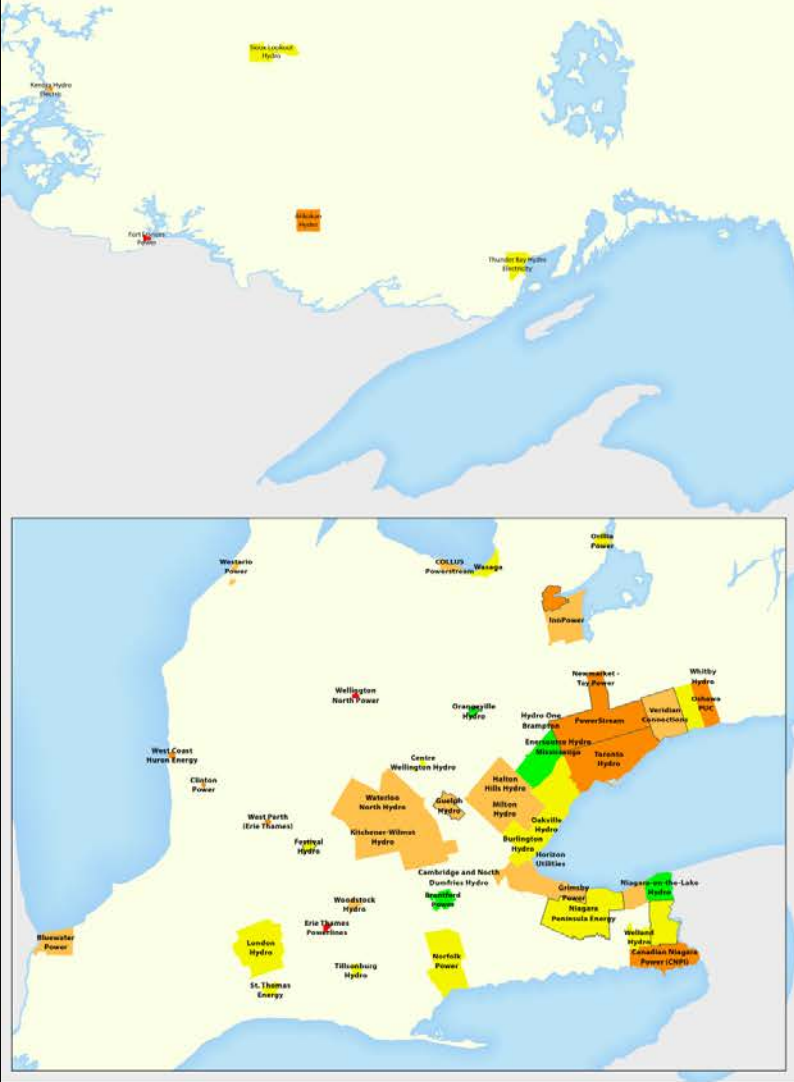
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.

- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
  - To further help address the costs associated with the Delivery line of the electricity bill, program such as the RRRP (previous slide) could be expanded to include other customers that may face higher costs.

- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.

- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation. Further changes to the tax incentives and/or revisiting legislated consolidation could be considered.

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

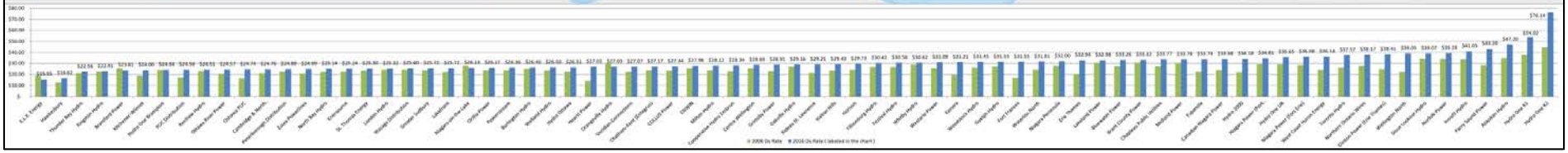
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# 6c. Empower Energy Agencies – OPG / Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

**Considerations**

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.
- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available, providing customers with pricing choice.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- Would provide consumers with electricity pricing choice.
- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro- November 2016 rates)

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7b. Give Consumers More Rate Choices and Greater Transparency – Detailed Global Adjustment

- Provide electricity consumers greater transparency with respect to electricity generation costs by providing more details regarding the Global Adjustment (e.g., adding a line on hydro bills, quarterly energy reports, etc).

**Considerations**

- As electricity bills have increased, many consumers have complained about a lack of transparency on the drivers of electricity costs. In particular, consumers and legislative officers have singled out the GA.

- Providing consumers with additional information on the cost components and amounts recovered through the GA would help consumers understand how the different forms of electricity generation in Ontario contribute to consumers costs.

- Providing additional information to consumers on electricity commodity cost drivers without sufficient context or background could simply lead to increased complaints about particular generating technologies that make up large shares of costs (e.g., nuclear).

- Adding a breakout of the amount of GA on residential electricity bills could lead to further confusion due to the existing breakout of multiple time-of-use buckets.

- Alternatively, the existing quarterly Ontario Energy Report, which provides various energy sector data, could be leveraged to show a breakout of quarterly GA costs by fuel type. A link on electricity bills could point to this information.

# 8. Help Small Business Manage Their Electricity Cost – End DRC Early for Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the proponents agreeing to a lower price in the near term.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period ; discussions/consultation may be required in advance of this potential option moving forward.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- Since the Minister of Energy is not a party, IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms would also reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.

- Projects over 500 kW would offer the most savings potential as they represent the majority of installed renewables capacity and are spread across fewer contracts.

- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.

- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh;
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
  - **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 million | $582 million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - For example, the New contract is $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 million | $632 million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# 10. Tax Relief for Solar and Wind Contracts

- In 2010 and 2011 Ontario procured large scale projects (>500 kW) through the FIT program at standard offer pricing.

- The FIT program was the centerpiece of the GEA which established the economic and social goals of growing the green economy, including establishing a local renewable energy manufacturing base, supporting the development of green energy jobs, and providing incentives for Indigenous participation.

- To help achieve these economic and social goals, the FIT program offered pricing at above competitive procurement rates, and provided Indigenous and Community participation adders, which resulted in economic benefits to all Ontarians, but resulted in additional costs borne by Ontario's electricity ratepayers.

- Ontario could fund the added cost of some or all of these economic and social incentives by shifting their costs from the rate-base to the tax-base.
    1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
    2. The tax base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT.

**Considerations**

- If applied to projects in commercial operation the benefit to the ratepayer would be immediate.
- Comparing FIT pricing to competitive procurement pricing could provide a reasonable representation of energy procurement without the added cost of economic and social incentives.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
   - For example, from 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
   - The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
   - If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
   - The $3.3 billion difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.
   - This represents estimated average ratepayer savings of $1.50/ month relative to OPO forecasts.
   - The same approach could be considered for solar projects however, prior to LRP I in 2016, Ontario had not procured solar capacity competitively and international cost comparisons are challenging given differences in regional development costs.
   - This example does not include the value of participation price adders available for community and indigenous participation.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

2. The tax-base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT 1 solar and wind projects.

   - For example, 17 large FIT 1 wind and solar projects have Indigenous and/or Community participation making them eligible for a price adder in addition to their base contract price.

   - The estimated value of these price adders is approximately $17.1 million (NPV 2017) over the expected remaining term of their contracts.

   - This represents estimated ratepayer savings of approximately $0.01/month relative to OPO forecasts.

# FIT 1 and GEIA Wind Projects in Commercial Operation
(source: IESO Active Contracts List, October 31, 2016)

| Count | Program | MW | COD |
|---|---|---|---|
| 1 | FIT 1 | 0.8 | Oct-10 |
| 2 | FIT 1 | 18 | Jul-15 |
| 3 | FIT 1 | 23 | Aug-15 |
| 4 | FIT 1 | 40 | Jan-15 |
| 5 | FIT 1 | 10 | Sep-14 |
| 6 | FIT 1 | 10 | Sep-14 |
| 7 | FIT 1 | 10 | Jun-14 |
| 8 | FIT 1 | 99 | May-13 |
| 9 | FIT 1 | 100 | Oct-15 |
| 10 | FIT 1 | 4 | Sep-12 |
| 11 | FIT 1 | 100 | Apr-16 |
| 12 | FIT 1 | 15 | Jun-15 |
| 13 | FIT 1 | 18 | Mar-12 |
| 14 | FIT 1 | 104.4 | Nov-13 |
| 15 | FIT 1 | 40 | Dec-15 |
| 16 | FIT 1 | 60 | May-14 |

| Count | Program | MW | COD |
|---|---|---|---|
| 17 | FIT 1 | 125 | Aug-13 |
| 18 | FIT 1 | 73.5 | Aug-14 |
| 19 | FIT 1 | 102 | Jan-15 |
| 20 | FIT 1 | 9 | Jan-12 |
| 21 | FIT 1 | 4.1 | Dec-15 |
| 22 | FIT 1 | 0.5 | Oct-13 |
| 23 | FIT 1 | 82.8 | Nov-11 |
| 24 | FIT 1 | 18.45 | Sep-16 |
| 25 | FIT 1 | 60 | Jul-14 |
| 26 | FIT 1 | 10 | Oct-16 |
| 27 | FIT 1 | 6.15 | Nov-14 |
| 28 | FIT 1 | 2.3 | Aug-15 |
| 29 | FIT 1 | 10 | Feb-16 |
| 30 | FIT 1 | 8.2 | Nov-14 |
| 31 | FIT 1 | 150 | Nov-14 |
| 32 | FIT 1 | 91.39 | Dec-14 |

| Count | Contract | MW | COD |
|---|---|---|---|
| 33 | FIT 1 | 25 | May-15 |
| 34 | FIT 1 | 82.8 | Nov-11 |
| 35 | FIT 1 | 30 | Mar-14 |
| 36 | FIT 1 | 17.6 | May-16 |
| 37 | FIT 1 | 23 | Dec-12 |
| 38 | FIT 1 | 99 | May-13 |
| 39 | FIT 1 | 48.6 | Dec-11 |
| 40 | FIT 1 | 19.44 | Aug-15 |
| 41 | FIT 1 | 10.8 | Mar-12 |
| 42 | FIT 1 | 38.88 | Sep-15 |
| 43 | FIT 1 | 60 | Aug-14 |
| 44 | GEIA | 270 | Mar-14 |
| 45 | GEIA | 180 | Dec-15 |
| 46 | GEIA | 148.6 | Dec-14 |
| 47 | GEIA | 270 | May-15 |

# Key Outcomes / Next Steps

- The proposed initiatives provide the following opportunities to:
  - Provide a greater focus on vulnerable consumers by funding electricity support programs through the tax-base.
    - Enhance existing and new support programs targeted at the most vulnerable consumers (i.e., OESP and RRRP); and
    - Better harmonize delivery rates across the province.
  - Re-set how energy infrastructure is funded by shifting costs to the tax-base from the rate-base.
  - Provide electricity consumers with greater choices and transparency (e.g., alternative rate plan based on a flat electricity rate, unpacking the Global Adjustment costs, etc);
  - Provide system benefits (e.g., market renewal);
  - Increase cost effectiveness and improve efficiency; and
  - Lower the cost of electricity for all consumers.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require legislative and/or regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

A. Rural or Remote Rate Protection (RRRP) – Overview and Enhancements
B. Fund Conservation Programs Through the Tax-Base
C. Eliminate the Industrial Conservation Initiative (ICI)
D. Cancel Large Renewable Procurement I (LRP I)

# A. RRRP Overview and Enhancements

- The Delivery line of the electricity bill is composed of Distribution and Transmission Costs. While transmission costs are uniform across the province, LDC costs vary by distributor and account for about 20% of the total bill for the electricity customers.
  - See slide X for a map of delivery rate increases between 2006 and 2016.
- The Rural or Remote Rate Protection (RRRP) framework was put in place in 2001 to help offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations.
- RRRP is available to: residential Hydro One R2 customers (~350,000 customers), Algoma Power customers (~11,600 customers); H1 remote customers (~3,500 customers).
  - To date, R2 customers receive a fixed amount of $125 million a year distributed amongst the customers. Algoma and Remote customers have RRRP calculated by the OEB each year that fluctuates based on average provincial distribution increases.
- Because the amount had been fixed for over a decade, the Province recently increased funding of the RRRP program for Hydro One R2 customers from $125 million to $240 million. This will be effective as of January 1, 2017, and will bring their delivery charges in line with the next highest charges from Hydro One's R1 customer class.

# B. Fund Conservation Programs Through the Tax-Base

- Propose to fund 2017-2020 electricity conservation and demand management program costs* using tax dollars instead of ratepayer dollars.
  - Funds received through the Hydro One Departure Tax could potentially be repurposed towards this.
- Total remaining 2017-2020 electricity conservation program costs are expected to be ~$2.1 billion.
- Post 2020, this option could evolve to funding conservation programs through the Greenhouse Gas Reduction Account.

**Considerations**

- Electricity conservation programs provide a number of benefits to society, however, Ontario's ratepayers have been covering these costs:
  - Avoiding/deferring future energy infrastructure investments, reducing disruption in communities (e.g., avoiding the need to build new natural gas generation);
  - Environmental benefits (e.g., reduced natural gas peaking generation and GHG emissions); and
  - Social and economic benefits (e.g., job creation and assistance managing electricity bills).
- There is precedence for using tax dollars to fund conservation programs.
  - Between 2007 and 2011, Ontario funded the Home Energy Savings retrofit program using tax dollars.
- Funding conservation programs though the tax-base is expected to result in a benefit of $3.40/month for residential electricity consumers in 2017. This could provide immediate short term relief to consumers while other rate mitigation initiatives are developed (e.g., market renewal, LDC efficiencies).

*** Note:** This includes costs towards the Conservation First Framework, Industrial Accelerator Program, Demand Response and the Conservation Fund)

# C. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

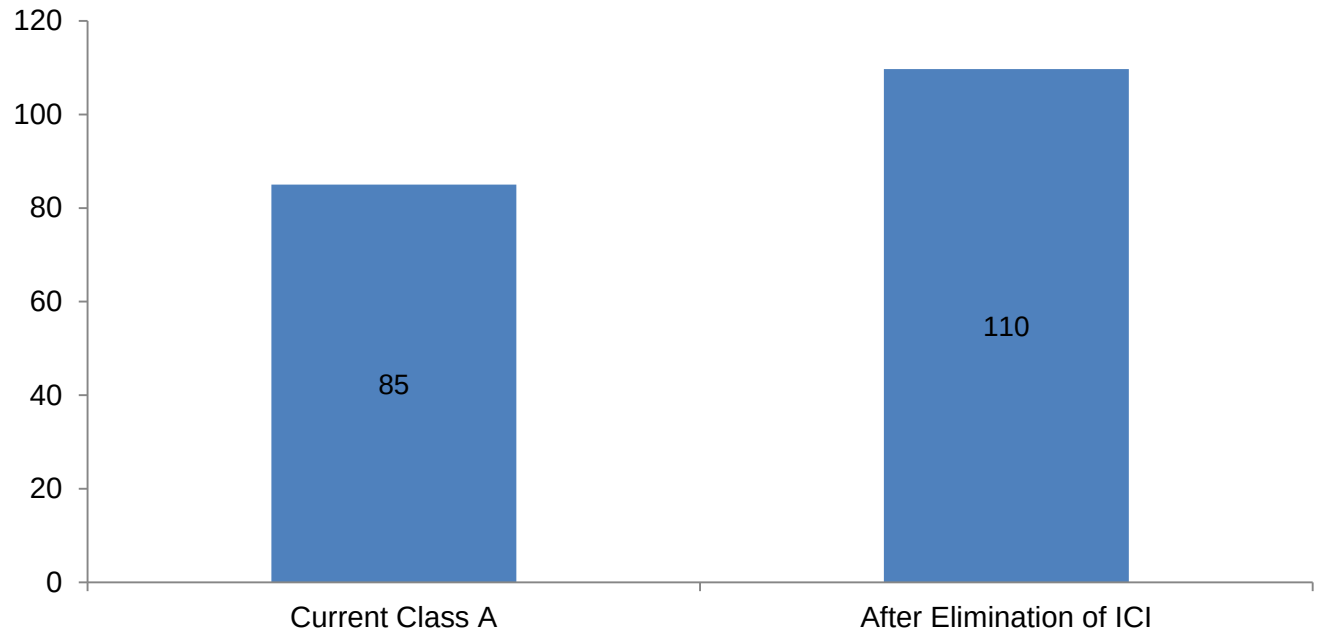
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# C. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# D. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period.
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g. rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

*Cancel/Adjust Announced Procurements:*

- Amendments to existing directions to IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

*Cancel Existing LRP I Contracts:*

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

**Legal Analysis**

- Any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements.
  - An amendment to an existing direction would not require Cabinet approval, however, further analysis is required to determine if direction to cancel LRP I contracts could be considered as amending existing direction.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights. This reasoning would likely apply equally to any direction to IESO to cancel LRP I contracts. Previous advice has also flagged a risk that the Province could be liable for damages in tort for inducing a breach of contract (or other claims).
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

**From:** Gavin He
**To:** John Kim
**Subject:** RE: Rate Mitigation
**Date:** Sunday, January 15, 2017 4:48:50 PM

---

Hi John,

No problem. Sent them to Ron and cc'ed you, Francisco, and Emily. Hopefully they are fine.

Going to log off now. Have a great evening.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:37 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks Gavin.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:35:58 PM
**To:** John Kim
**Cc:** Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Sure.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:35 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Let's send the first two with the aim to send the third tomorrow if still asked. I will review the third one, the GA one, again either tonight or tomorrow morning.

John.

**From:** Gavin He
**Sent:** January 15, 2017 4:32 PM
**To:** John Kim
**Cc:** Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Sure, just to confirm, I will send all the attached to Ron?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:26 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks....let's send to Ron. Pls. also include the deck from Francisco.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:21 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

I am good with the notes and I don't have any additional comments, saved that in the folder.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:19 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

No reason....updated the RRRP.

I took a look at the comments in the deck and the comments are good. Given the meeting is

on Monday, I am leaning towards not sending back comments on the deck back unless proposing to make edits to the text, like Francisco is in the attached.

I'm OK to send these back with cc: to Emily and Francisco unless you have additional comments, which would be welcome.  Ideally would like to review further but I'm going to bed soon.

Thanks,

John.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:13 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

I reviewed the debt-financing GA sections and I am good with the edits.

I didn't review the other deck in details, but took a quick look on slide 7 and the new section at the end of the note.  Just one question, is there a reason why the RRRP numbers for 2019-2021 were not updated?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:01 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Let me know what you think.  If OK, could you save to the folder?

Going to quickly go through the deck.

---

**From:** John Kim
**Sent:** January 15, 2017 3:32 PM
**To:** Gavin He; Shajee Kathirgamanathan
**Subject:** Re: Rate Mitigation

Yeah, I think Shajee's point on slide 7? might be the only path. I am about to take a crack at it but I don't want to minimize the fiscal impact by taking their numbers. Thus being deliberate. Shouldn't take long.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:30 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Based on Emily's update, the impact for OESP & RRRP will be $0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022, without detailed impact on each year. So it we are going to update the table, it seems we might need to make some assumption.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:17 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yes, the OESP and RRRP that Emily updated, kind of showed me there were updates.

Ok, I need to go back to that deck.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:13 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Are you referring to the numbers for OESP and RRRP?

Also, the $2B GA amount is from scenario 2 and 3. The cap for the maximum amount of GA above the true cost is $2B.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:10 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yeah, I'm trying to decide if it's worth adding that proposal. While I am trying to minimize work, it's fiscal impact stuff.

And the table. I'm trying to assess if not updating that is an option as I'm getting tired.

What's your sense?

---

**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 3:06 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

If you're referring to #10 on renewables/wind contracts, I think it's not so much tax exempting renewables, but rather paying through the tax base the amounts above competitive electricity rates. (Eg. If competitive amount is say $80/mwh. And they have a community/indigenous adder of $40/mwh. Therefore a total contract price is $120/mwh. The proposal would shift the $40/mwh to the tax base). That's my interpretation at least.

Again it's just another way to transfer to the tax base from the rate base.

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 2:57 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks.....I think we should send the note in for about 6pm so don't worry about it. I will have a look at the deck.

The only thing that concerns me is the additional proposals like tax exempting of renewable

contracts, etc.  I'm debating whether they need coverage but likely to try to dodge it.  I think the table at the bottom needs updating but I'm currently still assessing it.

---

**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 2:54 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

I finished with my comments on the power point file. I think there were some CEFD and Energy Comments from before.

Only way to distinguish are my comments are "**CEFD Comments**" (bold), whereas before it was evidently bold and underlined.

Will take a quick review of the document, but heading out shortly for the evening. Will try to get done what I can.

Thanks,
Shajee

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 2:45 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks....saw this after sending the other.

---

**From:** Gavin He
**Sent:** January 15, 2017 2:41 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

Emily just finished the file.  I have copied my edits in her version and saved it as v9.

Thanks,
Gavin He

---

**From:** Gavin He

**Sent:** Sunday, January 15, 2017 2:24 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

In the interest of time, I have worked on v8 from my personal drive, as Emily is still in the note. I have reviewed and updated sections related to debt-financing GA.

John – for the numbers, I wasn't involved in providing the updates, so don't have much knowledge on how the numbers were put together, and the presentation decks don't provide update on those numbers, so I didn't make any update there.

Please review and let me know if you have any questions. I can consolidate my edits once Emily is done.

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 10:01 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation

FYI.

Hoping to finalize on our end by early afternoon…..Emily might have other comments.

I think what things need to be checked against the updated deck, as well.

John.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 9:59 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John, Emily,

I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.

I also made some edits to Energy's slides but not sure those are needed.

Thanks,

Francisco

-----Original Message-----
From: John Kim
Sent: Saturday, January 14, 2017 11:45 PM
To: Emily Kerr <Emily.Kerr@ofina.on.ca>
Subject: RE: Rate Mitigation

Hi Emily,

Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.

Thanks,

John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation
>
> Good morning,
>
> Attached are materials for Monday's rate mitigation meeting.
>
> Keley
>
> Original Message
>
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
>
> Sent: Saturday, January 14, 2017 7:49 AM
>
> To: Orsini, Steve (CAB)
>
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
>
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

| | |
|---|---|
| **From:** | Graham, Helen (TBS) |
| **To:** | Francisco Chinchon |
| **Cc:** | John Kim |
| **Subject:** | RE: Rate mitigation |
| **Date:** | Monday, January 16, 2017 11:34:10 AM |

Great – any time after 1 is good for me – I will try to get Bharat to participate as well

**From:** Francisco Chinchon [mailto:Francisco.Chinchon@ofina.on.ca]
**Sent:** January 16, 2017 11:33 AM
**To:** Graham, Helen (TBS)
**Cc:** Kim, John (OFA)
**Subject:** Rate mitigation

Hi Helen,

I heard your vm. We have been reviewing and we are happy to arrange a call if you are available this afternoon.

Thanks,

Francisco

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

**From:** Shajee Kathirgamanathan
**To:** John Kim
**Subject:** RE: cost shift charts
**Date:** Monday, November 21, 2016 4:33:12 PM
**Attachments:** Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v3.pptx

---

I'm still working on adding some info to the OEPTC/NOEC text in the timeline, but here's what I have so far.

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Monday, November 21, 2016 12:11 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** cost shift charts

Hi John,

Just a really first crack at the table and timeline, attached also found here: S:\Users\CEF\Hydro 2016\Electricity Prices\Cost Shifts\Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides.pptx

Is the timeline what you were thinking will look like?

I'll continue after lunch, including find our existing language on some of these. Also I believe there were previous incarnations of some of these programs we may want to highlight (eg. OEPTC/NOEC and NIER).

Thanks,
Shajee

**Shajee Kathirgamanathan**
Senior Advisor
Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
Office: 416-325-1402 | Mobile: 647-294-3359
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Ontario

MINISTRY OF
ENERGY

# Cost Shifts in Ontario's Electricity Sector

## Working Draft

November 2016

CONFIDENTIAL DRAFT

# Context

- Necessary investments in Ontario's electricity system have led to increased prices, prompting government to introduced a number of price mitigation programs for all consumer types.
  - In addition to existing rate mitigation programs, the 2016 Throne Speech announced a package of rate mitigation initiatives to address electricity prices for residential, commercial and industrial consumers.

- Ontario has a number of programs in place to manage residential electricity prices, including:
  - Ontario Electricity Support Program (OESP);
  - Rural or Remote Rate Protect (RRRP);
  - Northern Ontario Energy Credit (NOEC); and
  - Ontario Energy and Property Tax Credit (OEPTC).

- Ontario also has a number of programs in place to manage industrial electricity prices, including:
  - Industrial Conservation Initiative (ICI);
  - Industrial Electricity Incentive (IEI);
  - Industrial Accelerator Program (IAP);
  - saveONenergy for Business Program; and
  - Demand Response.

# Context (cont'd)

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in Ontario's Electricity Sector

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in Ontario's Electricity Sector (cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

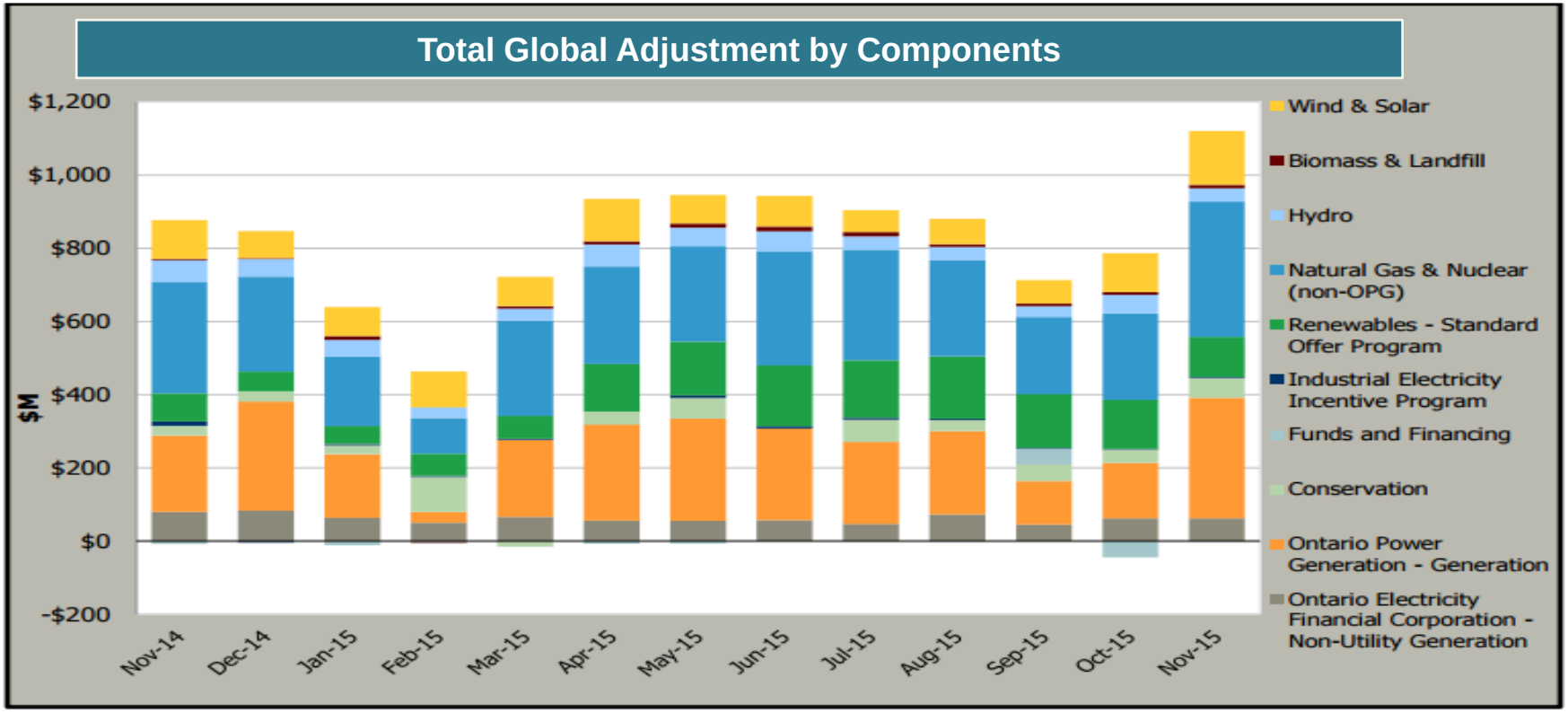
| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

DRAFT

# Taxpayer funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| **Ontario Clean Energy Benefit (OCEB)** | ~1,000 | Jan 1 2011 to Dec 31, 2015 | OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax. Effective September 1, 2012, electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month, and provided a full 10 per cent benefit to almost all residential customers and most small retail businesses.<br><br>OCEB was a responsible way of helping Ontario families through the transition to a more reliable and cleaner electricity system, with the monthly cap balancing the fiscal implications of providing electricity relief.<br><br>Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. |
| **Ending DRC from Residential Bills** | ~300 | Jan 1, 2016 to Mar 31, 2018 | As part of its commitment to reduce electricity cost pressures, the government has removed the Debt Retirement Charge (DRC) from residential electricity users' bills as of January 1, 2016.<br><br>This is saving a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*. |
| **Ontario Rebate for Electricity Consumers (OREC)** | ~1,000 | Jan 1, 2017 onward | This ongoing program will rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST), an eight per cent savings. |
| **Northern Industrial Electricity Rate Program** | 120 | March 2010 | The Northern Industrial Electricity Rate (NIER) was extended in 2012 for an additional three-year term, effective April 1, 2013, and expiring March 31, 2016, with an allocation up to $120 million per year.<br><br>Qualifying participants receive a rebate of two cents per kilowatt-hour (kWh) up to a maximum of $20 million per year per company.<br><br>NIER was initially established as a three-year program in Budget 2010 and effective as of April 1, 2010, to provide an estimated $150 million per year to eligible large industrial companies in northern Ontario. |
| **Northern Ontario Energy Credit** | 25 | Budget 2010 Announcement | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224.[1] |
| **Ontario Energy Property Tax Credit** | 445 | Budget 2010 Announcement | Delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families, and up to $1,148 for qualifying seniors. [1] |

1. Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).

DRAFT

# Timeline - Taxpayer funded Electricity Price Mitigation

**Budget 2010: OEPTC, NOEC Proposed as part of the Ontario Trillium Benefit**

*In the 2011 Budget, the government combined the payments of three existing tax credits — the Ontario Sales Tax Credit, the Ontario Energy and Property Tax Credit, and the Northern Ontario Energy Credit — to create the OTB.*
*The OTB is paid in monthly instalments throughout the year, which helps people meet their expenses as bills arrive.*

**Ontario Clean Energy Benefit** (Jan 1 2011 to Dec 31 2015)

*The OCEB was introduced in the 2010 Ontario Economic Outlook and Fiscal Review to help consumers transition to a cleaner electricity system. As set out in legislation, the OCEB ended on December 31, 2015. The Province has introduced rate mitigation measures to be implemented after December 31, 2015.*

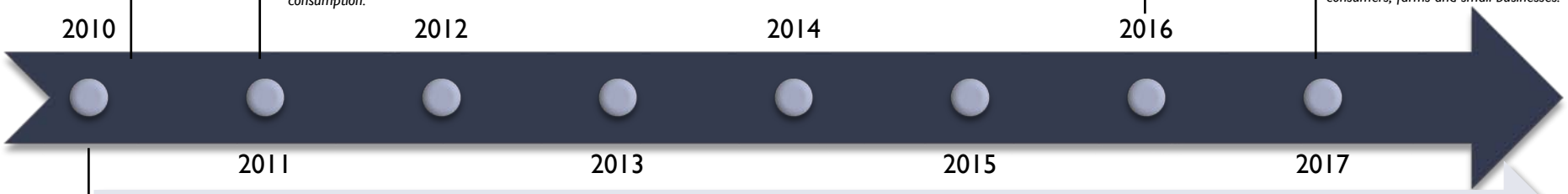
*OCEB provided over four million residential customers, and over 400,000 farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax, for the first 3,000 kilowatt-hours (kWh) of monthly electricity consumption.*

**Removing DRC from Residential Bills**

*As part of its commitment to reduce electricity cost pressures, the government has removed the Debt Retirement Charge (DRC) from residential electricity users' bills beginning on January 1, 2016. This will save a typical residential user about $70 each year and will mean ending the DRC earlier for these users than otherwise provided for in the Electricity Act, 1998.*

**Ontario Rebate for Electricity Consumers**

*As of January 1, 2017, OREC will reduce electricity costs by an amount equal to the provincial portion of the HST for about five million residential consumers, farms and small businesses.*




**Northern Industrial Electricity Rate Program**

## History of Northern Industrial Relief

**November 2006**
*The Ontario government announced the Northern Pulp and Paper Electricity Transition Program (NPPETP), a three-year $140 million, to be effective retroactively to October 1, 2006*

**Budget 2009**
*The government announced extension of the NPPETP by one year providing about $58 million with electricity price rebates of 1.8 cents/kWh.*

**Budget 2010**
*The government announced the NIER program, with a projected fiscal cost of $150 million per year, to provide electricity price rebates for qualifying large industrial facilities in Northern Ontario. An additional $21.8 million allocated for existing NPPETP in 2010-11 to be integrated with NIER.*

**September 2010**
*Transition from NPPETP to NIER: pulp and paper mills participating in NPPETP continued to receive the NPPETP rebate of 1.8 cents/kWh until September 30, 2010, with those qualifying for NIER receiving a top-up rebate of 0.2 cents/kWh.*

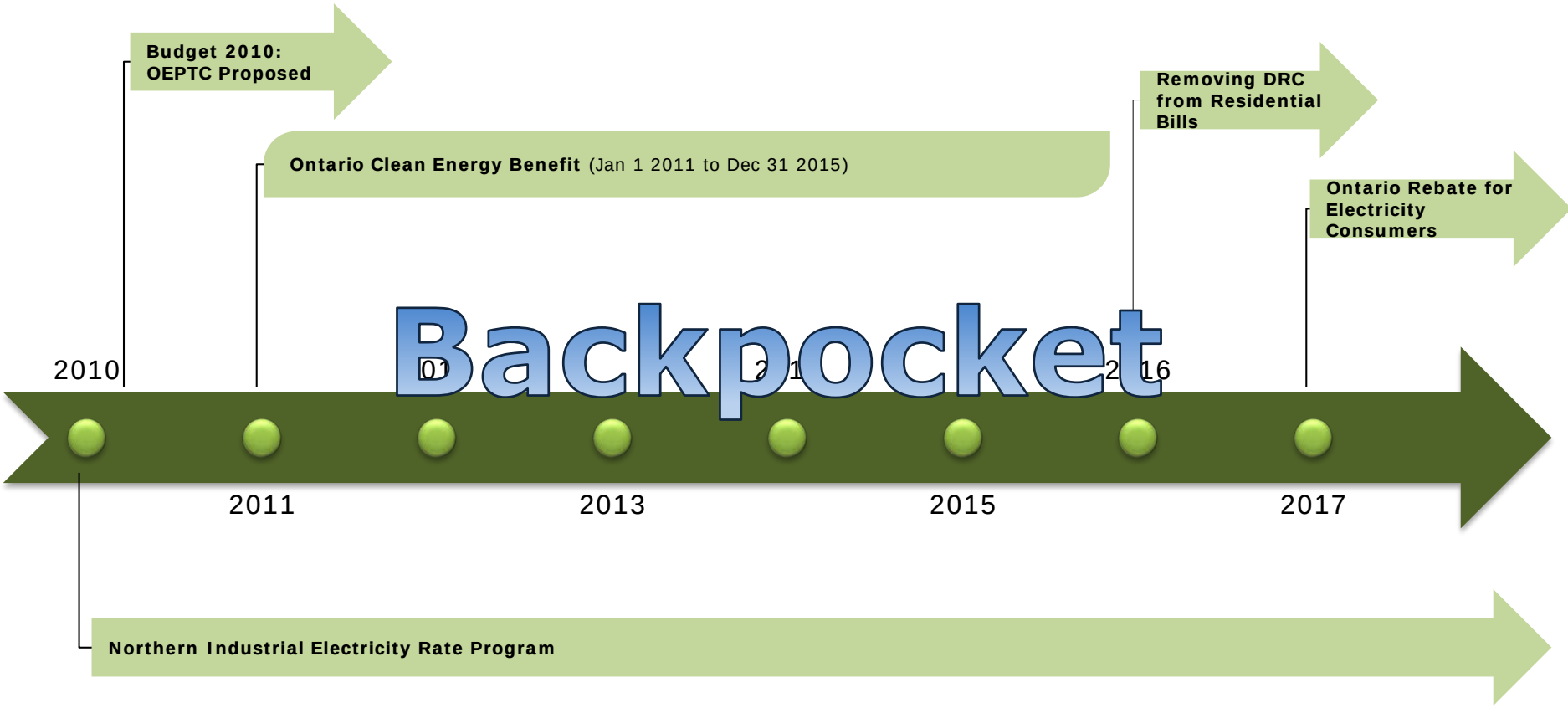
**December 2012**
*The government announced the extension of the NIER for three years, capping the rebates to a maximum of 2011-12 consumptions levels or $20 million, whichever is lower.*

# Taxpayer funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| Ontario Clean Energy Benefit (OCEB) | 1,000 | Jan 1 2011 to Dec 31, 2015 | |
| Ending DRC from Residential Bills | 300 | Jan 1, 2016 onward | |
| Ontario Rebate for Electricity Consumers (OREC) | 1,000 | Jan 1, 2017 onward | Rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST), ... per cent saving |
| Northern Industrial Electricity Rate Program | 120 | 2010-2011 fiscal year onwards | Provides a $20 per megawatt hour rebate, up to a maximum of $20 million, for qualifying large northern industrial consumers. |
| Northern Ontario Energy Credit | 25 | | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224. |
| Ontario Energy Property Tax Credit | 445 | | Delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families, and up to $1,148 for qualifying seniors. |
| Ontario Sales Tax Credit (?) | | | |

Backpocket

# Taxpayer funded Electricity Price Mitigation



| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | Salman Qadir; Gavin He; John Kim; Adam Prokop |
| **Subject:** | RE: deck |
| **Date:** | Tuesday, December 06, 2016 11:08:03 AM |
| **Importance:** | Low |

Thanks Salman.

For organization purposes, can we save all the files from this round in a separate folder "Mitigation – Energy" was created for all the pre-throne speech initiatives.

Since this seems to be a separate round, perhaps this folder:
\\ofina.on.ca\ofadfs\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Salman Qadir
**Sent:** Tuesday, December 06, 2016 9:09 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: deck

Hi,

I've saved this here:
Z:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation -- Energy\Price Mitigation Proposals

Feel free to save another file in the folder with your comments (or email me your file) and I will consolidate them. Please let me know when you're finished.

Thanks,
Salman

---

**From:** Gavin He
**Sent:** Tuesday, December 06, 2016 9:08 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>

**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: deck

Hi John,

Sure, will do.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Tuesday, December 06, 2016 9:08 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** deck

Could we all review and provide Salman with the deck to consolidate the comments?

I've started annotating comments, as well.

John.

Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

| | |
|---|---|
| **From:** | Salman Qadir |
| **To:** | Gavin He; John Kim; Shajee Kathirgamanathan; Adam Prokop |
| **Subject:** | RE: deck |
| **Date:** | Tuesday, December 06, 2016 9:09:01 AM |

Hi,

I've saved this here:
Z:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation -- Energy\Price Mitigation Proposals

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Thanks,
Salman

---

**From:** Gavin He
**Sent:** Tuesday, December 06, 2016 9:08 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
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Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

| | |
|---|---|
| **From:** | Salman Qadir |
| **To:** | Shajee Kathirgamanathan; Gavin He; John Kim; Adam Prokop |
| **Subject:** | RE: deck |
| **Date:** | Tuesday, December 06, 2016 11:14:01 AM |

Good idea.

I've moved the relevant files to this folder. Thanks Shajee.

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, December 06, 2016 11:08 AM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: deck
**Importance:** Low

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\\ofina.on.ca\ofadfs\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

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**Subject:** RE: deck

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Thanks,
Salman

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**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>
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**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** deck

Could we all review and provide Salman with the deck to consolidate the comments?

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John.

Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

**From:** Shajee Kathirgamanathan
**To:** John Kim
**Subject:** RE: for tomorrow - price mitigation
**Date:** Tuesday, September 06, 2016 10:52:53 PM
**Attachments:** Cabinet Note - Electricity Price Mitigation v6.docx

---

Thanks John.

I accepted virtually all the tracked changes, and responded to your comments.

Note: I changed the title for initiative #4 from GGRA to 'Redirect Cap and Trade Proceeds Recycling' for consistency with energy's deck.

Please see v6, attached or found here:
S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v6.docx

Thanks,
Shajee

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, September 06, 2016 10:23 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Ok I'm taking a look.

---

**From:** John Kim
**Sent:** Tuesday, September 06, 2016 9:10 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Thanks, I have a marked up version.

Pls see if you can address some of the comments.

John.

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, September 06, 2016 7:55 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Hi John,

I made another update to the v5 note.

I'm assuming we're still briefing Associate Deputy Hughes tomorrow. If so we might want to have Ron review to be able to get to Trish (if required) prior to the briefing.

S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v5.docx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, September 06, 2016 11:21 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Hi John,

I incorporated the TBS note (aka the 'RAN' note), with our Cabinet note.

Please see attached file also here:
S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v5.docx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Tuesday, September 06, 2016 10:35 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

This was one of Ron's bullets….

- The 8% rebate would provide a typical residential consumer about an $11 per month benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average cap and trade commitment.

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, September 06, 2016 10:34 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Hi John,

Not sure, where did you find the 10-11 dollar benefit? The chart on page 2 lists $9.9 which includes the counteracting effects from all other legislation. Which is greater than the $2 benefit committed.

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Monday, September 05, 2016 12:49 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Ok, could you double check on the 10-11 dollar benefit for residential vs. commitment of 2?

---

**From:** Shajee Kathirgamanathan
**Sent:** Monday, September 05, 2016 12:39 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** Re: for tomorrow - price mitigation

Yup, I made most of Ron's updates to this version and kept our overall layout/ points . (E.g. *Small* farms etc).

No, I'm out for most of today, will double check tomorrow and hopefully we can finalize.

Thanks,
Shajee

Sent from my mobile device, please excuse any typos or brevity.

On Sep 5, 2016, at 9:05 AM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Shajee,
>
> As a general ask, the version that was signed off for TB briefing last week, could we incorporate as much of those contents in this version?
>
> Connection this morning is very unstable so hard for me to check.
>
> John.
>
> ---
>
> **From:** Shajee Kathirgamanathan
> **Sent:** Monday, September 05, 2016 12:10 AM
> **To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
> **Subject:** RE: for tomorrow - price mitigation
>
> Hi John,
>
> Since we're having the Cabinet Briefing on Wednesday, just wanted to finish off this note for your (and eventual) review by Ron. (Also not sure, but would TPD also need to review this note (?). Madeleine invited Sriram along with us.)
>
> File attached and found here:
> S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v4.docx
>
> Also I generated some new calculations from the latest Ontario Provincial Outlook (OPO) produced by the IESO. They only had revised demand information; not prices.
>
> | | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
> |---|---|---|---|---|
> | ENERGY | **261** | **1006** | **1004** | **994** |
> | CEFD-LTEP | **224** | **909** | **958** | **1005** |
> | CEFD-OPO | **218** | **880** | **911** | **934** |
>
> Thanks,
> Shajee
>
> **Shajee Kathirgamanathan**

Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, September 01, 2016 1:20 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Will do.

Thanks

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Thursday, September 01, 2016 1:17 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** for tomorrow - price mitigation

As discussed, could we aim to compile some information RPP and Cap and Trade in an internal note or some sort of a dump for tomorrow?

Thanks,

John.

Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

**Tab x**

**CABINET BRIEFING NOTE**

| | |
|---|---|
| **Committee:** | Cabinet |
| **Meeting Date:** | September 14, 2016 |
| **Ministry:** | ENERGY |
| **Last reviewed by:** | **Tracking to:** Cabinet – September 14, 2016 |

**[BASED ON DRAFT CABINET SUBMISSION]**

| | |
|---|---|
| **SUBMISSION TITLE:** | Electricity Price Mitigation |

## I. REQUEST/DECISION REQUIRED:

- The Ministry of Energy is proposing measures to provide relief to various electricity consumer classes. These measure include:

  1. Provide a pre-tax 8% rebate to Regulated Price Plan (RPP) consumers;
  2. Expanding the Industrial Conservation Initiative (ICI) eligibility to customers above 1MW in all sectors;
  3. Updating Rural or Remote Rate Protection (RRRP);
  4. Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

  ~~Using cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade. Balance of proceeds intended for electricity relief through the Climate Change Action Plan could provide some fiscal offsets (to be confirmed by Energy).~~

- [ Approve in principle an expenditure increase estimated at $261M [estimate subject to refinement from ENERGY] in 2016-17 for the Electricity Price Mitigation, offset from the Treasury Board Contingency Fund. ]

**Commented [JK1]:** This seems very broad with no limit to the amount of C&T proceeds to be used.

**Commented [SK22R1]:** Updated to be consistent with revised deck.

The Minute specifies $270M, so there is a limit for this request.

**Commented [JK3]:** Finance?

**Commented [SK24R3]:** From old deck. Deleted.

**Commented [SK25]:** Unclear if this is necessary for the cabinet note as the TB/MBC note may be worried more on fiscal implications.

## II. KEY POINTS:

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online.

As part of the 2016 Budget, the government committed to mitigating electricity cost impacts that were anticipated from the cap and trade program. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable for residential and industrial consumers. This included a commitment to provide a modest benefit of up to $2 per month, on average, to residential consumers.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a

cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the CCAP commitment and additional price mitigation, the Ministry of Energy has developed price mitigation options that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

| | Measure | Targeted Recipients | Impact (annually) | |
|---|---|---|---|---|
| | | | Fiscal | Rate Base |
| **1.** | 8% Rebate to Regulated Price Plan | Residential, small business, small farms and other small users | $1B | - |
| **2.** | Expanding ICI eligibility to customers above 1MW in all sectors | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors | - | $47M/ $82M* |
| **3.** | Updating Rural or Remote Rate Protection | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. | - | $110M |
| **4.** | Redirecting cap and trade proceeds recycling ~~to commercial and industrial; and~~ provide fiscal offsets to the 8% rebate | Commercial and industrial electricity customers | -$60M** | - |

*Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.
**To meet the Budget 2016 commitment, the Climate Change Action Plan (CCAP) committed $1.3B from the Greenhouse Gas Reduction Account (GGRA) or about $330M annually. Current proposal will require $60M less or $270M annually.

- ENERGY provided the following overview of bill impacts:

| Regulated Price Plan (Residential)* | | Class B (Commercial) | Class A (Industrial) | |
|---|---|---|---|---|
| Average (750 kWh/month) | Rural** (1000 kWh/month) | | Existing | New |
| -$10/month (-6%) | -$45/month (-20%) | -$1/MWh (-1%) | -$1/MWh (-1%) | Up to -$52/MWh (-34%) |

Note: The impact of cap and trade would not be added to electricity bills until 2017 and impact of ICI would not be added until 2018. All impacts included here for illustrative purposes
* ENERGY did not provide the monthly impact for other Regulated Price Plan not classified as Residential (eg. farms, small businesses) that would benefit from the 8% Rebate to Regulated Price Plan.
** Rural customers refers to those Hydro One customers eligible to receive RRRP (R2 rate class customers)

**Tab x**

1. **8% Rebate to Regulated Price Plan (RPP)**
   - An 8% rebate on the pre-tax portion for Regulated Price Plan (RPP) consumers would be equal to the provincial portion of HST and funded by the tax base.
   - The $1 billion figure is a 2017 to 2020 calendar year average of cost estimates developed by Ministry of Energy staff, as follows:

| *$ millions* | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|
| | 1,003 | 1,014 | 975 | 1,049 |
| Avg. 2017-20 | 1,010 | | | |

   - On a fiscal year basis, the above estimates become:

| *$ millions* | **2016-17** | **2017-18** | **2018-19** | **2019-20** |
|---|---|---|---|---|
| | 261 | 1,006 | 1,004 | 994 |
| 3-Year Avg. | 1,001 | | | |

   - Ministry staff are in the process of developing a refined estimate of the cost.
   - The rebate would appear directly on bills. As such, Local Distribution Companies (LDC) would be the delivery mechanism for the rebate.
     - While non-Regulated Price Plan consumers would not see a benefit from the 8% rebate under this option, all industrial and commercial consumers would receive proceeds recycling through the Greenhouse Gas Reduction Account (GGRA).
     - Commercial and industrial consumers would also continue to receive input tax credits and Public Service Bodies would continue to receive PSB rebates.
   - New legislation would be required and closely mirror the Ontario Clean Energy Benefit (OCEB) Act, 2010. More details further below.
   - On-bill rebate delivery would likely require adjustments to Local Distribution Company (LDC) billing systems, which could impact delivery costs and timelines.
   - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
     - One option to address any timing concerns is to allow LDCs to provide retroactive payments if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
   - The rebate would not be directly linked to HST.

2. **Expanding ICI Eligibility to customers above 1MW in all sectors**
   - Lower threshold for participation in ICI to 1 MW and remove sectoral restrictions.
   - Most newly eligible ICI participants who choose to opt-in to the program would be able to reduce their electricity costs substantially. All other consumers would see a relatively small increase in their bills.
   - Expanding the ICI will reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods (80MW in the short term and 165 MW in the long term)
   - Bill savings to new participants up to 21% in the short term and up to 34% long-term.

- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
    - Companies that would become eligible under such an expansion include Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.
- Class B consumers would have a collective increase in the Global Adjustment of $47M in the short term and $87M in the long term from this initiative.
- Residential consumers would see an average cost increase of $0.42/month in the short term and $0.74/month in the long term.

**3. Updating Rural or Remote Rate Protection**

- RRRP funding supporting Hydro One R2 (rural) customers capped at current levels since 2004.
- The current program provides a monthly subsidy of a about $32/month.
- Proposal will provide an additional $110 million in support to approximately 329,000 R2 customers to $235 million annually.
- Proposal will increase the subsidy by about $28/month and equalize R2 bills with Hydro One R1 (medium) density customers at 1,000 kWh.
- All residential consumers would see an average cost increase of about $0.60/month.
- ENERGY is considering options to periodically adjust the amount of rate protection eg. indexed at inflation or “trued up” on a regular basis.

**4. Redirect Cap and Trade Proceeds Recycling ~~Redirecting proceed recycling to Commercial and Industrial~~Greenhouse Gas Reduction Account (GGRA)**

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers.
- Ontario’s Climate Change Action Plan (CCAP) includes up to $1.32 billion over 4 years to help keep electricity rates affordable for residential and industrial consumers.
- The GGRA allocated $120M to average residential consumers, $170M to commercial and $40M to industrial consumers.
- The 8% rebate to the Regulated Price Plan consumers fulfills the commitment to reduce residential rates by $2/month.
    - Proposal would lead to savings of the $120M in GGRA proceeds previously allocated to residential consumers, and help offset the fiscal impact of the 8% rebate to the Regulated Price Plan consumers.
- To provide price mitigation to commercial and industrial electricity consumers, ENERGY is proposing to direct an additional $60M of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to mitigate impacts.
- The current proposal would require an estimated $60 million less per year, or $0.24 billion less over the first compliance period.

## III. KEY CONSIDERATIONS

- Due to the nature of the ICI Global Adjustment mechanism and cost recovery of the RRRP, the rate base proposal (#2 and #3), while benefiting the targeted recipients, would **come at a cost to all other electricity rate payers in Ontario**.
- This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets.
- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
    - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
    - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
    - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

**1. 8% Rebate to Regulated Price Plan**

- The 8% pre-tax rebate would provide a typical residential consumer about an $11 per month benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average cap and trade commitment.

- This 8% pre-tax rebate is similar to the previous Ontario Clean Energy Benefit (See Appendix for background) which provided a 10% post-tax rebate.
    - The OCEB legislation was set out with an end date, and was subsequently modified to be capped at 3,000 kWh per month for all electricity customers after 8 months of the program.
    - This proposal does not specify any consumption caps nor an end date.
- Due to the lack of a cap, compared to OCEB, this proposal is more generous to the high volume RPP users.
    - OCEB rebate was applicable for up to 36,000 kWh annually (12 months times 3,000 kWh cap per month) while this proposal would be **more generous for those consuming more than 50,850 kWh** annually.
    - Furthermore, highest volume users in this proposal would receive **up to 392% more** than under the OCEB program.
- Unclear why any proposals for a cap would be any more complex or onerous to LDCs than prior OCEB cap (instituted beginning September 2012 to termination of OCEB program in December 2015).

- Blanket reduction in electricity prices for all users irrespective of consumption amounts hamper efforts to conserve electricity, and mutes TOU price signals.
- [Businesses that fall under the Regulated Price Plan pay little to no HST due to the Input Tax Credit. The 8% reduction can be deemed a windfall for these users.]

**Commented [SK6]:** 36000*0.113/0.08 = 50,850

36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate
0.08 – pre-tax effective rebate (8%)

**Commented [SK27]:** 36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate

36000*0.113 = 4068 [OCEB effective rebated consumption]

Max under proposal: 250,000
pre-tax effective rebate: 0.08
Proposal's effective rebated consumption: 250,000*0.08 = 20,000

(20,000-4068)/4068 = **3.9164**

**Commented [SK8]:** Will need to verify

- ~~While eligibility is intended to align with OCEB consumers, there exist a set of consumers not covered by the RPP (eg. those on retail contracts – See Appendix) which were OCEB eligible.~~
  - ~~Unclear if those other OCEB eligible consumers are also eligible for the 8% rebate.~~

2. **Expanding ICI Eligibility to customers above 1MW in all sectors**
   - Not all users with demand above 1MW will be in a position to take full advantage of the ICI expansion (eg. inability to load shift during peaks).
   - Consumers in the commercial sector currently do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
     - Expansion of the ICI can give commercial consumers who are able to shift demand during peak hours, the opportunity to opt-in and benefit.

3. **Updating Rural or Remote Rate Protection**
   - According to ENERGY, the RRRP is a $175M program with the majority of program funding ($125.5M) to Hydro One's lowest-density 'R2' customers
   - Unclear why customers on RRRP who are not Hydro One's R2 customers are not also targeted for this benefit.

4. **Redirect Cap and Trade Proceeds Recycling~~Redirecting proceed recycling to Commercial and Industrial~~~~Greenhouse Gas Reduction Account (GGRA)~~**
   - Deck implies $60M in savings from 8% Rebate for the RPP consumers.
     - Unclear, how the redirected amount $60M ($120M-$60M) will be allocated to commercial and industrial users.
     - A fiscal offset to the initiative would materialize only if the $60M is diverted to in-plan initiatives.

**Commented [JK9]:** Which sectors? There was a deck recently that showed the composition of GA in the bills paid by sectors. I believe it was one of the price mitigation decks.

**Commented [SK210R9]:** This is a general statement.

Slide 32 in the 20160902_330pm deck.

## IV. Cabinet Committee Discussion Summary

n/a

## V. Financial Summary

| $ Millions | 2016-17 | 2017-18 | 2018-19 |
|---|---|---|---|
| Initiative cost requested | 261 | 1,006 | 1,004 |
| Requested program base | 261 | 1,006 | 1,004 |
| Total fiscal impact (draw from c-funds) | 261 | 1,006 | 1,004 |

## VI. Performance Measures

[To estimate the impact of the program, the savings provided to the various consumers, and any potential for adjustments to the program, information should be provided from LDCs on consumption profiles and rebate amounts, particularly those affected by the 8% rebate on Regulated Price Plan Consumers.]

| | |
|---|---|
| **Name of analyst:** | Shajee Kathirgamanathan (416-325-1402) |
| **Date:** | September 6, 2016 |
| **Branch / Division:** | Electricity Finance Branch / Corporate and Electricity Finance Division |

## APPENDIX A: PROPOSED POLICY MINUTE

[WORK IN PROGRESS, WAITING ON ENERGY'S FINAL SUBMISSION]

CABINET AGREED THAT:

1. THE MINISTRY OF ENERGY (ENERGY), WITH SUPPORT FROM THE MINISTRY OF FINANCE (MOF), SHALL PREPARE LEGISLATION THAT WOULD PROVIDE AN EIGHT PERCENT (8%) REBATE ON THE PRE-TAX COST OF ELECTRICITY FOR THE FOLLOWING CLASSES OF CONSUMERS:
   A. ALL CONSUMERS ELIGIBLE TO BE BILLED UNDER THE ONTARIO ENERGY BOARD'S REGULATED PRICE PLAN; AND
   B. ANY OTHER CONSUMERS WHO WERE ELIGIBLE FOR FINANCIAL ASSISTANCE UNDER THE *ONTARIO CLEAN ENERGY BENEFIT ACT, 2010* (OCEBA) DURING THE PERIOD THAT PROGRAM WAS IN PLACE.

2. THE LEGISLATION SHALL BE GENERALLY MODELLED UPON THE OCEBA, AND WOULD INCLUDE THE FOLLOWING ELEMENTS:
   A. THE REBATE WOULD BE AVAILABLE STARTING JANUARY 1, 2017 AND BEFORE SUCH DATE AS MAY BE PRESCRIBED;
   B. THE REBATE WOULD NOT BE SUBJECT TO A CAP UNLESS A CAP IS PRESCRIBED;
   C. THE LEGISLATION WOULD SPECIFY THE TYPES OF COSTS TO WHICH THE REBATE WOULD OR WOULD NOT BE APPLIED, WITH AUTHORITY TO MAKE CHANGES BY REGULATION;
   D. THE LEGISLATION WOULD ADDRESS INVOICING REQUIREMENTS, INCLUDING AUTHORITY TO PRESCRIBE HOW THE REBATE IS TO APPEAR ON CONSUMER ELECTRICITY BILLS;
   E. THE LEGISLATION WOULD INCLUDE AUTHORITY TO PRESCRIBE THE WAY IN WHICH THE REBATE IS TO BE FLOWED THROUGH TO CONSUMERS, AND THE WAY IN WHICH ELECTRICITY VENDORS PROVIDING THE REBATE ARE TO BE REIMBURSED;
   F. THE LEGISLATION WOULD INCLUDE RECORD-KEEPING REQUIREMENTS FOR ELECTRICITY VENDORS AND ANY OTHER PRESCRIBED PERSONS; AND
   G. THE LEGISLATION WOULD INCLUDE INSPECTION POWERS FOR INSPECTORS APPOINTED BY THE MINISTER OF FINANCE, INCLUDING POWERS RELATED TO RECOVERY OF OVERPAYMENTS.
3. ENERGY AMEND O. REG. 429/04 (ADJUSTMENTS UNDER SECTION 25.33 OF THE ACT) MADE UNDER THE ELECTRICITY ACT, 1998 TO EXPAND ELIGIBILITY FOR CLASS A CONSUMERS AND CLASS A MARKET PARTICIPANTS UNDER THE INDUSTRIAL CONSERVATION INITIATIVE (ICI) TO ALL ELECTRICITY CONSUMERS AND MARKET PARTICIPANTS WITH A PEAK DEMAND ABOVE AN AVERAGE OF ONE MEGAWATT (1MW) WITH NO SECTORAL RESTRICTIONS ON PARTICIPATION.
4. ENERGY AMEND O. REG 442/01 (RURAL OR REMOTE ELECTRICITY RATE PROTECTION) MADE UNDER THE ONTARIO ENERGY BOARD ACT, 1998 TO INCREASE THE TOTAL AMOUNT OF RATE PROTECTION AVAILABLE TO LOW DENSITY HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE RATE PROTECTION PROGRAM BY $110 MILLION, EFFECTIVE JANUARY 1, 2017.
5. ENERGY CONSIDER AND, IF APPROPRIATE, UTILIZE A MECHANISM TO PERIODICALLY ADJUST THE TOTAL ANNUAL AMOUNT OF RATE PROTECTION AVAILABLE TO HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE ELECTRICITY RATE PROTECTION REGULATION / PROGRAM, EFFECTIVE JANUARY 1, 2018.

6. ENERGY TO RECYCLE UP TO AN AVERAGE OF $270 MILLION OF CAP AND TRADE AUCTION PROCEEDS FROM THE GREENHOUSE GAS REDUCTION ACCOUNT PER YEAR OVER THE FIRST COMPLIANCE PERIOD (2017-2020) TO COMMERCIAL AND INDUSTRIAL ELECTRICITY CONSUMERS.
7. ENERGY AND MOF TO WORK WITH CABINET OFFICE (CO) AND PREMIER'S OFFICE (PO) ON COMMUNICATIONS PLAN.

## APPENDIX B: BACKGROUND – ONTARIO CLEAN ENERGY BENEFIT

- OCEB was in effect from 2011 to 2015, and provided residential, farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax.
    - Effective September 2012 electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month.
- OCEB helped Ontario families through the transition to a more reliable and cleaner electricity system, with the monthly cap balancing the fiscal implications of providing electricity relief.
- OCEB costs totalled $1,006 million in 2013-14 and $1,078 million in 2014-15, with a projected cost for 2015-16 of $860 million (for the 9 months remaining in the program).

| **Eligible Consumers** | |
|---|---|
| **Categories Listed in Legislation (coincides with categories eligible for RPP)** | |
| **Residential** | • a dwelling<br>• a property within the meaning of the Condominium Act, 1998<br>• a residential complex, within the meaning of the Residential Tenancies Act, 2006<br>• a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the Co-operative Corporations Act |
| **Farms** | • carries on a business that is a farming business for the purposes of the Farm Registration and Farm Organizations Funding Act, 1993, and<br>• holds a valid registration number assigned under that Act or the consumer's obligation to file a farming business registration form was waived pursuant to an order made under subsection 22 (6) of that Act |
| **Demand for electricity of 50 kW or less, or consumes not more than 250,000 kWh annually** | Would include small business, smaller broader- public-sector entities, and other small users. |
| **Special Cases (not eligible for RPP, but eligible for OCEB)** | |
| **Consumers On Retail Contracts** | Includes consumers with existing retail contracts and those who sign them during the duration of the program. |
| **Cornwall Electric and Hydro One Remote Communities Inc.** | Included since they are licensed distributors. |
| **Other Consumers Prescribed by Regulation** | 10 First Nations remote unlicensed distributors have been added by regulation. |
| **Exclusions** | |
| **Generators** | Generation station service and the microFIT distribution service charge are excluded in legislation. |

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | John Kim |
| **Subject:** | RE: for tomorrow - price mitigation |
| **Date:** | Tuesday, September 06, 2016 10:23:30 PM |

Ok I'm taking a look.

---

**From:** John Kim
**Sent:** Tuesday, September 06, 2016 9:10 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Thanks, I have a marked up version.

Pls see if you can address some of the comments.

John.

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, September 06, 2016 7:55 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Hi John,

I made another update to the v5 note.

I'm assuming we're still briefing Associate Deputy Hughes tomorrow. If so we might want to have Ron review to be able to get to Trish (if required) prior to the briefing.

S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v5.docx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, September 06, 2016 11:21 AM
**To:** John Kim <John.Kim@ofina.on.ca>

**Subject:** RE: for tomorrow - price mitigation

Hi John,

I incorporated the TBS note (aka the 'RAN' note), with our Cabinet note.

Please see attached file also here:
S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v5.docx

Thanks,
Shajee

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**From:** John Kim
**Sent:** Tuesday, September 06, 2016 10:35 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

This was one of Ron's bullets….

- The 8% rebate would provide a typical residential consumer about an $11 per month benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average cap and trade commitment.

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, September 06, 2016 10:34 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Hi John,

Not sure, where did you find the 10-11 dollar benefit? The chart on page 2 lists $9.9 which includes the counteracting effects from all other legislation. Which is greater than the $2 benefit committed.

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Monday, September 05, 2016 12:49 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Ok, could you double check on the 10-11 dollar benefit for residential vs. commitment of 2?

---

**From:** Shajee Kathirgamanathan
**Sent:** Monday, September 05, 2016 12:39 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** Re: for tomorrow - price mitigation

Yup, I made most of Ron's updates to this version and kept our overall layout/ points . (E.g. *Small* farms etc).

No, I'm out for most of today, will double check tomorrow and hopefully we can finalize.

Thanks,
Shajee

Sent from my mobile device, please excuse any typos or brevity.

On Sep 5, 2016, at 9:05 AM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Shajee,
>
> As a general ask, the version that was signed off for TB briefing last week, could we incorporate as much of those contents in this version?
>
> Connection this morning is very unstable so hard for me to check.
>
> John.
>
> ---
>
> **From:** Shajee Kathirgamanathan
> **Sent:** Monday, September 05, 2016 12:10 AM

**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Hi John,

Since we're having the Cabinet Briefing on Wednesday, just wanted to finish off this note for your (and eventual) review by Ron. (Also not sure, but would TPD also need to review this note (?). Madeleine invited Sriram along with us.)

File attached and found here:
S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v4.docx

Also I generated some new calculations from the latest Ontario Provincial Outlook (OPO) produced by the IESO. They only had revised demand information; not prices.

| | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
|---|---|---|---|---|
| ENERGY | **261** | **1006** | **1004** | **994** |
| CEFD-LTEP | **224** | **909** | **958** | **1005** |
| CEFD-OPO | **218** | **880** | **911** | **934** |

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, September 01, 2016 1:20 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Will do.

Thanks

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Thursday, September 01, 2016 1:17 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** for tomorrow - price mitigation

As discussed, could we aim to compile some information RPP and Cap and Trade in an internal note or some sort of a dump for tomorrow?

Thanks,

John.

Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

**From:** Shajee Kathirgamanathan
**To:** John Kim
**Subject:** RE: for tomorrow - price mitigation
**Date:** Tuesday, September 06, 2016 7:55:22 PM
**Attachments:** Cabinet Note - Electricity Price Mitigation v5.docx

---

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S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v5.docx

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shajee.kathirgamanathan@ofina.on.ca

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**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>

**Subject:** Re: for tomorrow - price mitigation

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> **From:** Shajee Kathirgamanathan
> **Sent:** Monday, September 05, 2016 12:10 AM
> **To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
> **Subject:** RE: for tomorrow - price mitigation
>
> Hi John,
>
> Since we're having the Cabinet Briefing on Wednesday, just wanted to finish off this note for your (and eventual) review by Ron. (Also not sure, but would TPD also need to review this note (?). Madeleine invited Sriram along with us.)
>
> File attached and found here:
> S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v4.docx
>
> Also I generated some new calculations from the latest Ontario Provincial Outlook (OPO) produced by the IESO. They only had revised demand information; not prices.

| | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
|---|---|---|---|---|
| ENERGY | **261** | **1006** | **1004** | **994** |
| | | | | |

| | | | | |
|---|---|---|---|---|
| CEFD-LTEP | **224** | **909** | **958** | **1005** |
| CEFD-OPO | **218** | **880** | **911** | **934** |

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, September 01, 2016 1:20 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Will do.

Thanks

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Thursday, September 01, 2016 1:17 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** for tomorrow - price mitigation

As discussed, could we aim to compile some information RPP and Cap and Trade in an internal note or some sort of a dump for tomorrow?

Thanks,

John.

Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996

Email: john.kim@ofina.on.ca

**Tab x**

**CABINET BRIEFING NOTE**

| | |
|---|---|
| **Committee:** | Cabinet |
| **Meeting Date:** | September 14, 2016 |
| **Ministry:** | ENERGY |
| **Last reviewed by:** | **Tracking to:** Cabinet – September 14, 2016 |

**[BASED ON DRAFT CABINET SUBMISSION]**

| **SUBMISSION TITLE:** | Electricity Price Mitigation |
|---|---|

## I. REQUEST/DECISION REQUIRED:

- ~~Since 2010, electricity prices have risen considerably, particularly for households.~~
- The Ministry of Energy is proposing measures to provide relief to various electricity consumer classes. These measure include:

1. Provide a pre-tax~~n~~ 8% rebate to Regulated Price Plan (RPP) consumers~~; (i.e., residential, small business and farms), similar to OCEB~~.
2. ~~Provide targeted business support by e~~Expanding the Industrial Conservation Initiative (ICI) eligibility ~~threshold~~ to customers above 1MW in all sectors~~;~~.
3. ~~Provide relief to rural customers by u~~Updating Rural ~~and~~ or Remote Rate Protection (RRRP)~~;~~.
4. Using cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade. Balance of proceeds intended for electricity relief through the Climate Change Action Plan could provide some fiscal offsets (to be confirmed by Energy).

- [ Approve in principle an expenditure increase estimated at $261M [estimate subject to refinement from ENERGY] in 2016-17 for the Electricity Price Mitigation, offset from the Treasury Board Contingency Fund. ]~~Eliminate proceeds recycling to Regulated Price Plan consumers and increase proceeds recycling to commercial and industrial consumers.~~

**Commented [SK21]:** Unclear if this is necessary for the cabinet note as the TB/MBC note may be worried more on fiscal implications.

## II. KEY POINTS:

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online.

As part of the 2016 Budget, the government committed to mitigating electricity cost impacts that were anticipated from the cap and trade program. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable for residential and industrial consumers. This included a commitment to provide a modest benefit of up to $2 per month, on average, to residential consumers.

**Tab x**

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the CCAP commitment and additional price mitigation, the Ministry of Energy has developed price mitigation options that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

- ~~The Ministry of Energy (ENERGY) and Ministry of Finance (MOF) have been asked to explore rate mitigation options, including offsetting the provincial portion of the Harmonized Sales Tax (HST).~~
- ~~There are 4 components to this proposal, each providing relief to different customer classes.~~

| | Measure | Targeted Recipients | Annual Impact | |
|---|---|---|---|---|
| | | | Fiscal | Rate Base |
| **1.** | 8% Rebate to Regulated Price Plan | Residential, small business, small farms and other small users | $1B | - |
| **2.** | Expanding ICI eligibility to customers above 1MW in all sectors | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors | - | $47M/ $82M* |
| **3.** | Updating Rural ~~and~~ or Remote Rate Protection | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. | - | $110M |
| **4.** | Redirecting proceed recycling to ~~C~~commercial and ~~Industrial~~ industrial~~or~~ and provide fiscal offsets to the 8% rebate | ~~TBD~~Commercial and industrial electricity customers | -$60M** | - |

~~*Annual numbers from ENERGY.~~

**Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.

**To meet the Budget 2016 commitment, the Climate Change Action Plan (CCAP) committed $1.3B from the Greenhouse Gas Reduction Account (GGRA) or about $330M annually. Current proposal will require $60M less or $270M annually.

- ENERGY provided the following overview of bill impacts:

| Regulated Price Plan (Residential)* | Class B (Commercial) | Class A (Industrial) |
|---|---|---|

**Tab x**

| Average (750 kWh/month) | Rural** (1000 kWh/month) | | Existing | New |
|---|---|---|---|---|
| -$~~9~~.910/month (-~~7~~6%) | -$45/month (-20%) | -$1/MWh (-1%) | -$1/MWh (-1%) | Up to -$52/MWh (-~~33~~34%) |

Note: The impact of cap and trade would not be added to electricity bills until 2017 and impact of ICI would not be added until 2018. All impacts included here for illustrative purposes

*~~NOTE:~~ ENERGY did not provide the monthly impact , for other Regulated Price Plan not classified as Residential (eg. farms, small businesses) that would benefit from the 8% Rebate to Regulated Price Plan.

** Rural customers refers to those Hydro One customers eligible to receive RRRP (R2 rate class customers)

**1. 8% Rebate to Regulated Price Plan (RPP)**

- An 8% rebate on the pre-tax portion for Regulated Price Plan (RPP) consumers would be equal to the provincial portion of HST and funded by the tax base.
- The $1 billion figure is a 2017 to 2020 calendar year average of cost estimates developed by Ministry of Energy staff, as follows:

| *$ millions* | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|
| | 1,003 | 1,014 | 975 | 1,049 |
| Avg. 2017-20 | 1,010 | | | |

- On a fiscal year basis, the above estimates become:

| *$ millions* | **2016-17** | **2017-18** | **2018-19** | **2019-20** |
|---|---|---|---|---|
| | 261 | 1,006 | 1,004 | 994 |
| 3-Year Avg. | 1,001 | | | |

- Ministry staff are in the process of developing a refined estimate of the cost.

- The rebate would appear directly on bills. As such, Local Distribution Companies (LDC) would be the delivery mechanism for the rebate.
  - While non-Regulated Price Plan consumers would not see a benefit from the 8% rebate under this option, all industrial and commercial consumers would receive proceeds recycling through the Greenhouse Gas Reduction Account (GGRA).
  - Commercial and industrial consumers would also continue to receive input tax credits and Public Service Bodies would continue to receive PSB rebates.
- New legislation would be required and closely mirror the Ontario Clean Energy Benefit (OCEB) Act, 2010. More details further below.
- On-bill rebate delivery would likely require adjustments to Local Distribution Company (LDC) billing systems, which could impact delivery costs and timelines.
- In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - One option to address any timing concerns is to allow LDCs to provide retroactive payments if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- The rebate would not be directly linked to HST.

2. **Expanding ICI Eligibility to customers above 1MW in all sectors**
   - Lower threshold for participation in ICI to 1 MW and remove sectoral restrictions.
   - Most newly eligible ICI participants who choose to opt-in to the program would be able to reduce their electricity costs substantially. All other consumers would see a relatively small increase in their bills.
   - Expanding the ICI will reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods (80MW in the short term and 165 MW in the long term)
   - Bill savings to new participants up to 21% in the short term and up to 34% ~~providing a~~ long-term.
   - Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
     - ~~A few examples of c~~Companies that would become eligible under such an expansion ~~would be~~ include Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.
   - Class B consumers would have a collective increase in the Global Adjustment of $47M in the short term and $87M in the long term from this initiative.
   - ~~•~~
   - ~~All r~~Residential consumers would see an average cost increase of $0.42/month in the short term and $0.74/month in the long term.

3. **Updating Rural ~~and~~ or Remote Rate Protection**
   - RRRP funding supporting Hydro One R2 (rural) customers capped at current levels since 2004.
   - The current program provides a monthly subsidy of a about $32/month.
   - Proposal will ~~Provide~~ provide an additional $110 million in support to approximately ~~330~~329,000 R2 customers to $235 million annually.
   - Proposal will increase the subsidy by about $28/month and equalize R2 bills with Hydro One R1 (medium) density customers at 1,000 kWh.~~.~~
   - All residential consumers would see an average cost increase of about $0.~~57~~60/month.
   - ENERGY is considering options to periodically adjust the amount of rate protection eg. indexed at inflation or "trued up" on a regular basis.

4. **~~Redirecting proceed recycling to Commercial and Industrial~~Greenhouse Gas Reduction Account (GGRA)**
   - The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers.
   - Ontario's Climate Change Action Plan (CCAP) includes up to $1.32 billion over 4 years to help keep electricity rates affordable for residential and industrial consumers.
   - The GGRA allocated $120M to average residential consumers, $170M to commercial and $40M to industrial consumers.

**Tab x**

- The 8% rebate to the Regulated Price Plan consumers fulfills the commitment to reduce residential rates by $2/month.
    - Proposal would lead to savings of the $120M in GGRA proceeds previously allocated to residential consumers, and help offset the fiscal impact of the 8% rebate to the Regulated Price Plan consumers.
- To provide price mitigation to commercial and industrial electricity consumers, ENERGY is proposing to direct an additional $60M of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to mitigate impacts.
- 
- The current proposal would require an estimated $60 million less per year, or $0.24 billion less over the first compliance period.

~~Would lead to savings~~ ~~Redirecting some of the forecast $1.3 billion in GGRA proceeds previously allocated to from Regulated Price Plan consumers, to commercial and industrial consumers would ensure that the impact of cap and trade and ICI expansion and RRRP update would not increase costs for any large industrial and would result in a benefit to the average industrial and commercial customers~~which ~~would~~ and ~~help offset the fiscal impact of the 8% rebate to the RPP consumers~~.

## III. KEY CONSIDERATIONS

- Due to the nature of the ICI Global Adjustment mechanism and cost recovery of the RRRP, the rate base proposal (#2 and #3) while benefiting the targeted recipients, **come at a cost to all other electricity rate payers in Ontario**.
- This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets.
- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
    - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
    - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
    - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

### 1. 8% Rebate to Regulated Price Plan

- The 8% pre-tax rebate would provide a typical residential consumer about an $11 per month benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average cap and trade commitment.

- This 8% pre-tax rebate is similar to the previous Ontario Clean Energy Benefit (See Appendix for background) which provided a 10% post-tax rebate.
    - The OCEB legislation was set out with an end date, and was subsequently modified to be capped at 3,000 kWh per month for all electricity customers after 8 months of the program.
    - This proposal does not specify any consumption caps nor an end date.
- Due to the lack of a cap, ~~C~~compared to OCEB, this proposal is more generous to the high volume RPP ~~RPP~~ users.
    - OCEB rebate was ~~eligible~~ applicable for up to 36,000 kWh annually (12 months times 3,000 kWh cap per month) while this proposal would be ~~is~~ **more generous for those consuming more than 50,850 kWh** annually.
    - Furthermore, highest volume users in this proposal would receive **up to 392% more** than under the OCEB program.
- Unclear why any proposals for a cap would be any more complex or onerous to LDCs than prior OCEB cap (instituted beginning September 2012 to termination of OCEB program in December 2015).
    - ~~o~~
- Blanket reduction in electricity prices for all users irrespective of consumption amounts hamper efforts to conserve electricity, and mutes TOU price signals.
- ~~Removal of HST (a broad tax) to one particular product distorts and shifts consumption to that area.~~

**Commented [SK2]:** 36000*0.113/0.08 = 50,850

36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate
0.08 – pre-tax effective rebate (8%)

**Commented [SK23]:** 36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate

36000*0.113 = 4068 [OCEB effective rebated consumption]

Max under proposal: 250,000
pre-tax effective rebate: 0.08
Proposal's effective rebated consumption: 250,000*0.08 = 20,000

(20,000-4068)/4068 = **3.9164**

**Commented [SK4]:** This is a general/classic economic comment on the preference of broad consumption taxes vs taxes for particular items.
TPD might have a better way to communicate this, if applicable.

- [Businesses that fall under the Regulated Price Plan pay little to no HST due to the Input Tax Credit. The 8% reduction can be deemed a windfall for these users.]
- While eligibility is intended to align with OCEB consumers, there exist a set of consumers not covered by the RPP (eg. ~~Those~~ those on retail contracts – See Appendix) which were OCEB eligible.
  - Unclear if those other OCEB eligible consumers are also eligible for the 8% rebate.

Commented [SK5]: Will need to verify

**2. Expanding ICI Eligibility to customers above 1MW in all sectors**

- Not all users with demand above 1MW will be in a position to take full advantage of the ICI expansion (eg. inability to load shift during peaks).~~Previous expansion of ICI eligibility from 5MW to 3MW users in selected sectors provided those industrial users between 3MW and 5MW the option to enroll in the ICI program~~
  - ~~o~~
  - ~~Unclear if this initiative is a similar 'opt-in' proposal or a mandatory enrollment such as the initial ICI program for 5MW customers~~

**3. Updating Rural ~~and~~ or Remote Rate Protection**

- According to ENERGY, the RRRP is a $175M program with the majority of program funding ($125.5M) to Hydro One's lowest-density 'R2' customers
- Unclear why ~~who the remaining $49.5M is directed towards, nor whether the expended RRRP program would accommodate these customers~~customers on RRRP who are not Hydro One's R2 customers are not also targeted for this benefit.
- ~~Unclear whether the RRRP would be indexed or trued up on a regularly basis per one of the options ENERGY's FP deck.~~

**4. ~~Redirecting proceed recycling to Commercial and Industrial~~Greenhouse Gas Reduction Account (GGRA)**

- ~~Unclear on the mechanism of how these proceeds will be directed to Commercial and Industrial users.~~
- ~~According to the ENERGY deck the GGRA allocated $120M to average residential consumers, $170M to commercial and $40M to industrial consumers.~~ Deck implies more than $60M in savings from 8% Rebate for the RPP consumers.
  - ~~o~~ Unclear, how the redirected amount $60M ($120M-$60M) will be allocated to commercial and industrial users.
  - o

## IV. Cabinet Committee Discussion Summary

n/a

## V. Financial Summary

| $ Millions | 2016-17 | 2017-18 | 2018-19 |
|---|---|---|---|
| Initiative cost requested | 261 | 1,006 | 1,004 |
| Requested program base | 261 | 1,006 | 1,004 |
| Total fiscal impact (draw from c-funds) | 261 | 1,006 | 1,004 |

## VI. Performance Measures

[To estimate the impact of the program, ~~and~~ the savings provided to the various consumers, and any potential for adjustments to the program, information should be provided from ~~the~~ LDCs on consumption profiles and rebate amounts, particularly those affected by the 8% rebate on ~~the~~ Regulated Price Plan Consumers.]

| | |
|---|---|
| **Name of analyst:** | Shajee Kathirgamanathan (416-325-1402) |
| **Date:** | September 6, 2016 |
| **Branch / Division:** | Electricity Finance Branch / Corporate and Electricity Finance Division |

## APPENDIX A: PROPOSED ~~C~~POLICY~~ABINET~~ MINUTE

[WORK IN PROGRESS, WAITING ON ENERGY'S FINAL SUBMISSION]

CABINET AGREED THAT:

1. THE MINISTRY OF ENERGY (ENERGY), WITH SUPPORT FROM THE MINISTRY OF FINANCE (MOF), SHALL PREPARE LEGISLATION THAT WOULD PROVIDE AN EIGHT PERCENT (8%) REBATE ON THE PRE-TAX COST OF ELECTRICITY FOR THE FOLLOWING CLASSES OF CONSUMERS:
   A. ALL CONSUMERS ELIGIBLE TO BE BILLED UNDER THE ONTARIO ENERGY BOARD'S REGULATED PRICE PLAN; AND
   B. ANY OTHER CONSUMERS WHO WERE ELIGIBLE FOR FINANCIAL ASSISTANCE UNDER THE *ONTARIO CLEAN ENERGY BENEFIT ACT, 2010* (OCEBA) DURING THE PERIOD THAT PROGRAM WAS IN PLACE.

2. THE LEGISLATION SHALL BE GENERALLY MODELLED UPON THE OCEBA, AND WOULD INCLUDE THE FOLLOWING ELEMENTS:
   A. THE REBATE WOULD BE AVAILABLE STARTING JANUARY 1, 2017 AND BEFORE SUCH DATE AS MAY BE PRESCRIBED;
   B. THE REBATE WOULD NOT BE SUBJECT TO A CAP UNLESS A CAP IS PRESCRIBED;
   C. THE LEGISLATION WOULD SPECIFY THE TYPES OF COSTS TO WHICH THE REBATE WOULD OR WOULD NOT BE APPLIED, WITH AUTHORITY TO MAKE CHANGES BY REGULATION;
   D. THE LEGISLATION WOULD ADDRESS INVOICING REQUIREMENTS, INCLUDING AUTHORITY TO PRESCRIBE HOW THE REBATE IS TO APPEAR ON CONSUMER ELECTRICITY BILLS;
   E. THE LEGISLATION WOULD INCLUDE AUTHORITY TO PRESCRIBE THE WAY IN WHICH THE REBATE IS TO BE FLOWED THROUGH TO CONSUMERS, AND THE WAY IN WHICH ELECTRICITY VENDORS PROVIDING THE REBATE ARE TO BE REIMBURSED;
   F. THE LEGISLATION WOULD INCLUDE RECORD-KEEPING REQUIREMENTS FOR ELECTRICITY VENDORS AND ANY OTHER PRESCRIBED PERSONS; AND
   G. THE LEGISLATION WOULD INCLUDE INSPECTION POWERS FOR INSPECTORS APPOINTED BY THE MINISTER OF FINANCE, INCLUDING POWERS RELATED TO RECOVERY OF OVERPAYMENTS.
3. ENERGY AMEND O. REG. 429/04 (ADJUSTMENTS UNDER SECTION 25.33 OF THE ACT) MADE UNDER THE ELECTRICITY ACT, 1998 TO EXPAND ELIGIBILITY FOR CLASS A CONSUMERS AND CLASS A MARKET PARTICIPANTS UNDER THE INDUSTRIAL CONSERVATION INITIATIVE (ICI) TO ALL ELECTRICITY CONSUMERS AND MARKET PARTICIPANTS WITH A PEAK DEMAND ABOVE AN AVERAGE OF ONE MEGAWATT (1MW) WITH NO SECTORAL RESTRICTIONS ON PARTICIPATION.
4. ENERGY AMEND O. REG 442/01 (RURAL OR REMOTE ELECTRICITY RATE PROTECTION) MADE UNDER THE ONTARIO ENERGY BOARD ACT, 1998 TO INCREASE THE TOTAL AMOUNT OF RATE PROTECTION AVAILABLE TO LOW DENSITY HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE RATE PROTECTION PROGRAM BY $110 MILLION, EFFECTIVE JANUARY 1, 2017.
5. ENERGY CONSIDER AND, IF APPROPRIATE, UTILIZE A MECHANISM TO PERIODICALLY ADJUST THE TOTAL ANNUAL AMOUNT OF RATE PROTECTION AVAILABLE TO HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE ELECTRICITY RATE PROTECTION REGULATION / PROGRAM, EFFECTIVE JANUARY 1, 2018.

6. ENERGY TO RECYCLE UP TO AN AVERAGE OF $270 MILLION OF CAP AND TRADE AUCTION PROCEEDS FROM THE GREENHOUSE GAS REDUCTION ACCOUNT PER YEAR OVER THE FIRST COMPLIANCE PERIOD (2017-2020) TO COMMERCIAL AND INDUSTRIAL ELECTRICITY CONSUMERS.
7. ENERGY AND MOF TO WORK WITH CABINET OFFICE (CO) AND PREMIER'S OFFICE (PO) ON COMMUNICATIONS PLAN.

## APPENDIX B: BACKGROUND – ONTARIO CLEAN ENERGY BENEFIT

- OCEB was in effect from 2011 to 2015, and provided residential, farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax.
    - Effective September 2012 electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month.
- OCEB helped Ontario families through the transition to a more reliable and cleaner electricity system, with the monthly cap balancing the fiscal implications of providing electricity relief.
- OCEB costs totalled $1,006 million in 2013-14 and $1,078 million in 2014-15, with a projected cost for 2015-16 of $860 million (for the 9 months remaining in the program).

| **Eligible Consumers** | |
|---|---|
| **Categories Listed in Legislation (coincides with categories eligible for RPP)** | |
| **Residential** | • a dwelling<br>• a property within the meaning of the Condominium Act, 1998<br>• a residential complex, within the meaning of the Residential Tenancies Act, 2006<br>• a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the Co-operative Corporations Act |
| **Farms** | • carries on a business that is a farming business for the purposes of the Farm Registration and Farm Organizations Funding Act, 1993, and<br>• holds a valid registration number assigned under that Act or the consumer's obligation to file a farming business registration form was waived pursuant to an order made under subsection 22 (6) of that Act |
| **Demand for electricity of 50 kW or less, or consumes not more than 250,000 kWh annually** | Would include small business, smaller broader- public-sector entities, and other small users. |
| **Special Cases (not eligible for RPP, but eligible for OCEB)** | |
| **Consumers On Retail Contracts** | Includes consumers with existing retail contracts and those who sign them during the duration of the program. |
| **Cornwall Electric and Hydro One Remote Communities Inc.** | Included since they are licensed distributors. |
| **Other Consumers Prescribed by Regulation** | 10 First Nations remote unlicensed distributors have been added by regulation. |
| **Exclusions** | |
| **Generators** | Generation station service and the microFIT distribution service charge are excluded in legislation. |

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | John Kim |
| **Subject:** | RE: for tomorrow - price mitigation |
| **Date:** | Tuesday, September 06, 2016 11:21:21 AM |
| **Attachments:** | Cabinet Note - Electricity Price Mitigation v5.docx |

Hi John,

I incorporated the TBS note (aka the 'RAN' note), with our Cabinet note.

Please see attached file also here:
S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v5.docx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Tuesday, September 06, 2016 10:35 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

This was one of Ron's bullets….

- The 8% rebate would provide a typical residential consumer about an $11 per month benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average cap and trade commitment.

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, September 06, 2016 10:34 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Hi John,

Not sure, where did you find the 10-11 dollar benefit? The chart on page 2 lists $9.9 which includes the counteracting effects from all other legislation. Which is greater than the $2 benefit committed.

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

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**From:** John Kim
**Sent:** Monday, September 05, 2016 12:49 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Ok, could you double check on the 10-11 dollar benefit for residential vs. commitment of 2?

---

**From:** Shajee Kathirgamanathan
**Sent:** Monday, September 05, 2016 12:39 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** Re: for tomorrow - price mitigation

Yup, I made most of Ron's updates to this version and kept our overall layout/ points . (E.g. *Small* farms etc).

No, I'm out for most of today, will double check tomorrow and hopefully we can finalize.

Thanks,
Shajee

Sent from my mobile device, please excuse any typos or brevity.

On Sep 5, 2016, at 9:05 AM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Shajee,
>
> As a general ask, the version that was signed off for TB briefing last week, could we incorporate as much of those contents in this version?
>
> Connection this morning is very unstable so hard for me to check.
>
> John.

**From:** Shajee Kathirgamanathan
**Sent:** Monday, September 05, 2016 12:10 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Hi John,

Since we're having the Cabinet Briefing on Wednesday, just wanted to finish off this note for your (and eventual) review by Ron. (Also not sure, but would TPD also need to review this note (?). Madeleine invited Sriram along with us.)

File attached and found here:
S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v4.docx

Also I generated some new calculations from the latest Ontario Provincial Outlook (OPO) produced by the IESO. They only had revised demand information; not prices.

| | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
|---|---|---|---|---|
| ENERGY | **261** | **1006** | **1004** | **994** |
| CEFD-LTEP | **224** | **909** | **958** | **1005** |
| CEFD-OPO | **218** | **880** | **911** | **934** |

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, September 01, 2016 1:20 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Will do.

Thanks

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

**From:** John Kim
**Sent:** Thursday, September 01, 2016 1:17 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** for tomorrow - price mitigation

As discussed, could we aim to compile some information RPP and Cap and Trade in an internal note or some sort of a dump for tomorrow?

Thanks,

John.

Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

**Tab x**

**CABINET BRIEFING NOTE**

| | |
|---|---|
| **Committee:** | Cabinet |
| **Meeting Date:** | September 14, 2016 |
| **Ministry:** | ENERGY |
| **Last reviewed by:** | **Tracking to:** Cabinet – September 14, 2016 |

**[NO MATERIALS RECEIVED – BASED ON MATERIALS FROM FPC SUBMISSION. WAITING ON CABINET SUBMISSION FOR FINALIZED PROPOSAL]**

| **SUBMISSION TITLE:** | Electricity Price Mitigation |
|---|---|

## I. REQUEST/DECISION REQUIRED:

- ~~Since 2010, electricity prices have risen considerably, particularly for households.~~
- The Ministry of Energy is proposing measures to provide relief to various electricity consumer classes. These measure include:

1. Provide a pre-tax~~n~~ 8% rebate to Regulated Price Plan (RPP) consumers~~: (i.e., residential, small business and farms), similar to OCEB.~~
2. ~~Provide targeted business support by e~~Expanding the Industrial Conservation Initiative (ICI) eligibility ~~threshold~~ to customers above 1MW in all sectors~~.~~
3. ~~Provide relief to rural customers by u~~Updating Rural and Remote Rate Protection (RRRP)~~.~~
4. Using cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade. Balance of proceeds intended for electricity relief through the Climate Change Action Plan could provide some fiscal offsets (to be confirmed by Energy).

- [ Approve in principle an expenditure increase estimated at $261M [estimate subject to refinement from ENERGY] in 2016-17 for the Electricity Price Mitigation, offset from the Treasury Board Contingency Fund. ]~~Eliminate proceeds recycling to Regulated Price Plan consumers and increase proceeds recycling to commercial and industrial consumers.~~

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**Commented [SK21]:** Unclear if this is necessary for the cabinet note as the TB/MBC note may be worried more on fiscal implications.

## II. KEY POINTS:

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online.

As part of the 2016 Budget, the government committed to mitigating electricity cost impacts that were anticipated from the cap and trade program. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable for residential and

industrial consumers. This included a commitment to provide a modest benefit of up to $2 per month, on average, to residential consumers.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the CCAP commitment and additional price mitigation, the Ministry of Energy has developed price mitigation options that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal *(based on FPC materials; proposal still being refined by Ministry)*

- ~~The Ministry of Energy (ENERGY) and Ministry of Finance (MOF) have been asked to explore rate mitigation options, including offsetting the provincial portion of the Harmonized Sales Tax (HST).~~
- ~~There are 4 components to this proposal, each providing relief to different customer classes.~~

| | Measure | Annual Impact | Targeted Recipients |
|---|---|---|---|
| **1.** | 8% Rebate to Regulated Price Plan | Fiscal [(~~$1B)*~~]* | Residential, ~~Farms, Ss~~small business, small farms and other small users |
| **2.** | Expanding ICI eligibility to customers above 1MW in all sectors | Rate base [$47M/$82M]** | Intermediate and large-sized ~~Small l~~industrial, ~~Commercial~~ commercial and ~~Institutional~~ institutional consumers above 1MW in all sectors |
| **3.** | Updating Rural and Remote Rate Protection | Rate base [$110M] | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. |
| **4.** | Redirecting proceed recycling to Commercial and Industrial or provide fiscal offsets to the 8% rebate | TBD | TBD |

*Annual numbers from ENERGY.
**Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.

- ENERGY provided the following overview of bill impacts:

| Regulated Price Plan (Residential)* | | Class B (Commercial) | Class A (Industrial) | |
|---|---|---|---|---|
| Average (750 kWh/month) | Rural (1000 kWh/month) | | Existing | New |

| | | | | |
|---|---|---|---|---|
| -$9.9/month (-7%) | -$45/month (-20%) | -$1/MWh (-1%) | -$1/MWh (-1%) | Up to -$52/MWh (-33%) |

*NOTE: ENERGY did not provide the monthly impact for other Regulated Price Plan not classified as Residential (eg. farms, small businesses) that would benefit from the 8% Rebate to Regulated Price Plan.

**1. 8% Rebate to Regulated Price Plan (RPP)**

- An 8% rebate on the pre-tax portion for Regulated Price Plan (RPP) consumers would be equal to the provincial portion of HST and funded by the tax base.
- Slide 25 of the final version of the recent Electricity Price Mitigation Options deck notes that "proceeding with an 8% Regulated Price Plan (RPP) rebate without a cap would cost an estimated $1 billion per year."
- The $1 billion figure is a 2017 to 2020 calendar year average of cost estimates developed by Ministry of Energy staff, as follows:

| *$ millions* | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|
| | 1,003 | 1,014 | 975 | 1,049 |
| Avg. 2017-20 | 1,010 | | | |

- On a fiscal year basis, the above estimates become:

| *$ millions* | **2016-17** | **2017-18** | **2018-19** | **2019-20** |
|---|---|---|---|---|
| | 261 | 1,006 | 1,004 | 994 |
| 3-Year Avg. | 1,001 | | | |

- Ministry staff are in the process of developing a refined estimate of the cost.

- The rebate would appear directly on bills. As such, Local Distribution Companies (LDC) would be the delivery mechanism for the rebate.
  - While non-Regulated Price Plan consumers would not see a benefit from the 8% rebate under this option, all industrial and commercial consumers would receive proceeds recycling through the Greenhouse Gas Reduction Account (GGRA).
  - Commercial and industrial consumers would also continue to receive input tax credits and Public Service Bodies would continue to receive PSB rebates.
- New legislation would be required and closely mirror the Ontario Clean Energy Benefit (OCEB) Act, 2010. More details further below.
- On-bill rebate delivery would likely require adjustments to Local Distribution Company (LDC) billing systems, which could impact delivery costs and timelines.
- In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - One option to address any timing concerns is to allow LDCs to provide retroactive payments if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.

**2. Expanding ICI Eligibility to customers above 1MW in all sectors**

- Lower threshold for participation in ICI to 1 MW and remove sectoral restrictions.
- Most newly eligible ICI participants who choose to opt-in to the program would be able to reduce their electricity costs substantially. All other consumers would see a relatively small increase in their bills.
- Expanding the ICI will reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods (80MW in the short term and 165 MW in the long term)
- Bill savings to new participants up to 21% in the short term and up to 34% ~~providing a~~ long-term.
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
    - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.
- All residential consumers would see an average cost increase of $0.42/month in the short term and $0.74/month in the long term.

**3. Updating Rural and Remote Rate Protection**

- RRRP funding supporting Hydro One R2 (rural) customers capped at current levels since 2004.
- Provide an additional $110 million in support to approximately 330,000 R2 customers to $235 million annually.
- Proposal will equalize R2 bills with Hydro One R1 (medium) density customers. ~~-~~
- All residential consumers would see an average cost increase of $0.57/month.

**4. ~~Redirecting proceed recycling to Commercial and Industrial~~Greenhouse Gas Reduction Account (GGRA)**

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers.
- Ontario's Climate Change Action Plan (CCAP) includes up to $1.32 billion over 4 years to help keep electricity rates affordable for residential and industrial consumers.
- The 8% rebate to the Regulated Price Plan consumers fulfills the commitment to reduce residential rates by $2/month.
    - Would lead to savings in GGRA proceeds previously allocated to Regulated Price Plan consumers, and help offset the fiscal impact of the 8% rebate to the Regulated Price Plan consumers.
- To provide price mitigation to commercial and industrial electricity consumers, ENERGY is proposing to direct a portion of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to mitigate impacts.
- ~~Would lead to savings Redirecting some of the forecast $1.3 billion in GGRA proceeds previously allocated to from Regulated Price Plan consumers, to commercial and industrial consumers would ensure that the impact of cap and trade and ICI expansion and RRRP update would not increase costs for any large industrial and would result in a~~

benefit to the average industrial and commercial customerswhich would and help offset the fiscal impact of the 8% rebate to the RPP consumers.

- 

## III. KEY CONSIDERATIONS

- Due to the nature of the ICI Global Adjustment mechanism and cost recovery of the RRRP, the rate base proposal (#2 and #3) while benefiting the targeted recipients, **come at a cost to all other electricity rate payers in Ontario**.
- This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets.

### 1. 8% Rebate to Regulated Price Plan

- The 8% pre-tax rebate would provide a typical residential consumer about an $11 per month benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average cap and trade commitment.

- This 8% pre-tax rebate is similar to the previous Ontario Clean Energy Benefit (See Appendix for background) which provided a 10% post-tax rebate.
  - The OCEB legislation was set out with an end date, and was subsequently modified to be capped at 3,000 kWh per month for all electricity customers after 8 months of the program.
  - This proposal does not specify any consumption caps nor an end date.
- Due to the lack of a cap, ~~C~~compared to OCEB, this proposal is more generous to the high volume RPP ~~RPP~~ users
  - OCEB rebate was ~~eligible~~ applicable for up to 36,000 kWh annually (12 months times 3,000 kWh cap per month) while this proposal would be ~~is~~ **more generous for those consuming more than 50,850 kWh** annually.
  - Furthermore, highest volume users in this proposal would receive **up to 392% more** than under the OCEB program.
- Unclear why any proposals for a cap would be any more complex or onerous to LDCs than prior OCEB cap (instituted beginning September 2012 to termination of OCEB program in December 2015).
  - ~~o~~
- Blanket reduction in electricity prices for all users irrespective of consumption amounts hamper efforts to conserve electricity, and mutes TOU price signals.
- [Removal of HST (a broad tax) to one particular product distorts and shifts consumption to that area.]
- [Businesses that fall under the Regulated Price Plan pay little to no HST due to the Input Tax Credit. The 8% reduction can be deemed a windfall for these users.]
- While eligibility is intended to align with OCEB consumers, there exist a set of consumers not covered by the RPP (eg. ~~Those~~ those on retail contracts – See Appendix) which were OCEB eligible.
  - Unclear if those other OCEB eligible consumers are also eligible for the 8% rebate.

### 2. Expanding ICI Eligibility to customers above 1MW in all sectors

- Not all users with demand above 1MW will be in a position to take full advantage of the ICI expansion (eg. inability to load shift during peaks).~~Previous expansion of ICI eligibility~~

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**Commented [SK2]:** 36000*0.113/0.08 = 50,850

36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate
0.08 – pre-tax effective rebate (8%)

**Commented [SK23]:** 36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate

36000*0.113 = 4068 [OCEB effective rebated consumption]

Max under proposal: 250,000
pre-tax effective rebate: 0.08
Proposal's effective rebated consumption: 250,000*0.08 = 20,000

(20,000-4068)/4068 = **3.9164**

**Formatted:** Indent: Left: 0.5", No bullets or numbering

**Commented [SK4]:** This is a general/classic economic comment on the preference of broad consumption taxes vs taxes for particular items.
TPD might have a better way to communicate this, if applicable.

**Commented [SK5]:** Will need to verify

~~from 5MW to 3MW users in selected sectors provided those industrial users between 3MW and 5MW the option to enroll in the ICI program~~

- ~~o~~
- ~~o Unclear if this initiative is a similar 'opt-in' proposal or a mandatory enrollment such as the initial ICI program for 5MW customers~~

**3. Updating Rural and Remote Rate Protection**

- According to ENERGY, the RRRP is a $175M program with the majority of program funding ($125.5M) to Hydro One's lowest-density 'R2' customers
- Unclear why ~~who the remaining $49.5M is directed towards, nor whether the expended RRRP program would accommodate these customers~~customers on RRRP who are not Hydro One's R2 customers are not also targeted for this benefit.
- Unclear whether the RRRP would be indexed or trued up on a regularly basis per one of the options ENERGY's ~~FP~~ deck.

**4. ~~Redirecting proceed recycling to Commercial and Industrial~~Greenhouse Gas Reduction Account (GGRA)**

- ~~Unclear on the mechanism of how these proceeds will be directed to Commercial and Industrial users.~~
- According to the ENERGY deck the GGRA allocated $120M to average residential consumers, $170M to commercial and $40M to industrial consumers. Deck implies more than $60M in savings from 8% Rebate for the RPP consumers.
  - ~~o~~ Unclear, how the redirected amount $60M ($120M-$60M) will be allocated to commercial and industrial users.
  - o

## IV. Cabinet Committee Discussion Summary

n/a

## V. Financial Summary

| $ Millions | 2016-17 | 2017-18 | 2018-19 |
|---|---|---|---|
| Initiative cost requested | 261 | 1,006 | 1,004 |
| Requested program base | 261 | 1,006 | 1,004 |
| Total fiscal impact (draw from c-funds) | 261 | 1,006 | 1,004 |

## VI. Performance Measures

[To estimate the impact of the program, ~~and~~ the savings provided to the various consumers, and any potential for adjustments to the program, information should be provided from ~~the~~ LDCs on consumption profiles and rebate amounts, particularly those affected by the 8% rebate on ~~the~~ Regulated Price Plan Consumers.]

| | |
|---|---|
| **Name of analyst:** | Shajee Kathirgamanathan (416-325-1402) |
| **Date:** | September 6, 2016 |
| **Branch / Division:** | Electricity Finance Branch / Corporate and Electricity Finance Division |

## APPENDIX A: PROPOSED CABINET MINUTE

[WORK IN PROGRESS, WAITING ON ENERGY'S FINAL SUBMISSION]

## APPENDIX B: BACKGROUND – ONTARIO CLEAN ENERGY BENEFIT

- OCEB was in effect from 2011 to 2015, and provided residential, farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax.
    - Effective September 2012 electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month.
- OCEB helped Ontario families through the transition to a more reliable and cleaner electricity system, with the monthly cap balancing the fiscal implications of providing electricity relief.
- OCEB costs totalled $1,006 million in 2013-14 and $1,078 million in 2014-15, with a projected cost for 2015-16 of $860 million (for the 9 months remaining in the program).

| **Eligible Consumers** | |
|---|---|
| **Categories Listed in Legislation (coincides with categories eligible for RPP)** | |
| **Residential** | • a dwelling<br>• a property within the meaning of the Condominium Act, 1998<br>• a residential complex, within the meaning of the Residential Tenancies Act, 2006<br>• a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the Co-operative Corporations Act |
| **Farms** | • carries on a business that is a farming business for the purposes of the Farm Registration and Farm Organizations Funding Act, 1993, and<br>• holds a valid registration number assigned under that Act or the consumer's obligation to file a farming business registration form was waived pursuant to an order made under subsection 22 (6) of that Act |
| **Demand for electricity of 50 kW or less, or consumes not more than 250,000 kWh annually** | Would include small business, smaller broader- public-sector entities, and other small users. |
| **Special Cases (not eligible for RPP, but eligible for OCEB)** | |
| **Consumers On Retail Contracts** | Includes consumers with existing retail contracts and those who sign them during the duration of the program. |
| **Cornwall Electric and Hydro One Remote Communities Inc.** | Included since they are licensed distributors. |
| **Other Consumers Prescribed by Regulation** | 10 First Nations remote unlicensed distributors have been added by regulation. |
| **Exclusions** | |
| **Generators** | Generation station service and the microFIT distribution service charge are excluded in legislation. |

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | John Kim |
| **Subject:** | RE: for tomorrow - price mitigation |
| **Date:** | Tuesday, September 06, 2016 10:33:32 AM |

Hi John,

Not sure, where did you find the 10-11 dollar benefit? The chart on page 2 lists $9.9 which includes the counteracting effects from all other legislation. Which is greater than the $2 benefit committed.

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Monday, September 05, 2016 12:49 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Ok, could you double check on the 10-11 dollar benefit for residential vs. commitment of 2?

---

**From:** Shajee Kathirgamanathan
**Sent:** Monday, September 05, 2016 12:39 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** Re: for tomorrow - price mitigation

Yup, I made most of Ron's updates to this version and kept our overall layout/ points . (E.g. *Small* farms etc).

No, I'm out for most of today, will double check tomorrow and hopefully we can finalize.

Thanks,
Shajee

Sent from my mobile device, please excuse any typos or brevity.

On Sep 5, 2016, at 9:05 AM, John Kim <John.Kim@ofina.on.ca> wrote:

Hi Shajee,

As a general ask, the version that was signed off for TB briefing last week, could we incorporate as much of those contents in this version?

Connection this morning is very unstable so hard for me to check.

John.

---

**From:** Shajee Kathirgamanathan
**Sent:** Monday, September 05, 2016 12:10 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Hi John,

Since we're having the Cabinet Briefing on Wednesday, just wanted to finish off this note for your (and eventual) review by Ron. (Also not sure, but would TPD also need to review this note (?). Madeleine invited Sriram along with us.)

File attached and found here:
S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v4.docx

Also I generated some new calculations from the latest Ontario Provincial Outlook (OPO) produced by the IESO. They only had revised demand information; not prices.

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**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Will do.

Thanks

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shajee.kathirgamanathan@ofina.on.ca

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**Subject:** for tomorrow - price mitigation

As discussed, could we aim to compile some information RPP and Cap and Trade in an internal note or some sort of a dump for tomorrow?

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Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

**From:** Shajee Kathirgamanathan
**To:** John Kim; Salman Qadir
**Subject:** RE: for tomorrow - price mitigation
**Date:** Monday, September 05, 2016 12:09:44 AM
**Attachments:** Cabinet Note - Electricity Price Mitigation v4.docx

---

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| CEFD-OPO | **218** | **880** | **911** | **934** |

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Shajee

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**Subject:** RE: for tomorrow - price mitigation

Will do.

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shajee.kathirgamanathan@ofina.on.ca

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Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

**Tab x**

**CABINET BRIEFING NOTE**

| | |
|---|---|
| **Committee:** | Cabinet |
| **Meeting Date:** | September 14, 2016 [or Sept 13?] |
| **Ministry:** | Finance/TBS [ENERGY?] |
| **Last reviewed by:** | **Tracking to:** |

| | |
|---|---|
| **SUBMISSION TITLE:** | **[BASED ON MATERIALS FROM FPC SUBMISSION, WAITING ON CABINET SUBMISSION FOR FINALIZED PROPOSAL]**<br>Electricity Price Mitigation |

## I. REQUEST/DECISION REQUIRED:

- ~~Since 2010, electricity prices have risen considerably, particularly for households.~~
- The Ministry of Energy is proposing measures to provide relief to various electricity consumer classes. These measure include:
  1. Provide an 8% pre-tax rebate to Regulated Price Plan consumers ~~(i.e., residential, small business and farms), similar to OCEB.~~
  2. Provide targeted business support by expanding the ICI eligibility threshold to customers above 1MW in all sectors.
  3. Provide relief to rural customers by updating Rural and Remote Rate Protection (RRRP).
  4. Eliminate proceeds recycling to Regulated Price Plan consumers and increase proceeds recycling to commercial and industrial consumers.

## II. KEY POINTS:

- The Ministry of Energy (ENERGY) and Ministry of Finance (MOF) have been asked to explore rate mitigation options, including offsetting the provincial portion of the Harmonized Sales Tax (HST).
- There are 4 components to this proposal, each providing relief to different customer classes.

| | Measure | Annual Impact | Targeted Recipients |
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| **1.** | 8% Rebate to Regulated Price Plan | Fiscal [~~(~~$1B~~)~~*]* | Residential, ~~Farms,~~ Small business, small farms and other small users |
| **2.** | Expanding ICI eligibility to customers above 1MW in all sectors | Rate base (~~$~~[$47M/$82M~~)~~**]** | Intermediate and large-sized ~~Small i~~industrial, ~~Commercial~~ commercial and ~~Institutional~~ institutional consumers above 1MW in all sectors |
| **3.** | Updating Rural and Remote Rate Protection | Rate base (~~$~~[$110M]~~)~~ | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. |
| **4.** | Redirecting proceed recycling to Commercial and Industrial or | TBD | TBD |

| | | | |
|---|---|---|---|
| | provide fiscal offsets to the 8% rebate | | |

*Note: Annual ~~Numbers~~ numbers from ENERGY.
**NOTE: Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.

- ~~Due to the nature of the Global Adjustment mechanism, the rate base proposal (#2 and #3) while benefiting the targeted recipients, come at a cost to all other electricity rate payers in Ontario.~~

Commented [SK21]: Moved to key considerations

- ENERGY provided the following overview of bill impacts:

| Regulated Price Plan (Residential)* | | Class B (Commercial) | Class A (Industrial) | |
|---|---|---|---|---|
| Average (750 kWh/month) | Rural (1000 kWh/month) | | Existing | New |
| -$9.9/month (-7%) | -$45/month (-20%) | -$1/MWh (-1%) | -$1/MWh (-1%) | Up to -$52/MWh (-33%) |

*NOTE: ENERGY did not provide the monthly impact ~~,~~ for other Regulated Price Plan not classified as Residential (eg. farms, small businesses) that would benefit from the 8% Rebate to Regulated Price Plan.

**1. 8% Rebate to Regulated Price Plan**

- An 8% rebate on the pre-tax portion for Regulated Price Plan consumers would be equal to the provincial portion of HST and funded by the tax base.

- The rebate would appear directly on bills. As such, Local Distribution Companies (LDC) would be the delivery mechanism for the rebate.
  - While non-Regulated Price Plan consumers would not see a benefit from the 8% rebate under this option, all industrial and commercial consumers would receive proceeds recycling through the Greenhouse Gas Reduction Account (GGRA).
  - Commercial and industrial consumers would also continue to receive input tax credits and Public Service Bodies would continue to receive PSB rebates.
- New legislation would be required and closely mirror the Ontario Clean Energy Benefit (OCEB) Act, 2010. More details further below.
- On-bill rebate delivery would likely require adjustments to Local Distribution Company (LDC) billing systems, which could impact delivery costs and timelines.
- In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - One option to address any timing concerns is to allow LDCs to provide retroactive payments if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.

**2. Expanding ICI Eligibility to customers above 1MW in all sectors**

- Lower the threshold for participation in ICI to 1 MW and remove sectoral restrictions on participation.

- Most newly eligible ICI participants who choose to opt-in to the program would be able to reduce their electricity costs substantially. All other consumers would see a relatively small increase in their bills.
- Expanding the ICI will reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods (80MW in the short term and 165 MW in the long term)
- Bill savings to new participants up to 21% in the short term and up to 34% ~~providing a~~ in the long-term
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
    - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.
- All residential consumers would see an average cost increase of $0.42/month in the short term and $0.74/month in the long term.

**3. Updating Rural and Remote Rate Protection**

- RRRP funding supporting Hydro One R2 (rural) customers capped at current levels since 2004.
- Provide an additional $110 million in support to approximately 330,000 ~~Hydro One~~ R2 ~~rural~~ customers to $235 million annually.
- Proposal will equalize R2 bills with Hydro One R1 (medium) density customers.~~-~~
- ~~~~
- All residential consumers would see an average cost increase of $0.57/month.
- ~~[TO BE EXPANDED]~~

**4. ~~Redirecting proceed recycling to Commercial and Industrial~~Greenhouse Gas Reduction Account (GGRA)**

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers.
- Ontario's Climate Change Action Plan (CCAP) includes up to $1.32 billion over 4 years to help keep electricity rates affordable for residential and industrial consumers.
- The 8% rebate to the Regulated Price Plan consumers fulfills the commitment to reduce residential rates by $2/month.
- Would lead to savings ~~Redirecting some of the forecast $1.3 billion~~ in GGRA proceeds previously allocated to ~~from~~ Regulated Price Plan consumers, ~~to commercial and industrial consumers would ensure that the impact of cap and trade and ICI expansion and RRRP update would not increase costs for any large industrial and would result in a benefit to the average industrial and commercial customers~~~~which would~~ and help offset the fiscal impact of the 8% rebate to the RPP consumers.

## III. KEY CONSIDERATIONS

***NOTE:*** *Due to the nature of the ICI Global Adjustment mechanism and cost recovery of the RRRP, the rate base proposal (#2 and #3) while benefiting the targeted recipients,* ***come at a cost to all other electricity rate payers in Ontario****.*

**1. 8% Rebate to Regulated Price Plan**

- This 8% pre-tax rebate is similar to the previous Ontario Clean Energy Benefit (See Appendix for background) which provided a 10% post-tax rebate.
  - The OCEB legislation was set out with an end date, and was subsequently modified to be capped at 3,000 kWh per month for all electricity customers after 8 months of the program.
  - This proposal does not specify any consumption caps nor an end date.
- Due to the lack of a cap, ~~C~~compared to OCEB, this proposal is more generous to high volume ~~RPP~~ users
  - OCEB rebate was ~~eligible~~ applicable for up to 36,000 kWh annually (12 months times 3,000 kWh cap per month) while this proposal would be ~~is~~ more generous for those consuming more than 50,850 kWh annually.
  - Furthermore, highest volume users in this proposal would receive **up to 392% more** than under the OCEB program.
- Unclear why any proposals for a cap would be any more complex or onerous to LDCs than prior OCEB cap (instituted beginning September 2012 to termination of OCEB program in December 2015).
  - ~~o~~
- Blanket reduction in electricity prices for all users irrespective of consumption amounts hamper efforts to conserve electricity, and mutes TOU price signals.
- Removal of HST (a broad tax) to one particular product distorts and shifts consumption to that area.
- Businesses that fall under the Regulated Price Plan pay little to no HST due to the Input Tax Credit. The 8% reduction can be deemed a windfall for these users.
- While eligibility is intended to align with OCEB consumers, there exist a set of consumers not covered by the RPP (eg. ~~Those~~ those on retail contracts – See Appendix) which were OCEB eligible.
  - Unclear if those other OCEB eligible consumers are also eligible for the 8% rebate.
- ENERGY staff have provided the following preliminary fiscal impact projections:

- ~~*Preliminary* MOF calculations align favorably with ENERGY projections. Note refined estimates are forthcoming.~~

**FISCAL IMPACT ($M)**

| 2016-17 | 2017-18 | 2018-19 | 2019-20 |
|---|---|---|---|
| **261** | 1,006 | 1,004 | 994 |
| ~~224~~ | ~~909~~ | ~~958~~ | ~~1005~~ |
| ~~16.5%~~ | ~~10.7%~~ | ~~4.8%~~ | ~~-1.1%~~ |

**Commented [SK22]:** Moved to key considerations

**Commented [SK3]:** 36000*0.113/0.08 = 50,850

36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate
0.08 – pre-tax effective rebate (8%)

**Commented [SK24]:** 36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate

36000*0.113 = 4068 [OCEB effective rebated consumption]

Max under proposal: 250,000
pre-tax effective rebate: 0.08
Proposal effective rebated consumption: 250,000*0.08 = 20,000

(20,000-4068)/4068 = **3.9164**

**Commented [SK5]:** This is a general/classic economic comment on the preference of broad consumption taxes vs taxes for particular items.
TPD might have a better way to communicate this, if applicable.

**Commented [SK6]:** Will need to verify

**Commented [JK7]:** Let's delete MOF analysis for now.

**Commented [SK8R7]:** OK

- Ministry staff are in the process of developing a refined estimate of the cost.
- ENERGY's projections indicate a reduction in costs from 2017-18 to 2019-20.
- ~~—~~

2. **Expanding ICI Eligibility to customers above 1MW in all sectors**
   - Not all users with demand above 1MW will be in a position to take full advantage of the ICI expansion (eg. Inability to load shift during peaks).~~Previous expansion of ICI eligibility from 5MW to 3MW users in selected sectors provided those industrial users between 3MW and 5MW the option to enroll in the ICI program~~
     - ~~o —~~
     - ~~o Unclear if this initiative is a similar 'opt-in' proposal or a mandatory enrollment such as the initial ICI program for 5MW customers~~

3. **Updating Rural and Remote Rate Protection**
   - According to ENERGY, the RRRP is a $175M program with the majority of program funding ($125.5M) to Hydro One's lowest-density 'R2' customers
   - Unclear why ~~who the remaining $49.5M is directed towards, nor whether the expended RRRP program would accommodate these customers~~customers on RRRP who are not Hydro One's R2 customers are not also targeted for this benefit.
   - Unclear whether the RRRP would be indexed or trued up on a regularly basis per one of the options ENERGY's ~~FP~~ deck.

4. **~~Redirecting proceed recycling to Commercial and Industrial~~Greenhouse Gas Reduction Account (GGRA)**
   - ~~Unclear on the mechanism of how these proceeds will be directed to Commercial and Industrial users.~~
   - According to the ENERGY deck the GGRA allocated $120M to average residential consumers, $170M to commercial and $40M to industrial consumers. Deck implies more than $60M in savings from 8% Rebate for the RPP consumers.
     - ~~o —~~Unclear, how the redirected amount $60M ($120M-$60M) will be allocated to commercial and industrial users.
     - o

**~~Fiscal Impact from Each Proposal ($M)~~**

| | ~~2016-17~~ | ~~2017-18~~ | ~~2018-19~~ |
|---|---|---|---|
| ~~1. 8% Rebate to Regulated Price Plan~~ | ~~261~~ | ~~1006~~ | ~~994~~ |
| ~~4. Redirecting proceed recycling to Commercial and Industrial~~ | ~~-~~ | ~~-60~~ | ~~-60~~ |
| ~~TOTAL~~ | ~~261~~ | ~~946~~ | ~~934~~ |

~~[TO BE INSERTED IF NECESSARY, TABLE SUMMARIZING ELECTRICITY PRICE IMPACTS FROM EACH OF THESE 4 COMPONENTS]~~

**Commented [SK29]:** Delete. Table Key Points above, summarizes this more appropriately.

## IV. CABINET COMMITTEE DISCUSSION SUMMARY

n/a

## V. Financial Summary

| $ Millions | 2016-17 | 2017-18 | 2018-19 |
|---|---|---|---|
| Initiative cost requested | 261 | ~~946~~1,006 | ~~934~~~~994~~1,0 |
| Requested program base | ~~?~~261 | ~~?~~1,006 | 1,004~~?~~ |
| Total fiscal impact (draw from c-funds) | 261 | ~~946~~1,006 | ~~934~~1,004 |

**Commented [JK10]:** Update as above?

**Commented [SK211R10]:** Done

## VI. Performance Measures

To estimate the impact of the program, ~~and~~ the savings provided to the various consumers, and any potential for adjustments to the program, information should be provided from ~~the~~ LDCs on consumption profiles and rebate amounts, particularly those affected by the 8% rebate on ~~the~~ Regulated Price Plan Consumers.

| | |
|---|---|
| **Name of analyst:** | Shajee Kathirgamanathan (416-325-1402) |
| **Date:** | ~~August 30~~September 4, 2016 |
| **Branch / Division:** | Electricity Finance Branch / Corporate and Electricity Finance Division |

## APPENDIX A: PROPOSED CABINET MINUTE

Commented [JK12]: Let's indicate that this is just work in progress….to be filled out by TBS or Cabinet Office staff.

Commented [SK13R12]: Done.

[WORK IN PROGRESS, TO BE FILLED OUT BY TBS/CO STAFF]

1. ~~Ensure LDCs provide details on consumption profiles and bills to assess the effectiveness of the electricity price relief provided and better inform any future changes in legislation should it be necessary. (Eg. caps, effects on user demands, changes to peak demand forecasts).~~

## APPENDIX B: BACKGROUND – ONTARIO CLEAN ENERGY BENEFIT

~~Quick Background: The Ontario Clean Energy Benefit~~

- OCEB was in effect from 2011 to 2015, and provided residential, farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax.
    - Effective September 2012 electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month.
- OCEB helped Ontario families through the transition to a more reliable and cleaner electricity system, with the monthly cap balancing the fiscal implications of providing electricity relief.
- OCEB costs totalled $1,006 million in 2013-14 and $1,078 million in 2014-15, with a projected cost for 2015-16 of $860 million (for the 9 months remaining in the program).

| **Eligible Consumers** | |
|---|---|
| **Categories Listed in Legislation (coincides with categories eligible for RPP)** | |
| **Residential** | • a dwelling<br>• a property within the meaning of the Condominium Act, 1998<br>• a residential complex, within the meaning of the Residential Tenancies Act, 2006<br>• a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the Co-operative Corporations Act |
| **Farms** | • carries on a business that is a farming business for the purposes of the Farm Registration and Farm Organizations Funding Act, 1993, and<br>• holds a valid registration number assigned under that Act or the consumer's obligation to file a farming business registration form was waived pursuant to an order made under subsection 22 (6) of that Act |
| **Demand for electricity of 50 kW or less, or consumes not more than 250,000 kWh annually** | Would include small business, smaller broader- public-sector entities, and other small users. |
| **Special Cases (not eligible for RPP, but eligible for OCEB)** | |
| **Consumers On Retail Contracts** | Includes consumers with existing retail contracts and those who sign them during the duration of the program. |
| **Cornwall Electric and Hydro One Remote Communities Inc.** | Included since they are licensed distributors. |
| **Other Consumers Prescribed by Regulation** | 10 First Nations remote unlicensed distributors have been added by regulation. |
| **Exclusions** | |
| **Generators** | Generation station service and the microFIT distribution service charge are excluded in legislation. |

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | John Kim |
| **Subject:** | RE: for tomorrow - price mitigation |
| **Date:** | Tuesday, September 06, 2016 11:25:17 PM |
| **Attachments:** | Cabinet Note - Electricity Price Mitigation v6.docx |

One minor edit to the v6 sent a half hour ago. (Added a caveat below the first table about 'in-plan assumptions' in alignment with Tim Schuurman's email and your comment added near the end.

File attached and found here:
S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v6.docx

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, September 06, 2016 10:53 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Thanks John.

I accepted virtually all the tracked changes, and responded to your comments.

Note: I changed the title for initiative #4 from GGRA to 'Redirect Cap and Trade Proceeds Recycling' for consistency with energy's deck.

Please see v6, attached or found here:
S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v6.docx

Thanks,
Shajee

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, September 06, 2016 10:23 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Ok I'm taking a look.

---

**From:** John Kim
**Sent:** Tuesday, September 06, 2016 9:10 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Thanks, I have a marked up version.

Pls see if you can address some of the comments.

John.

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, September 06, 2016 7:55 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Hi John,

I made another update to the v5 note.

I'm assuming we're still briefing Associate Deputy Hughes tomorrow. If so we might want to have Ron review to be able to get to Trish (if required) prior to the briefing.

S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v5.docx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, September 06, 2016 11:21 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Hi John,

I incorporated the TBS note (aka the 'RAN' note), with our Cabinet note.

Please see attached file also here:
S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v5.docx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Tuesday, September 06, 2016 10:35 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

This was one of Ron's bullets….

- The 8% rebate would provide a typical residential consumer about an $11 per month benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average cap and trade commitment.

---

**From:** Shajee Kathirgamanathan
**Sent:** Tuesday, September 06, 2016 10:34 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Hi John,

Not sure, where did you find the 10-11 dollar benefit? The chart on page 2 lists $9.9 which includes the counteracting effects from all other legislation. Which is greater than the $2 benefit committed.

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Monday, September 05, 2016 12:49 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Ok, could you double check on the 10-11 dollar benefit for residential vs. commitment of 2?

---

**From:** Shajee Kathirgamanathan
**Sent:** Monday, September 05, 2016 12:39 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** Re: for tomorrow - price mitigation

Yup, I made most of Ron's updates to this version and kept our overall layout/ points . (E.g. *Small* farms etc).

No, I'm out for most of today, will double check tomorrow and hopefully we can finalize.

Thanks,
Shajee

Sent from my mobile device, please excuse any typos or brevity.

On Sep 5, 2016, at 9:05 AM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Shajee,
>
> As a general ask, the version that was signed off for TB briefing last week, could we incorporate as much of those contents in this version?
>
> Connection this morning is very unstable so hard for me to check.
>
> John.
>
> ---
>
> **From:** Shajee Kathirgamanathan
> **Sent:** Monday, September 05, 2016 12:10 AM
> **To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
> **Subject:** RE: for tomorrow - price mitigation
>
> Hi John,
>
> Since we're having the Cabinet Briefing on Wednesday, just wanted to finish off this note for your (and eventual) review by Ron. (Also not sure, but would TPD also need to review this note (?). Madeleine invited Sriram along with us.)
>
> File attached and found here:
> S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v4.docx

Also I generated some new calculations from the latest Ontario Provincial Outlook (OPO) produced by the IESO. They only had revised demand information; not prices.

| | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
|---|---|---|---|---|
| ENERGY | **261** | **1006** | **1004** | **994** |
| CEFD-LTEP | **224** | **909** | **958** | **1005** |
| CEFD-OPO | **218** | **880** | **911** | **934** |

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, September 01, 2016 1:20 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Will do.

Thanks

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Thursday, September 01, 2016 1:17 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** for tomorrow - price mitigation

As discussed, could we aim to compile some information RPP and Cap and Trade in an internal note or some sort of a dump for tomorrow?

Thanks,

John.

Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

**Tab x**

**CABINET BRIEFING NOTE**

| | |
|---|---|
| **Committee:** | Cabinet |
| **Meeting Date:** | September 14, 2016 |
| **Ministry:** | ENERGY |
| **Last reviewed by:** | **Tracking to:** Cabinet – September 14, 2016 |

**[BASED ON DRAFT CABINET SUBMISSION]**

| | |
|---|---|
| **SUBMISSION TITLE:** | Electricity Price Mitigation |

## I. REQUEST/DECISION REQUIRED:

- The Ministry of Energy is proposing measures to provide relief to various electricity consumer classes. These measure include:

  1. Provide a pre-tax 8% rebate to Regulated Price Plan (RPP) consumers;
  2. Expanding the Industrial Conservation Initiative (ICI) eligibility to customers above 1MW in all sectors;
  3. Updating Rural or Remote Rate Protection (RRRP);
  4. Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.

  ~~Using cap and trade proceeds to ensure industrial and commercial consumers are not negatively impacted by cap and trade. Balance of proceeds intended for electricity relief through the Climate Change Action Plan could provide some fiscal offsets (to be confirmed by Energy).~~

- [ Approve in principle an expenditure increase estimated at $261M [estimate subject to refinement from ENERGY] in 2016-17 for the Electricity Price Mitigation, offset from the Treasury Board Contingency Fund. ]

**Commented [JK1]:** This seems very broad with no limit to the amount of C&T proceeds to be used.

**Commented [SK22R1]:** Updated to be consistent with revised deck.

The Minute specifies $270M, so there is a limit for this request.

**Commented [JK3]:** Finance?

**Commented [SK24R3]:** From old deck. Deleted.

**Commented [SK25]:** Unclear if this is necessary for the cabinet note as the TB/MBC note may be worried more on fiscal implications.

## II. KEY POINTS:

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online.

As part of the 2016 Budget, the government committed to mitigating electricity cost impacts that were anticipated from the cap and trade program. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable for residential and industrial consumers. This included a commitment to provide a modest benefit of up to $2 per month, on average, to residential consumers.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a

cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the CCAP commitment and additional price mitigation, the Ministry of Energy has developed price mitigation options that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

| | Measure | Targeted Recipients | Impact (annually) | |
|---|---|---|---|---|
| | | | Fiscal | Rate Base |
| **1.** | 8% Rebate to Regulated Price Plan | Residential, small business, small farms and other small users | $1B | - |
| **2.** | Expanding ICI eligibility to customers above 1MW in all sectors | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors | - | $47M/ $82M* |
| **3.** | Updating Rural or Remote Rate Protection | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. | - | $110M |
| **4.** | Redirecting cap and trade proceeds recycling ~~to commercial and industrial; and~~ provide fiscal offsets to the 8% rebate | Commercial and industrial electricity customers | -$60M** | - |

*Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.
**To meet the Budget 2016 commitment, the Climate Change Action Plan (CCAP) committed $1.3B from the Greenhouse Gas Reduction Account (GGRA) or about $330M annually. Current proposal will require $60M less or $270M annually. Assumes the $60M is diverted to in-plan initiatives.

- ENERGY provided the following overview of bill impacts:

| Regulated Price Plan (Residential)* | | Class B (Commercial) | Class A (Industrial) | |
|---|---|---|---|---|
| Average (750 kWh/month) | Rural** (1000 kWh/month) | | Existing | New |
| -$10/month (-6%) | -$45/month (-20%) | -$1/MWh (-1%) | -$1/MWh (-1%) | Up to -$52/MWh (-34%) |

Note: The impact of cap and trade would not be added to electricity bills until 2017 and impact of ICI would not be added until 2018. All impacts included here for illustrative purposes
* ENERGY did not provide the monthly impact for other Regulated Price Plan not classified as Residential (eg. farms, small businesses) that would benefit from the 8% Rebate to Regulated Price Plan.
** Rural customers refers to those Hydro One customers eligible to receive RRRP (R2 rate class customers)

**Tab x**

1. **8% Rebate to Regulated Price Plan (RPP)**
   - An 8% rebate on the pre-tax portion for Regulated Price Plan (RPP) consumers would be equal to the provincial portion of HST and funded by the tax base.
   - The $1 billion figure is a 2017 to 2020 calendar year average of cost estimates developed by Ministry of Energy staff, as follows:

| *$ millions* | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|
| | 1,003 | 1,014 | 975 | 1,049 |
| Avg. 2017-20 | 1,010 | | | |

   - On a fiscal year basis, the above estimates become:

| *$ millions* | **2016-17** | **2017-18** | **2018-19** | **2019-20** |
|---|---|---|---|---|
| | 261 | 1,006 | 1,004 | 994 |
| 3-Year Avg. | 1,001 | | | |

   - Ministry staff are in the process of developing a refined estimate of the cost.
   - The rebate would appear directly on bills. As such, Local Distribution Companies (LDC) would be the delivery mechanism for the rebate.
     - While non-Regulated Price Plan consumers would not see a benefit from the 8% rebate under this option, all industrial and commercial consumers would receive proceeds recycling through the Greenhouse Gas Reduction Account (GGRA).
     - Commercial and industrial consumers would also continue to receive input tax credits and Public Service Bodies would continue to receive PSB rebates.
   - New legislation would be required and closely mirror the Ontario Clean Energy Benefit (OCEB) Act, 2010. More details further below.
   - On-bill rebate delivery would likely require adjustments to Local Distribution Company (LDC) billing systems, which could impact delivery costs and timelines.
   - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
     - One option to address any timing concerns is to allow LDCs to provide retroactive payments if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
   - The rebate would not be directly linked to HST.

2. **Expanding ICI Eligibility to customers above 1MW in all sectors**
   - Lower threshold for participation in ICI to 1 MW and remove sectoral restrictions.
   - Most newly eligible ICI participants who choose to opt-in to the program would be able to reduce their electricity costs substantially. All other consumers would see a relatively small increase in their bills.
   - Expanding the ICI will reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods (80MW in the short term and 165 MW in the long term)
   - Bill savings to new participants up to 21% in the short term and up to 34% long-term.

- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
    - Companies that would become eligible under such an expansion include Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.
- Class B consumers would have a collective increase in the Global Adjustment of $47M in the short term and $87M in the long term from this initiative.
- Residential consumers would see an average cost increase of $0.42/month in the short term and $0.74/month in the long term.

**3. Updating Rural or Remote Rate Protection**

- RRRP funding supporting Hydro One R2 (rural) customers capped at current levels since 2004.
- The current program provides a monthly subsidy of a about $32/month.
- Proposal will provide an additional $110 million in support to approximately 329,000 R2 customers to $235 million annually.
- Proposal will increase the subsidy by about $28/month and equalize R2 bills with Hydro One R1 (medium) density customers at 1,000 kWh.
- All residential consumers would see an average cost increase of about $0.60/month.
- ENERGY is considering options to periodically adjust the amount of rate protection eg. indexed at inflation or “trued up” on a regular basis.

**4. Redirect Cap and Trade Proceeds Recycling ~~Redirecting proceed recycling to Commercial and Industrial~~Greenhouse Gas Reduction Account (GGRA)**

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers.
- Ontario’s Climate Change Action Plan (CCAP) includes up to $1.32 billion over 4 years to help keep electricity rates affordable for residential and industrial consumers.
- The GGRA allocated $120M to average residential consumers, $170M to commercial and $40M to industrial consumers.
- The 8% rebate to the Regulated Price Plan consumers fulfills the commitment to reduce residential rates by $2/month.
    - Proposal would lead to savings of the $120M in GGRA proceeds previously allocated to residential consumers, and help offset the fiscal impact of the 8% rebate to the Regulated Price Plan consumers.
- To provide price mitigation to commercial and industrial electricity consumers, ENERGY is proposing to direct an additional $60M of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to mitigate impacts.
- The current proposal would require an estimated $60 million less per year, or $0.24 billion less over the first compliance period.

## III. KEY CONSIDERATIONS

- Due to the nature of the ICI Global Adjustment mechanism and cost recovery of the RRRP, the rate base proposal (#2 and #3), while benefiting the targeted recipients, would **come at a cost to all other electricity rate payers in Ontario**.
- This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets.
- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
    - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
    - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
    - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

**1. 8% Rebate to Regulated Price Plan**

- The 8% pre-tax rebate would provide a typical residential consumer about an $11 per month benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average cap and trade commitment.

- This 8% pre-tax rebate is similar to the previous Ontario Clean Energy Benefit (See Appendix for background) which provided a 10% post-tax rebate.
    - The OCEB legislation was set out with an end date, and was subsequently modified to be capped at 3,000 kWh per month for all electricity customers after 8 months of the program.
    - This proposal does not specify any consumption caps nor an end date.
- Due to the lack of a cap, compared to OCEB, this proposal is more generous to the high volume RPP users.
    - OCEB rebate was applicable for up to 36,000 kWh annually (12 months times 3,000 kWh cap per month) while this proposal would be **more generous for those consuming more than 50,850 kWh** annually.
    - Furthermore, highest volume users in this proposal would receive **up to 392% more** than under the OCEB program.
- Unclear why any proposals for a cap would be any more complex or onerous to LDCs than prior OCEB cap (instituted beginning September 2012 to termination of OCEB program in December 2015).

- Blanket reduction in electricity prices for all users irrespective of consumption amounts hamper efforts to conserve electricity, and mutes TOU price signals.
- [Businesses that fall under the Regulated Price Plan pay little to no HST due to the Input Tax Credit. The 8% reduction can be deemed a windfall for these users.]

**Commented [SK6]:** 36000*0.113/0.08 = 50,850

36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate
0.08 – pre-tax effective rebate (8%)

**Commented [SK27]:** 36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate

36000*0.113 = 4068 [OCEB effective rebated consumption]

Max under proposal: 250,000
pre-tax effective rebate: 0.08
Proposal's effective rebated consumption: 250,000*0.08 = 20,000

(20,000-4068)/4068 = **3.9164**

**Commented [SK8]:** Will need to verify

- ~~While eligibility is intended to align with OCEB consumers, there exist a set of consumers not covered by the RPP (eg. those on retail contracts – See Appendix) which were OCEB eligible.~~
  - ~~Unclear if those other OCEB eligible consumers are also eligible for the 8% rebate.~~

2. **Expanding ICI Eligibility to customers above 1MW in all sectors**
   - Not all users with demand above 1MW will be in a position to take full advantage of the ICI expansion (eg. inability to load shift during peaks).
   - Consumers in the commercial sector currently do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
     - Expansion of the ICI can give commercial consumers who are able to shift demand during peak hours, the opportunity to opt-in and benefit.

3. **Updating Rural or Remote Rate Protection**
   - According to ENERGY, the RRRP is a $175M program with the majority of program funding ($125.5M) to Hydro One's lowest-density 'R2' customers
   - Unclear why customers on RRRP who are not Hydro One's R2 customers are not also targeted for this benefit.

4. **Redirect Cap and Trade Proceeds Recycling~~Redirecting proceed recycling to Commercial and Industrial~~~~Greenhouse Gas Reduction Account (GGRA)~~**
   - Deck implies $60M in savings from 8% Rebate for the RPP consumers.
     - Unclear, how the redirected amount $60M ($120M-$60M) will be allocated to commercial and industrial users.
     - A fiscal offset to the initiative would materialize only if the $60M is diverted to in-plan initiatives.

**Commented [JK9]:** Which sectors? There was a deck recently that showed the composition of GA in the bills paid by sectors. I believe it was one of the price mitigation decks.

**Commented [SK210R9]:** This is a general statement.

Slide 32 in the 20160902_330pm deck.

## IV. Cabinet Committee Discussion Summary

n/a

## V. Financial Summary

| $ Millions | 2016-17 | 2017-18 | 2018-19 |
|---|---|---|---|
| Initiative cost requested | 261 | 1,006 | 1,004 |
| Requested program base | 261 | 1,006 | 1,004 |
| Total fiscal impact (draw from c-funds) | 261 | 1,006 | 1,004 |

## VI. Performance Measures

[To estimate the impact of the program, the savings provided to the various consumers, and any potential for adjustments to the program, information should be provided from LDCs on consumption profiles and rebate amounts, particularly those affected by the 8% rebate on Regulated Price Plan Consumers.]

| | |
|---|---|
| **Name of analyst:** | Shajee Kathirgamanathan (416-325-1402) |
| **Date:** | September 6, 2016 |
| **Branch / Division:** | Electricity Finance Branch / Corporate and Electricity Finance Division |

## APPENDIX A: PROPOSED POLICY MINUTE

[WORK IN PROGRESS, WAITING ON ENERGY'S FINAL SUBMISSION]

CABINET AGREED THAT:

1. THE MINISTRY OF ENERGY (ENERGY), WITH SUPPORT FROM THE MINISTRY OF FINANCE (MOF), SHALL PREPARE LEGISLATION THAT WOULD PROVIDE AN EIGHT PERCENT (8%) REBATE ON THE PRE-TAX COST OF ELECTRICITY FOR THE FOLLOWING CLASSES OF CONSUMERS:
   A. ALL CONSUMERS ELIGIBLE TO BE BILLED UNDER THE ONTARIO ENERGY BOARD'S REGULATED PRICE PLAN; AND
   B. ANY OTHER CONSUMERS WHO WERE ELIGIBLE FOR FINANCIAL ASSISTANCE UNDER THE *ONTARIO CLEAN ENERGY BENEFIT ACT, 2010* (OCEBA) DURING THE PERIOD THAT PROGRAM WAS IN PLACE.

2. THE LEGISLATION SHALL BE GENERALLY MODELLED UPON THE OCEBA, AND WOULD INCLUDE THE FOLLOWING ELEMENTS:
   A. THE REBATE WOULD BE AVAILABLE STARTING JANUARY 1, 2017 AND BEFORE SUCH DATE AS MAY BE PRESCRIBED;
   B. THE REBATE WOULD NOT BE SUBJECT TO A CAP UNLESS A CAP IS PRESCRIBED;
   C. THE LEGISLATION WOULD SPECIFY THE TYPES OF COSTS TO WHICH THE REBATE WOULD OR WOULD NOT BE APPLIED, WITH AUTHORITY TO MAKE CHANGES BY REGULATION;
   D. THE LEGISLATION WOULD ADDRESS INVOICING REQUIREMENTS, INCLUDING AUTHORITY TO PRESCRIBE HOW THE REBATE IS TO APPEAR ON CONSUMER ELECTRICITY BILLS;
   E. THE LEGISLATION WOULD INCLUDE AUTHORITY TO PRESCRIBE THE WAY IN WHICH THE REBATE IS TO BE FLOWED THROUGH TO CONSUMERS, AND THE WAY IN WHICH ELECTRICITY VENDORS PROVIDING THE REBATE ARE TO BE REIMBURSED;
   F. THE LEGISLATION WOULD INCLUDE RECORD-KEEPING REQUIREMENTS FOR ELECTRICITY VENDORS AND ANY OTHER PRESCRIBED PERSONS; AND
   G. THE LEGISLATION WOULD INCLUDE INSPECTION POWERS FOR INSPECTORS APPOINTED BY THE MINISTER OF FINANCE, INCLUDING POWERS RELATED TO RECOVERY OF OVERPAYMENTS.
3. ENERGY AMEND O. REG. 429/04 (ADJUSTMENTS UNDER SECTION 25.33 OF THE ACT) MADE UNDER THE ELECTRICITY ACT, 1998 TO EXPAND ELIGIBILITY FOR CLASS A CONSUMERS AND CLASS A MARKET PARTICIPANTS UNDER THE INDUSTRIAL CONSERVATION INITIATIVE (ICI) TO ALL ELECTRICITY CONSUMERS AND MARKET PARTICIPANTS WITH A PEAK DEMAND ABOVE AN AVERAGE OF ONE MEGAWATT (1MW) WITH NO SECTORAL RESTRICTIONS ON PARTICIPATION.
4. ENERGY AMEND O. REG 442/01 (RURAL OR REMOTE ELECTRICITY RATE PROTECTION) MADE UNDER THE ONTARIO ENERGY BOARD ACT, 1998 TO INCREASE THE TOTAL AMOUNT OF RATE PROTECTION AVAILABLE TO LOW DENSITY HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE RATE PROTECTION PROGRAM BY $110 MILLION, EFFECTIVE JANUARY 1, 2017.
5. ENERGY CONSIDER AND, IF APPROPRIATE, UTILIZE A MECHANISM TO PERIODICALLY ADJUST THE TOTAL ANNUAL AMOUNT OF RATE PROTECTION AVAILABLE TO HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE ELECTRICITY RATE PROTECTION REGULATION / PROGRAM, EFFECTIVE JANUARY 1, 2018.

6. ENERGY TO RECYCLE UP TO AN AVERAGE OF $270 MILLION OF CAP AND TRADE AUCTION PROCEEDS FROM THE GREENHOUSE GAS REDUCTION ACCOUNT PER YEAR OVER THE FIRST COMPLIANCE PERIOD (2017-2020) TO COMMERCIAL AND INDUSTRIAL ELECTRICITY CONSUMERS.
7. ENERGY AND MOF TO WORK WITH CABINET OFFICE (CO) AND PREMIER'S OFFICE (PO) ON COMMUNICATIONS PLAN.

## APPENDIX B: BACKGROUND – ONTARIO CLEAN ENERGY BENEFIT

- OCEB was in effect from 2011 to 2015, and provided residential, farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax.
    - Effective September 2012 electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month.
- OCEB helped Ontario families through the transition to a more reliable and cleaner electricity system, with the monthly cap balancing the fiscal implications of providing electricity relief.
- OCEB costs totalled $1,006 million in 2013-14 and $1,078 million in 2014-15, with a projected cost for 2015-16 of $860 million (for the 9 months remaining in the program).

| **Eligible Consumers** | |
|---|---|
| **Categories Listed in Legislation (coincides with categories eligible for RPP)** | |
| **Residential** | • a dwelling<br>• a property within the meaning of the Condominium Act, 1998<br>• a residential complex, within the meaning of the Residential Tenancies Act, 2006<br>• a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the Co-operative Corporations Act |
| **Farms** | • carries on a business that is a farming business for the purposes of the Farm Registration and Farm Organizations Funding Act, 1993, and<br>• holds a valid registration number assigned under that Act or the consumer's obligation to file a farming business registration form was waived pursuant to an order made under subsection 22 (6) of that Act |
| **Demand for electricity of 50 kW or less, or consumes not more than 250,000 kWh annually** | Would include small business, smaller broader- public-sector entities, and other small users. |
| **Special Cases (not eligible for RPP, but eligible for OCEB)** | |
| **Consumers On Retail Contracts** | Includes consumers with existing retail contracts and those who sign them during the duration of the program. |
| **Cornwall Electric and Hydro One Remote Communities Inc.** | Included since they are licensed distributors. |
| **Other Consumers Prescribed by Regulation** | 10 First Nations remote unlicensed distributors have been added by regulation. |
| **Exclusions** | |
| **Generators** | Generation station service and the microFIT distribution service charge are excluded in legislation. |

| | |
|---|---|
| **From:** | Salman Qadir |
| **To:** | Shajee Kathirgamanathan |
| **Cc:** | John Kim; Gavin He; Adam Prokop |
| **Subject:** | RE: rate mitigation |
| **Date:** | Thursday, January 12, 2017 4:50:44 PM |

Hey Shajee,

Take a look at v2 now. Redrafted the comments. Also left a note for you for one of your comments on Slide 7.

Thanks,
Salman

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, January 12, 2017 3:35 PM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: rate mitigation

Thanks Salman. I'll take a look.

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Salman Qadir
**Sent:** Thursday, January 12, 2017 3:24 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
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Z:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA

I've combined Shajee's comments with Gavin's and added mine as well. Please make additional comments in the Notes section and not as in-line comments.

@Shajee: I think you wanted to review once again/

Thanks,
Salman

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**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: rate mitigation

Agreed,

And I think slide 4 is critical with the key risks. A suggestion that has a greater capability to exacerbate an issue rather than solve it is not really a solution.

Kind regards,

Adam Prokop

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**From:** John Kim
**Sent:** Thursday, January 12, 2017 2:12 PM
**To:** Salman Qadir
**Cc:** Shajee Kathirgamanathan; Gavin He; Adam Prokop
**Subject:** RE: rate mitigation

To me, the proposals are tough to sell for two reasons before we get to the fiscal impact. 1. The intergenerational equity and 2. The optics.

But the challenge would be to put that down in an elegant way.

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**Sent:** Thursday, January 12, 2017 1:49 PM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** Fwd: rate mitigation

FYI

These proposals seem to relate to the transferring the contracts to oefc but not 100%

Begin forwarded message:

**From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Date:** January 12, 2017 at 1:25:20 PM EST
**To:** John Kim <John.Kim@ofina.on.ca>, Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject: FW: rate mitigation**

Hi,

FYI. Some implementation questions.

Ron

---

**From:** Ronald Kwan
**Sent:** January-12-17 12:37
**To:** Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>
**Subject:** RE: rate mitigation

Hi Scott,

The quick thought I had was then on a question on what the roles of each OEFC and IESO would be.

I had thought what was being contemplated was that IESO would be held whole, and OEFC would "pay" -- borrowing money to do so], instead of IESO having ratepayers pay through the GA. In this scenario, OEFC has an expense to IESO, financed through debt as OEFC has no associated revenue (at least at the outset until the relative GA size is reversed over time. As a sub-option, if the contracts could be assigned to OEFC, then OEFC's NUG regulation could potentially be listed and have OEFC recover the costs over time, not in the year-of – but that would have a fiscal impact since expense in the early years would exceed recoveries through the GA.

Your alternative seems to be where IESO simply borrows from OEFC, so for OEFC all of this is happening on the balance sheet, where OEFC borrows from the Province and then lends to IESO, so no net income statement or stranded debt impact on OEFC. However, in this case, IESO is short. It has cash from the OEFC financing, but it doesn't have the annual revenue to cover its contractual obligations. Wouldn't that likely affect the IESO and how it accounts for the contracts?

In either case, I'd think that implementation and accounting questions would need to be addressed, (e.g., objects of the corps, legislation / regulations).

Ron

---

**From:** Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
**Sent:** January-12-17 12:04

**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** rate mitigation

Hi Ron,

Thinking more about our conversation yesterday around financing of a portion of “out-of-market” generation costs. If IESO entered into a financing arrangement with OEFC and agreed to repay these costs + interest over a set time period, could OEFC record a receivable to offset / avoid the in-year expense?

I ask this in part because one of the other options on the table is to renegotiate wind contracts to reduce current costs by offering to extend the length of the contracts. That will rely on private proponents’ cost of capital. We could do the same thing using the Province’s costs of funds by financing a portion of the current cost through the OEFC and then agreeing to have ratepayers repay in years 20-30, once contracts have expired, but the facilities potentially still have remaining operating life.

Just a thought – happy to chat.
Scott

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| **From:** | Shajee Kathirgamanathan |
| **To:** | Salman Qadir |
| **Cc:** | John Kim; Gavin He; Adam Prokop |
| **Subject:** | RE: rate mitigation |
| **Date:** | Thursday, January 12, 2017 3:35:26 PM |

Thanks Salman. I'll take a look.

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
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**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** rate mitigation

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**From:** Salman Qadir
**To:** Shajee Kathirgamanathan
**Cc:** John Kim; Gavin He; Adam Prokop
**Subject:** RE: rate mitigation
**Date:** Thursday, January 12, 2017 3:24:02 PM

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> FYI. Some implementation questions.
>
> Ron
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** January-12-17 12:37
> **To:** Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>
> **Subject:** RE: rate mitigation
>
> Hi Scott,
>
> The quick thought I had was then on a question on what the roles of each OEFC and IESO would be.
>
> I had thought what was being contemplated was that IESO would be held whole, and OEFC would "pay" -- borrowing money to do so], instead of IESO having ratepayers pay through the GA. In this scenario, OEFC has an expense to IESO, financed through debt as OEFC has no associated revenue (at least at the outset until the relative GA size is reversed over time. As a sub-option, if the contracts could be assigned to OEFC, then OEFC's NUG regulation could potentially be listed and have OEFC recover the costs over time, not in the year-of – but that would have a fiscal impact since expense in the early years would exceed recoveries through the GA.

Your alternative seems to be where IESO simply borrows from OEFC, so for OEFC all of this is happening on the balance sheet, where OEFC borrows from the Province and then lends to IESO, so no net income statement or stranded debt impact on OEFC. However, in this case, IESO is short. It has cash from the OEFC financing, but it doesn't have the annual revenue to cover its contractual obligations. Wouldn't that likely affect the IESO and how it accounts for the contracts?

In either case, I'd think that implementation and accounting questions would need to be addressed, (e.g., objects of the corps, legislation / regulations).

Ron

---

**From:** Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
**Sent:** January-12-17 12:04
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** rate mitigation

Hi Ron,

Thinking more about our conversation yesterday around financing of a portion of "out-of-market" generation costs. If IESO entered into a financing arrangement with OEFC and agreed to repay these costs + interest over a set time period, could OEFC record a receivable to offset / avoid the in-year expense?

I ask this in part because one of the other options on the table is to renegotiate wind contracts to reduce current costs by offering to extend the length of the contracts. That will rely on private proponents' cost of capital. We could do the same thing using the Province's costs of funds by financing a portion of the current cost through the OEFC and then agreeing to have ratepayers repay in years 20-30, once contracts have expired, but the facilities potentially still have remaining operating life.

Just a thought – happy to chat.
Scott

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Salman Qadir |
| **Cc:** | Shajee Kathirgamanathan; Gavin He; Adam Prokop |
| **Subject:** | RE: rate mitigation |
| **Date:** | Thursday, January 12, 2017 2:12:37 PM |

To me, the proposals are tough to sell for two reasons before we get to the fiscal impact. 1. The intergenerational equity and 2. The optics.

But the challenge would be to put that down in an elegant way.

---

**From:** John Kim
**Sent:** Thursday, January 12, 2017 1:49 PM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** Fwd: rate mitigation

FYI

These proposals seem to relate to the transferring the contracts to oefc but not 100%

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 12, 2017 at 1:25:20 PM EST
> **To:** John Kim <John.Kim@ofina.on.ca>, Emily Kerr <Emily.Kerr@ofina.on.ca>
> **Subject: FW: rate mitigation**
>
> Hi,
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> FYI. Some implementation questions.
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>
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> **Subject:** RE: rate mitigation
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In either case, I'd think that implementation and accounting questions would need to be addressed, (e.g., objects of the corps, legislation / regulations).

Ron

---

**From:** Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
**Sent:** January-12-17 12:04
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**Subject:** rate mitigation

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| **From:** | Salman Qadir |
| **To:** | John Kim |
| **Cc:** | Shajee Kathirgamanathan; Gavin He; Adam Prokop |
| **Subject:** | RE: rate mitigation |
| **Date:** | Thursday, January 12, 2017 5:26:46 PM |
| **Attachments:** | Debt-Financing GA - Sent to MO on 2017-01-10_EFB_v3.pptx |

Hi John,

Collective comments have been saved in v3 here: \\ofina.on.ca\ofadfs\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA

Adam may have some comments in the morning.

Salman

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, January 12, 2017 3:35 PM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: rate mitigation

Thanks Salman. I'll take a look.

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Salman Qadir
**Sent:** Thursday, January 12, 2017 3:24 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** RE: rate mitigation

Hi all,

I've saved it here (let us know if there is a better place to save it): Z:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA

I've combined Shajee's comments with Gavin's and added mine as well. Please make additional comments in the Notes section and not as in-line comments.

@Shajee: I think you wanted to review once again/

Thanks,
Salman

---

**From:** Adam Prokop
**Sent:** Thursday, January 12, 2017 2:44 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: rate mitigation

Agreed,

And I think slide 4 is critical with the key risks. A suggestion that has a greater capability to exacerbate an issue rather than solve it is not really a solution.

Kind regards,

Adam Prokop

---

**From:** John Kim
**Sent:** Thursday, January 12, 2017 2:12 PM
**To:** Salman Qadir
**Cc:** Shajee Kathirgamanathan; Gavin He; Adam Prokop
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Just a thought – happy to chat.
Scott

Ontario

MINISTRY OF
ENERGY

# Debt Financing the Global Adjustment

January 10, 2017

*Working Draft for Discussion Purposes Only*

# Purpose

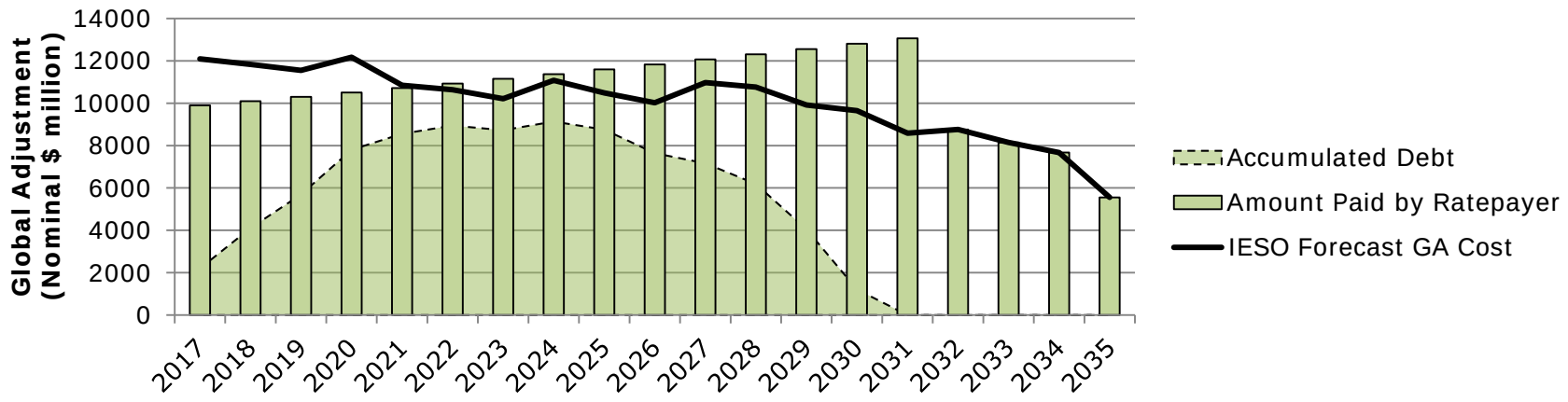
- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.

- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.

- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

# Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.




**Sample debt financing**: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

# Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

# Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

# GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

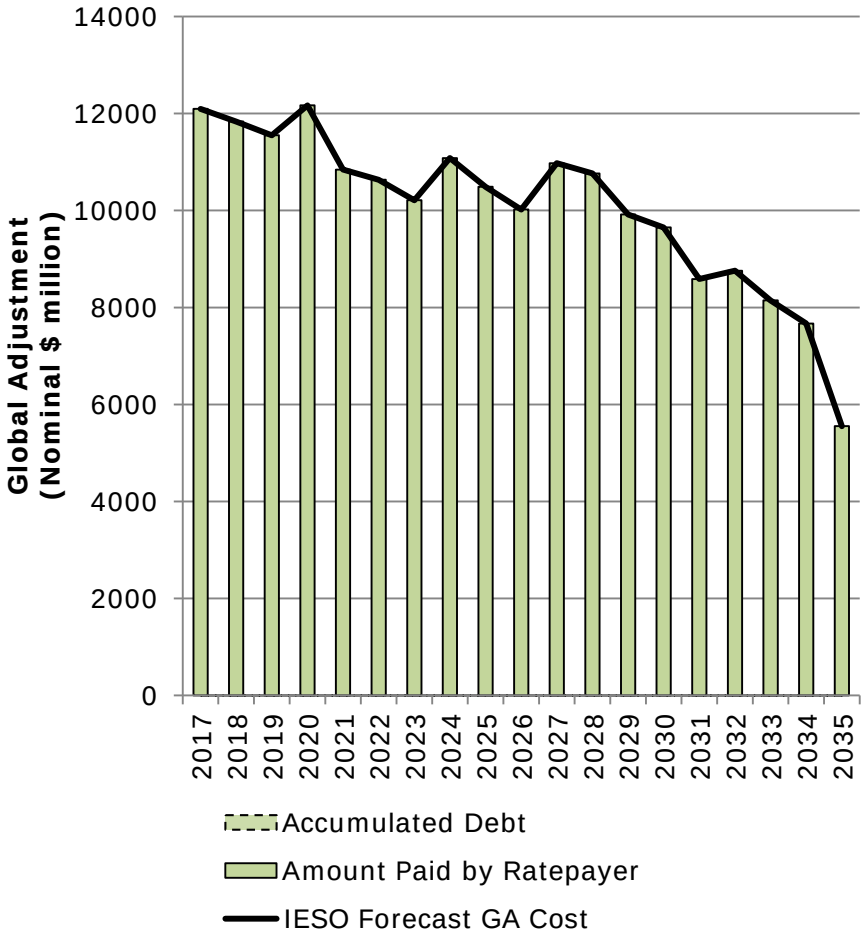
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

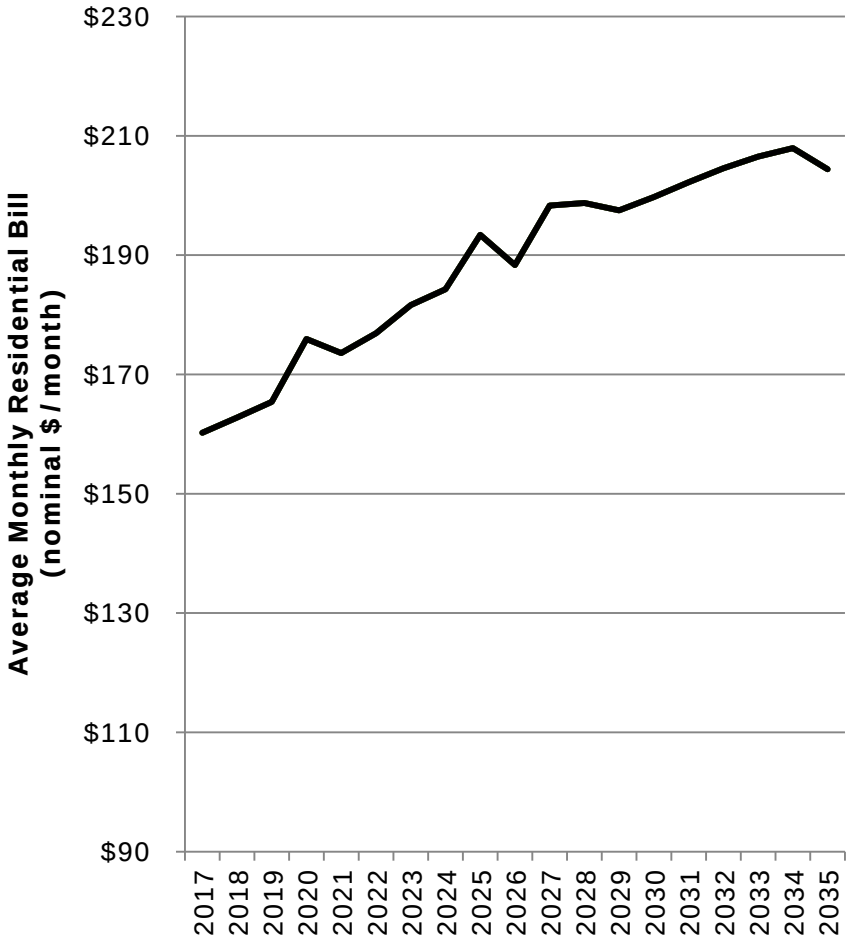
3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

# 1. Status Quo – Global and Residential Impacts

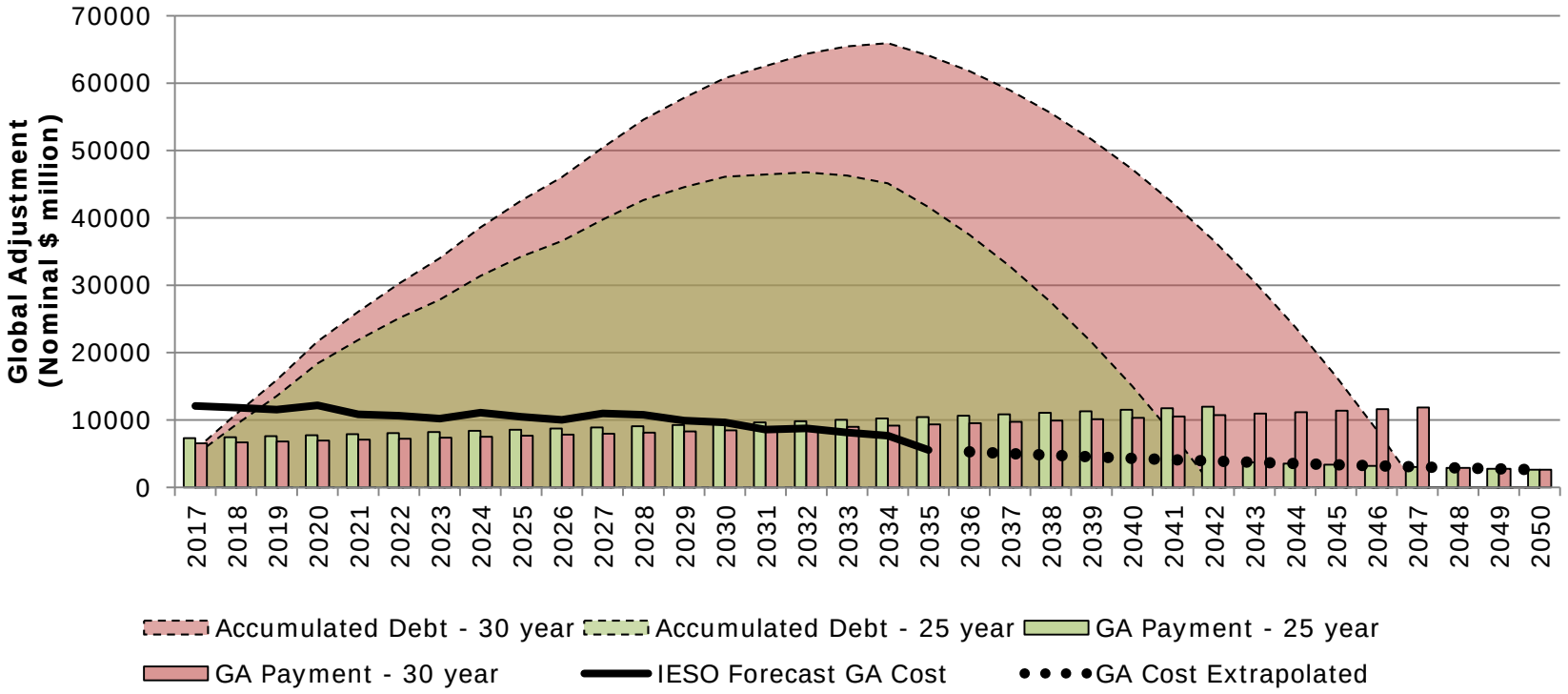
- Ratepayers continue paying the true cost of GA.



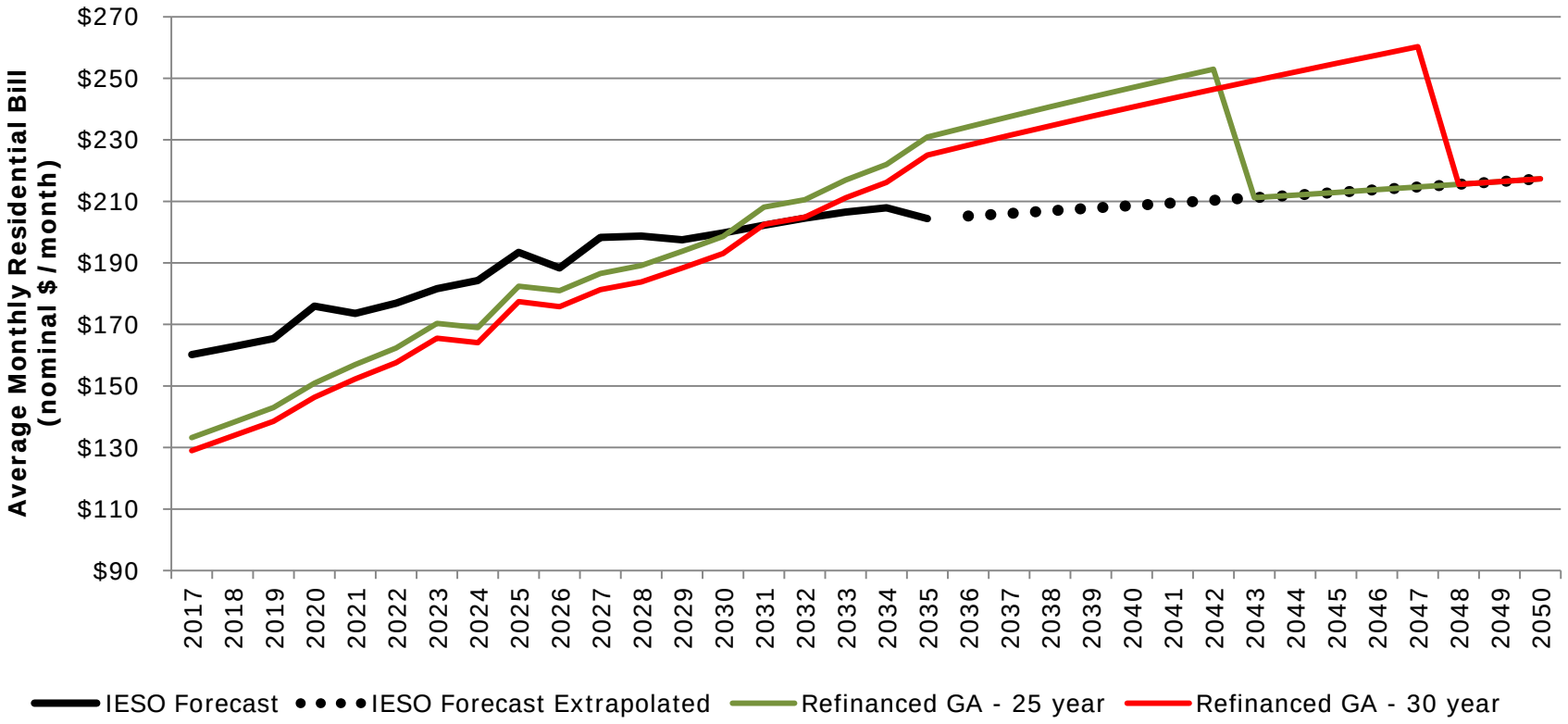
# 2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.




- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

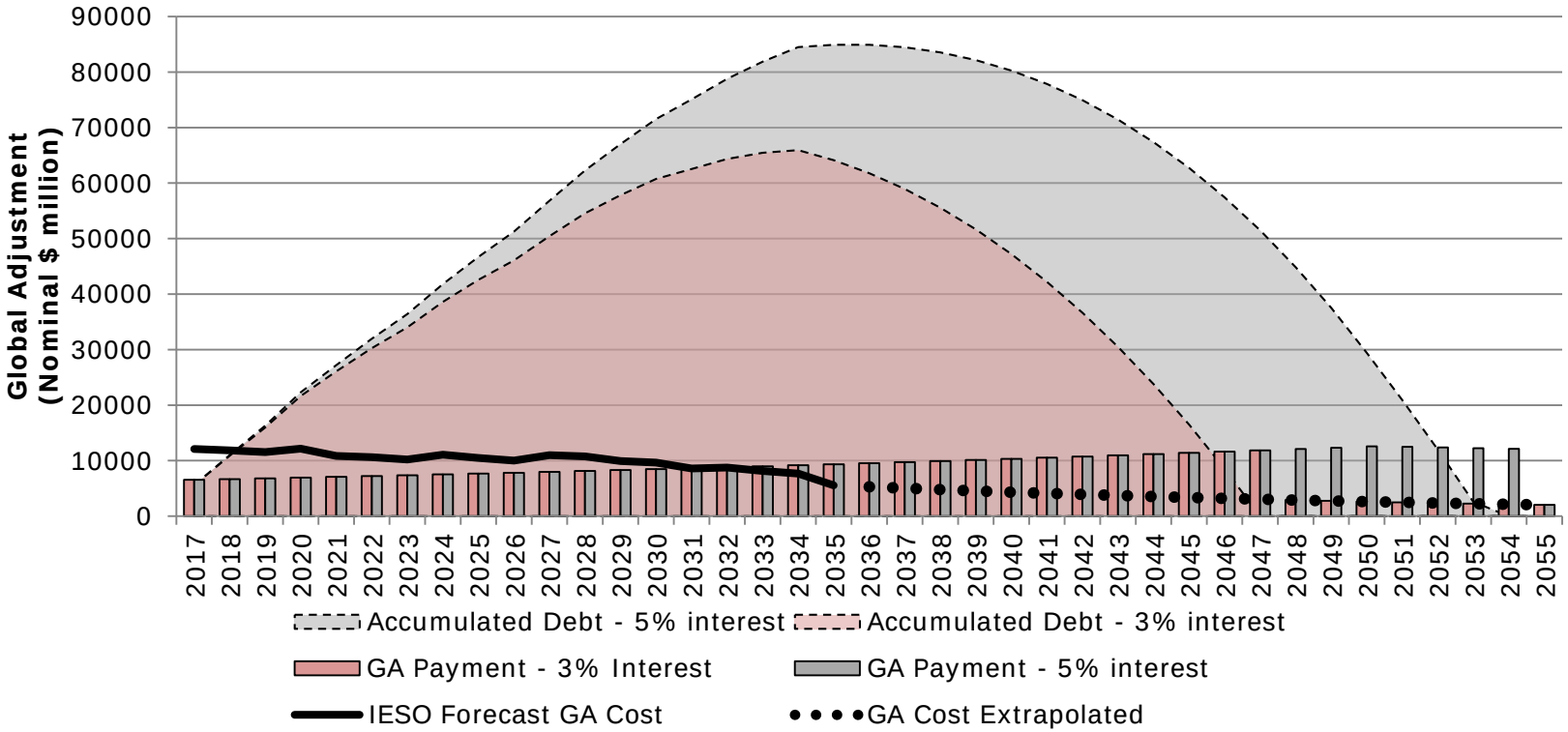
# 2. Maximize Short-term Cost Reduction – Residential Impacts




- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

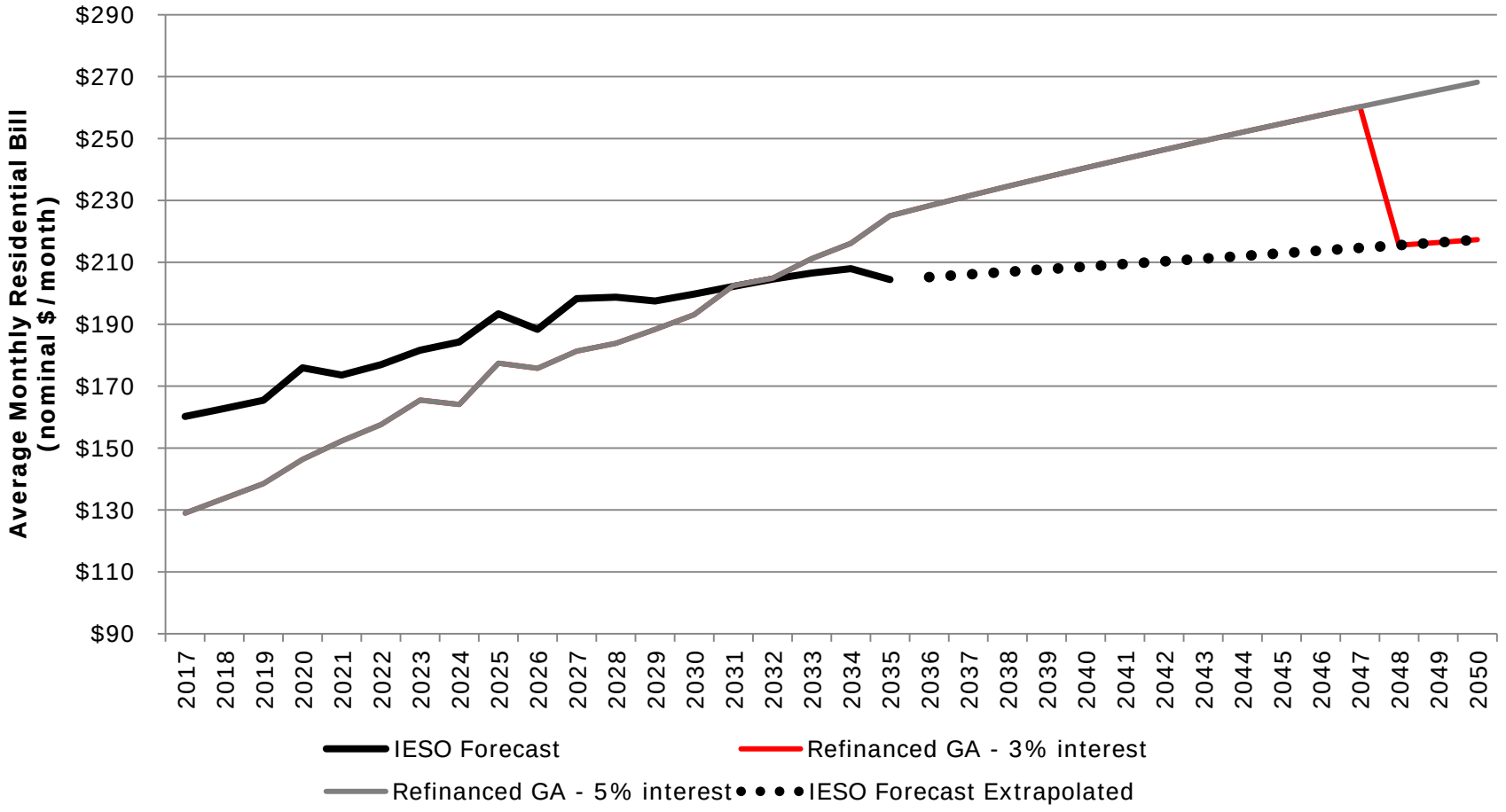
# 3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).




- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

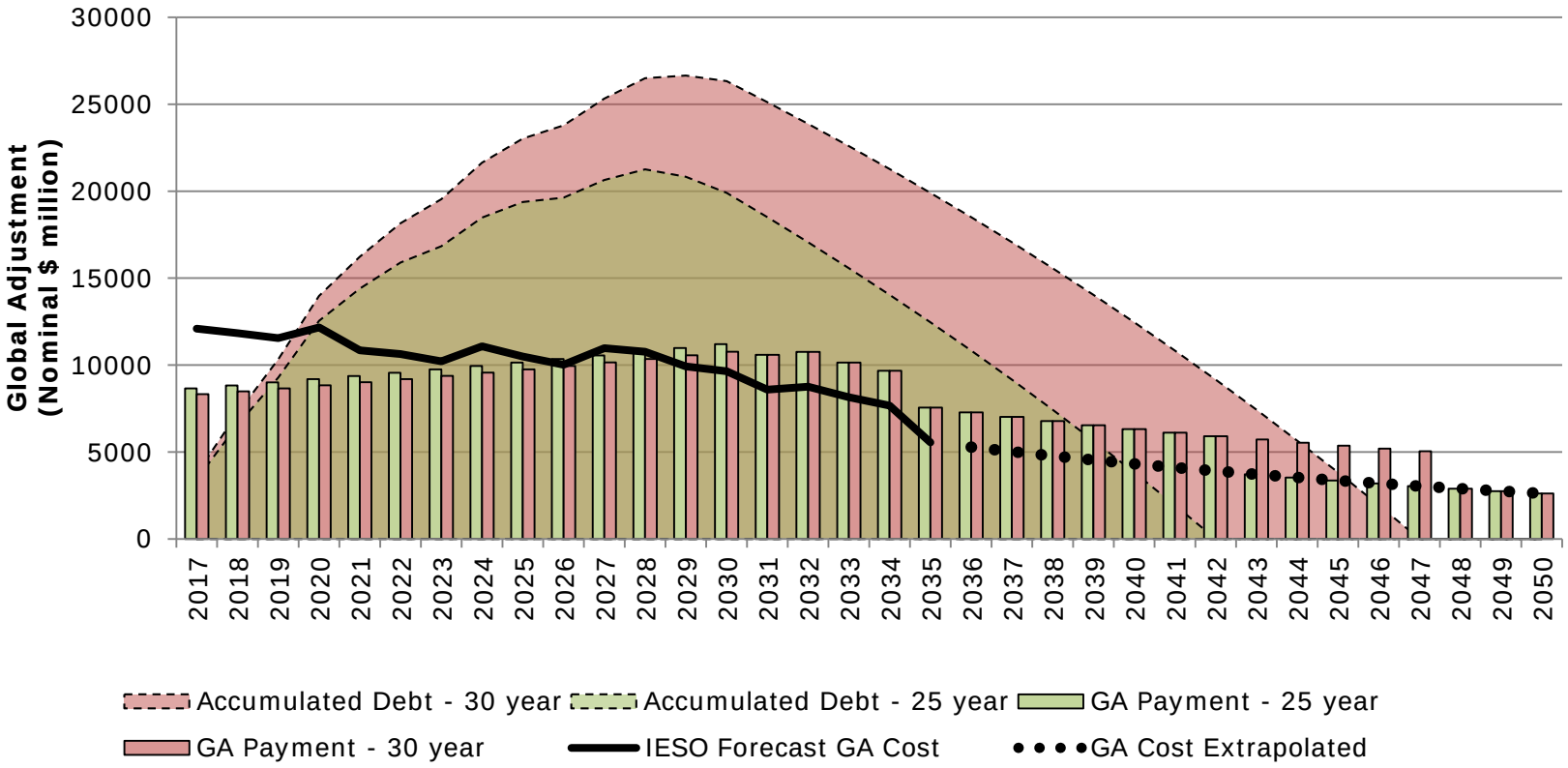
# 3. Interest Rate Risk – Residential Impacts




- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

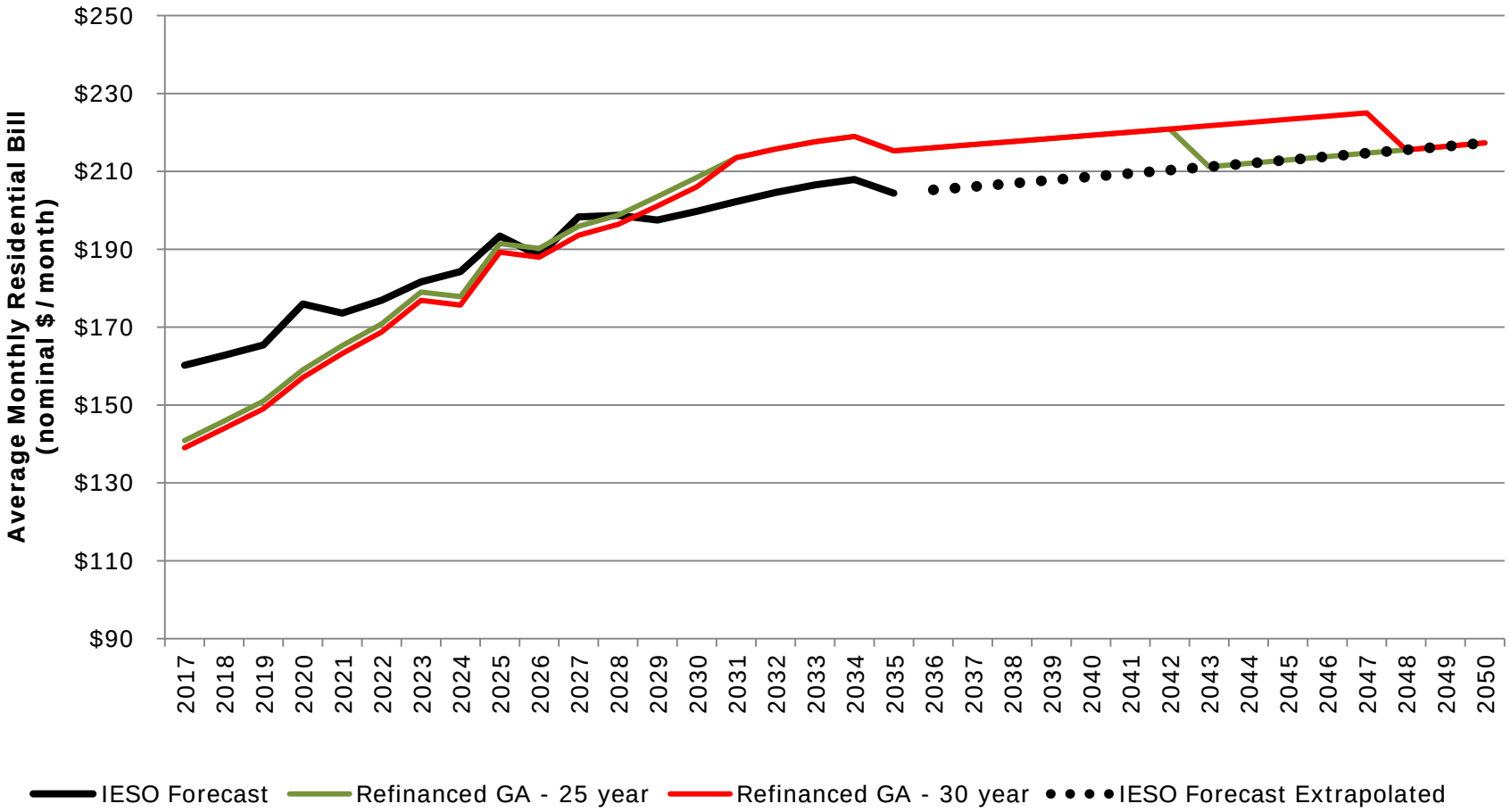
# 4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.




- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

# 4. Maximize Short-term Cost Reduction with Limits – Residential Impacts




- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

**From:** Francisco Chinchon
**To:** Helen Graham (MOF)
**Cc:** John Kim
**Subject:** Rate mitigation
**Date:** Monday, January 16, 2017 11:33:01 AM

---

Hi Helen,

I heard your vm. We have been reviewing and we are happy to arrange a call if you are available this afternoon.

Thanks,

Francisco

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | John Kim |
| **Cc:** | "Veinot, Cindy (TBS)" |
| **Subject:** | Re: A call from OPCD |
| **Date:** | Friday, January 13, 2017 4:27:31 PM |

Thanks John. Have a good weekend and recover from your jet lag

Copying Cindy, as neither Gadi nor I, as non-accountants admittedly, could see how this could not have a fiscal impact either, and for the same reasons.

Cindy, are you providing comments directly back to Energy, and, if so, when? Sooner rather than later would seem appropriate to me.

Ron

---

**From:** John Kim
**Sent:** January 13, 2017 4:13 PM
**To:** Ronald Kwan
**Subject:** A call from OPCD

Hi Ron,

Helen Graham and Cindy Veinot gave me a call. Helen called first and then asked me to a call with Cindy.

So DM of Energy appears to have engaged DM of TBS which is how OPCD received the deck. Energy asked for comments from an accounting perspective which is how OPCD seemed to have gotten engaged.

They wanted mostly clarification on Global Adjustment and what it covers. Cindy's comments were to the point that she would not see how this will not lead to a fiscal hit. That you cannot create a receivable/asset , unless there is a counterparty or unless it is a rate regulated entity.

I'm running out of steam so will be heading out shortly but will try to provide you with a note this weekend.

Thanks,

John.

Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority

Ph: 416-212-6996
Email: john.kim@ofina.on.ca

**From:** Gavin He
**To:** John Kim
**Cc:** Salman Qadir
**Subject:** Re: Benefit Implementation
**Date:** Thursday, December 08, 2016 11:08:43 PM

---

Sure, will do.

Regards,
Gavin He

On Dec 8, 2016, at 22:58, John Kim <John.Kim@ofina.on.ca> wrote:

> Could you check with Ken? Also let Rob know likely respond next week following review
>
> ---
>
> **From:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>
> **Sent:** December 8, 2016 4:04:51 PM
> **To:** John Kim
> **Cc:** Ken Kandeepan; Singh, Inayat (ENERGY); Salman Qadir; Gavin He; Sunita Chander (ENERGY)
> **Subject:** RE: Benefit Implementation
>
> Hi John,
>
> In response to your question we have updated the language in the MOU Section 3. b) to be more clear. Please see the below language that we plan to include in this MOU.
>
> > "The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time."
>
> Does this language provide the level of clarity that you are looking for? If not, please let me know and we can discuss.
>
> Thank you,
>
> -Robert
> (416) 325-6899
>
> ---
>
> **From:** John Kim [mailto:John.Kim@ofina.on.ca]
> **Sent:** December-08-16 9:25 AM
> **To:** Hunter, Robert A. (ENERGY); Chander, Sunita (ENERGY)
> **Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Salman Qadir; Gavin He
> **Subject:** RE: Benefit Implementation
>
> Hi Sunita, Robert,
>
> We need some clarity on what you mean by this not most likely.
>
> Thanks,
>
> John.
>
> ---
>
> **From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
> **Sent:** Thursday, December 08, 2016 9:03 AM

**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hi John,

In regards to records that the OFA must maintain related to the OREC, we do not need to have direct database access to your records, but records should be available upon request of the Ministry. Most likely we would ask for documents to be shared electronically via email if necessary, unless directed otherwise.

Regards,

-Robert
(416) 325-6899

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 8:47 AM
**To:** Hunter, Robert A. (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Chander, Sunita (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Robert,

In the version you sent back, you mention the Ministry having full access to such records. What are your expectations of how such access to take place?

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Monday, December 05, 2016 10:21 AM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hello,

Following up on Sunita's earlier email; have you had a chance to review the attached MOU? If there are any changes please let us know as soon as possible. We are aiming to have this finalized by the end of this week.

Thank you,

-Robert
(416) 325-6899

---

**From:** Chander, Sunita (ENERGY)
**Sent:** November-27-16 2:15 PM
**To:** Kandeepan, Ken (OFA); Kim, John (OFA)
**Cc:** Hunter, Robert A. (ENERGY); Singh, Inayat (ENERGY); An, Tai (ENERGY/MEDEI/MRI)
**Subject:** RE: Benefit Implementation

Hi, attached is the ENERGY-OFA MOU, one or two adjustments in the attached.

If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.

Thanks,

<< File: MOU - MoE OFA- DAP Nov 25.doc >>

---

**From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
**Sent:** September 30, 2016 10:21 AM
**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
**Cc:** Latto-Hall, Arla (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Michael,

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Ron << File: MOU - MoE OFA re OREC(v3)_Clean.doc >>

-----Original Appointment-----
**From:** Reid, Michael (ENERGY) [mailto:Michael.Reid@ontario.ca]
**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

---

Location: 77 Grenville Street, 6th Floor, Boardroom 6B

Upon arriving on the 6th floor, please call Betty at 5-6559 on the lobby phone.

---

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**From:** Chander, Sunita (ENERGY)
**To:** John Kim
**Subject:** Re: Benefit Implementation
**Date:** Tuesday, November 29, 2016 12:53:08 PM

---

No....but we can do that,

Sent from my BlackBerry
From: John Kim
Sent: Tuesday, November 29, 2016 12:51 PM
To: Chander, Sunita (ENERGY)
Subject: RE: Benefit Implementation

Hi Sunita,

Has Tim Christie's area looped in on the MOU?

Thanks,

John.

From: Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
Sent: Sunday, November 27, 2016 2:15 PM
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
Cc: Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Tai An (ENERGY) <Tai.An@ontario.ca>
Subject: RE: Benefit Implementation

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Thanks,

---

From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: September 30, 2016 10:21 AM
To: Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
Cc: Latto-Hall, Arla (ENERGY)
Subject: RE: Benefit Implementation

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Sent: September-27-16 09:14
To: Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
Cc: Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
Subject: Benefit Implementation
When: September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
Where: Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

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**From:** Ronald Kwan
**To:** John Kim
**Cc:** Salman Qadir; Gavin He
**Subject:** Re: Benefit Implementation
**Date:** Monday, November 28, 2016 10:39:43 AM

---

Hi John,

I understand that Tim Christie's group is doing the modelling on cost estimates.

Has he been looped in on the MOU? Please check with Sunita.

Thanks,
Ron

On Nov 27, 2016, at 3:48 PM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Salman,
>
> Could you review when you return on Tuesday.
>
> Thanks,
>
> John.
>
> ---
>
> **From:** Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
> **Sent:** Sunday, November 27, 2016 2:15 PM
> **To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Cc:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Tai An (ENERGY) <Tai.An@ontario.ca>
> **Subject:** RE: Benefit Implementation
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>
> If you are in agreement let us know and we can clean up and get ready for signature. We'll need to complete this first week of December.
>
> Thanks,
>
> _____
> **From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
> **Sent:** September 30, 2016 10:21 AM
> **To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
> **Cc:** Latto-Hall, Arla (ENERGY)
> **Subject:** RE: Benefit Implementation
>
> Hi Michael,
>
> Attached is a working draft of the MOU. OFA Legal had based it on the OCEB one, slightly updated for the proposed new rebate. I'm sure Energy will have some updates to suggest on it too.

Ron << File: MOU - MoE OFA re OREC(v3)_Clean.doc >>

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**From:** Reid, Michael (ENERGY) [mailto:Michael.Reid@ontario.ca]
**Sent:** September-27-16 09:14
**To:** Reid, Michael (ENERGY); Ken Kandeepan; Ronald Kwan; Sunita Chander (ENERGY)
**Cc:** Arla Latto-Hall (MCSS); Betty Wilson (ENERGY); Angie Georgakakos; Rasika Yatawara; John Kim
**Subject:** Benefit Implementation
**When:** September-30-16 10:30-11:30 (UTC-05:00) Eastern Time (US & Canada).
**Where:** Energy-R-77 Grenville-6B / Teleconference: 416-212-8014; Access Code: 2271608#

Update: Ken to call in.

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<MOU - MoE OFA- DAP Nov 25.doc>

**From:** John Kim
**To:** Gavin He
**Cc:** Salman Qadir
**Subject:** Re: Benefit Implementation
**Date:** Monday, December 12, 2016 12:24:57 PM

---

Ok I got it.

On Dec 12, 2016, at 11:59 AM, Gavin He <Gavin.He@ofina.on.ca> wrote:

> Hi John,
>
> Ken is good with Ron's edits. So we can move this forward right?
>
> Regards,
> Gavin He
>
> ---
>
> **From:** Chander, Sunita (ENERGY) [mailto:Sunita.Chander@ontario.ca]
> **Sent:** Monday, December 12, 2016 11:53 AM
> **To:** Hunter, Robert A. (ENERGY) <Robert.A.Hunter@ontario.ca>; John Kim <John.Kim@ofina.on.ca>
> **Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
> **Subject:** RE: Benefit Implementation
>
> Hi all, just wanted to remind everybody about timing as we will need to get these MOUs finalized for a Jan 1 implementation date. Can I ask when we can all agree to an MOU that can be signed by ADMs?
>
> On our end we need to send to our DM and MO as well, so I would like to send that mid-week this week.
>
> -Sunita
>
> Sunita Chander
> A/Director, Distribution and Agency Policy Branch
> Strategic, Network and Agency Policy Division
> Ministry of Energy
>
> 77 Grenville St., 6th Floor
> Toronto ON M7A 2C1
> Tel: 416-325-6594
> Email: sunita.chander@ontario.ca
>
> ---
>
> **From:** Hunter, Robert A. (ENERGY)
> **Sent:** December 8, 2016 4:05 PM
> **To:** Kim, John (OFA)
> **Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Salman Qadir; Gavin He; Chander, Sunita (ENERGY)
> **Subject:** RE: Benefit Implementation
>
> Hi John,
>
> In response to your question we have updated the language in the MOU Section 3. b) to be more clear.

Please see the below language that we plan to include in this MOU.

> "The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time."

Does this language provide the level of clarity that you are looking for? If not, please let me know and we can discuss.

Thank you,

-Robert
(416) 325-6899

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 9:25 AM
**To:** Hunter, Robert A. (ENERGY); Chander, Sunita (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Salman Qadir; Gavin He
**Subject:** RE: Benefit Implementation

Hi Sunita, Robert,

We need some clarity on what you mean by this not most likely.

Thanks,

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Thursday, December 08, 2016 9:03 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

Hi John,

In regards to records that the OFA must maintain related to the OREC, we do not need to have direct database access to your records, but records should be available upon request of the Ministry. Most likely we would ask for documents to be shared electronically via email if necessary, unless directed otherwise.

Regards,

-Robert
(416) 325-6899

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** December-08-16 8:47 AM
**To:** Hunter, Robert A. (ENERGY)
**Cc:** Kandeepan, Ken (OFA); Singh, Inayat (ENERGY); Chander, Sunita (ENERGY)
**Subject:** RE: Benefit Implementation

Hi Robert,

In the version you sent back, you mention the Ministry having full access to such records. What are your expectations of how such access to take place?

John.

---

**From:** Hunter, Robert A. (ENERGY) [mailto:Robert.A.Hunter@ontario.ca]
**Sent:** Monday, December 05, 2016 10:21 AM
**To:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Singh, Inayat (ENERGY) <Inayat.Singh2@ontario.ca>; Sunita Chander (ENERGY) <Sunita.Chander@ontario.ca>
**Subject:** RE: Benefit Implementation

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**To:** Reid, Michael (ENERGY); Kandeepan, Ken (OFA); Chander, Sunita (ENERGY); Kim, John (OFA)
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**From:** Ronald Kwan
**To:** John Kim
**Cc:** Tomasz Bugajski; Shajee Kathirgamanathan
**Subject:** Re: Cabinet note
**Date:** Wednesday, September 07, 2016 2:50:59 PM
**Attachments:** Cabinet Note - Electricity Price Mitigation v7_Markup.docx

---

Hi John,

I did not have time for a full review. I made a few quick suggestions. Is this briefing still happening?

Ron

---

**From:** John Kim
**Sent:** September 7, 2016 7:00 AM
**To:** Ronald Kwan
**Cc:** Tomasz Bugajski; Shajee Kathirgamanathan
**Subject:** Cabinet note

Hi Ron,

Pls. see attached draft note we intend to use for Associate briefing today at 4pm.

Thanks,

John.

Y. John Kim
Director(A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

**Tab x**

**CABINET BRIEFING NOTE**

| | |
|---|---|
| **Committee:** | Cabinet |
| **Meeting Date:** | September 14, 2016 |
| **Ministry:** | ENERGY |
| **Last reviewed by:** | **Tracking to:** Cabinet – September 14, 2016 |

**[BASED ON DRAFT CABINET SUBMISSION]**

| | |
|---|---|
| **SUBMISSION TITLE:** | Electricity Price Mitigation |

## I. REQUEST/DECISION REQUIRED:

- The Ministry of Energy is proposing measures to provide relief to various electricity consumer classes. These measure include:

    1. Provide a pre-tax 8% rebate to Regulated Price Plan (RPP) consumers;
    2. Expanding the Industrial Conservation Initiative (ICI) eligibility to customers above 1MW in all sectors;
    3. Updating Rural or Remote Rate Protection (RRRP);
    4. Recycle cap and trade proceeds to commercial and industrial electricity consumers to provide a modest 1% reduction in rates, with modest savings from proceeds intended for electricity relief through the Climate Change Action Plan to provide fiscal offsets.

- [Approve in principle an expenditure increase estimated at $261M [estimate subject to refinement from ENERGY] in 2016-17 for the Electricity Price Mitigation, offset from the Treasury Board Contingency Fund. ]

**Commented [SK21]:** Unclear if this is necessary for the cabinet note as the TB/MBC note may be worried more on fiscal implications.

**Commented [RK2]:** Remove from here, but should be part of fiscal impact part of the note.

## II. KEY POINTS:

Context

Electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online.

As part of the 2016 Budget, the government committed to mitigating electricity cost impacts that were anticipated from the cap and trade program. The Climate Change Action Plan (CCAP) included up to $1.32B over 4 years to help keep electricity rates affordable for residential and industrial consumers. This included a commitment to provide a modest benefit of up to $2 per month, on average, to residential consumers.

The Ontario Clean Energy Benefit (OCEB) expired December 31, 2015, as part of the originally planned, five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. With the end of OCEB, the government

ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned, as of January 1, 2016, and also put in place the low-income targeted Ontario Electricity Support Program (OESP).

In order to achieve the CCAP commitment and additional price mitigation, the Ministry of Energy has developed price mitigation options that consider tax-based levers, cap and trade proceeds, and shifting costs within the rate-base.

Proposal

| | Measure | Targeted Recipients | Impact (annually) | |
|---|---|---|---|---|
| | | | Fiscal | Rate Base |
| **1.** | 8% Rebate to Regulated Price Plan | Residential, small business, small farms and other small users | $1B | - |
| **2.** | Expanding ICI eligibility to customers above 1MW in all sectors | Intermediate and large-sized industrial, commercial and institutional consumers above 1MW in all sectors | - | $47M/ $82M* |
| **3.** | Updating Rural or Remote Rate Protection | Residents in rural or remote locations: Hydro One's lowest-density R2 customers. | - | $110M |
| **4.** | Redirecting cap and trade proceeds recycling:<br>• As part of the original CCAP policy, $330M of the cap & trade proceeds was to be recycled for electricity price mitigation for residential and non-residential users.<br>• Under this proposal, $270 M would be used to mitigate non-residential users;<br>• provides $60M for potential fiscal offsets to the 8% rebate | Commercial and industrial electricity customers | -($60M)** | - |

*Short-term/Long-term rate base impact, where short term is one year after expanded eligibility takes place and long-term is expected impact once new customers have time to change behavior.
**To meet the Budget 2016 commitment, the Climate Change Action Plan (CCAP) committed $1.3B from the Greenhouse Gas Reduction Account (GGRA) or about $330M annually. Current proposal will require $60M less or $270M annually. Assumes the $60M is diverted to in-plan initiatives.

- ENERGY provided the following overview of bill impacts:

| Regulated Price Plan (Residential)* | | Class B (Commercial) | Class A (Industrial) | |
|---|---|---|---|---|
| Average (750 kWh/month) | Rural** (1000 kWh/month) | | Existing | New |
| -$10/month (-6%) | -$45/month (-20%) | -$1/MWh (-1%) | -$1/MWh (-1%) | Up to -$52/MWh (-34%) |

Note: The impact of cap and trade would not be added to electricity bills until 2017 and impact of ICI would not be added until 2018. All impacts included here for illustrative purposes
* ENERGY did not provide the monthly impact for other Regulated Price Plan not classified as Residential (eg.

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farms, small businesses) that would benefit from the 8% Rebate to Regulated Price Plan.
** Rural customers refers to those Hydro One customers eligible to receive RRRP (R2 rate class customers)

**1. 8% Rebate to Regulated Price Plan (RPP)**

- An 8% rebate on the pre-tax portion for Regulated Price Plan (RPP) consumers would be equal to the provincial portion of HST and funded by the tax base.
- The $1 billion figure is a 2017 to 2020 calendar year average of cost estimates developed by Ministry of Energy staff, as follows:

| *$ millions* | **2017** | **2018** | **2019** | **2020** |
|---|---|---|---|---|
| | 1,003 | 1,014 | 975 | 1,049 |
| Avg. 2017-20 | 1,010 | | | |

- On a fiscal year basis, the above estimates become:

| *$ millions* | **2016-17** | **2017-18** | **2018-19** | **2019-20** |
|---|---|---|---|---|
| | 261 | 1,006 | 1,004 | 994 |
| 3-Year Avg. | 1,001 | | | |

- Ministry of Energy staff are in the process of developing a refined estimate of the cost.

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- The rebate would appear directly on bills. As such, Local Distribution Companies (LDC) would be the delivery mechanism for the rebate.
  - While non-Regulated Price Plan consumers would not see a benefit from the 8% rebate under this option, all industrial and commercial consumers would receive proceeds recycling through the Greenhouse Gas Reduction Account (GGRA).
  - Commercial and industrial consumers would also continue to receive input tax credits and Public Service Bodies would continue to receive PSB rebates.
- New legislation would be required and closely mirror the Ontario Clean Energy Benefit (OCEB) Act, 2010. More details further below.
- On-bill rebate delivery would likely require adjustments to Local Distribution Company (LDC) billing systems, which could impact delivery costs and timelines.
- In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
  - One option to address any timing concerns is to allow LDCs to provide retroactive payments if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- The rebate would not be directly linked to HST.

**2. Expanding ICI Eligibility to customers above 1MW in all sectors**

- Lower threshold for participation in ICI to 1 MW and remove sectoral restrictions.
- Most newly eligible ICI participants who choose to opt-in to the program would be able to reduce their electricity costs substantially. All other consumers would see a relatively small increase in their bills.
- Expanding the ICI will reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods (80MW in the short term and 165 MW in the long term)

- Bill savings to new participants up to 21% in the short term and up to 34% long-term.
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
    - Companies that would become eligible under such an expansion include Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.
- Class B consumers would have a collective increase in the Global Adjustment of $47M in the short term and $87M in the long term from this initiative.
- Residential consumers would see an average cost increase of $0.42/month in the short term and $0.74/month in the long term.

**3. Updating (Increasing) Rural or Remote Rate Protection**

- RRRP funding supporting Hydro One R2 (rural) customers capped at current levels since 2004.
- The current program provides a monthly subsidy of a about $32/month.
- Proposal will provide an additional $110 million in support to approximately 329,000 R2 customers to $235 million annually.
- Proposal will increase the subsidy by about $28/month and equalize R2 bills with Hydro One R1 (medium) density customers at 1,000 kWh.
- All residential consumers would see an average cost increase of about $0.60/month.
- ENERGY is considering options to periodically adjust the amount of rate protection eg. indexed at inflation or “trued up” on a regular basis.

**4. Redirect Cap and Trade Proceeds Recycling**

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial electricity consumers, while also providing a benefit of up to $2 per month for residential electricity consumers.
- Ontario’s Climate Change Action Plan (CCAP) includes up to $1.32 billion over 4 years to help keep electricity rates affordable for residential and industrial consumers.
- The GGRA allocated $120M to average residential consumers, $170M to commercial and $40M to industrial consumers.
- The 8% rebate to the Regulated Price Plan consumers fulfills the commitment to reduce residential rates by $2/month.
    - Proposal would lead to savings of the $120M in GGRA proceeds previously allocated to residential consumers, and help offset the fiscal impact of the 8% rebate to the Regulated Price Plan consumers.
- To provide price mitigation to commercial and industrial electricity consumers, ENERGY is proposing to direct an additional $60M of cap and trade auction proceeds to industrial and commercial consumers not in the RPP to mitigate impacts.
- The current proposal would require an estimated $60 million less per year, or $0.24 billion less over the first compliance period.

## III. KEY CONSIDERATIONS

- This request on an 8% rebate does not align with the 2016 Budget fiscal plan and there are no proposed offsets.
- 
- Due to the nature of the ICI Global Adjustment mechanism and cost recovery of the RRRP, the rate base proposal (#2 and #3), while benefiting the targeted recipients, would **come at a cost to all other electricity rate payers in Ontario**.
- ~~This request does not align with the 2016 Budget fiscal plan and there are no proposed offsets.~~
- Other price mitigation measures introduced following the implementation of the HST, as well as the end of OCEB, would continue.
    - Both the energy portion of the Ontario Energy and Property Tax Credit (OEPTC) and NOEC were introduced/ enhanced following the introduction of the HST and have a significant annual fiscal cost (totalling about $500 million annually).
    - The DRC on residential consumers was ended early, as of January 1, 2016 (about a $340 million impact in 2016-17).
    - OESP is a low-income targeted program funded by electricity consumers through the electricity rate base.

- **8% Rebate to Regulated Price Plan**
- The 8% pre-tax rebate would provide a typical residential consumer about an $11 per month benefit on average (about $10, after the impact of RRRP and ICI expansion), exceeding the Budget 2016 $2 per month on average cap and trade commitment.

- This 8% pre-tax rebate is similar to the previous Ontario Clean Energy Benefit (See Appendix for background) which provided a 10% post-tax rebate.
    - The OCEB legislation was set out with an end date, and was subsequently modified to be capped at 3,000 kWh per month for all electricity customers after 8 months of the program.
    - This proposal does not specify any consumption caps nor an end date.
- Due to the lack of a cap, compared to OCEB, this proposal is more generous to the high volume RPP users.
    - OCEB rebate was applicable for up to 36,000 kWh annually (12 months times 3,000 kWh cap per month) while this proposal would be **more generous for those consuming more than 50,850 kWh** annually.
    - Furthermore, highest volume users in this proposal would receive **up to 392% more** than under the OCEB program.
- Unclear why any proposals for a cap would be any more complex or onerous to LDCs than prior OCEB cap (instituted beginning September 2012 to termination of OCEB program in December 2015). However, cap may affect some types of consumers more than others, such as small businesses, condo dwellers in separately-metered units, and residential consumers heating with electricity.

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**Commented [SK3]:** 36000*0.113/0.08 = 50,850

36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate
0.08 – pre-tax effective rebate (8%)

**Commented [SK24]:** 36000 – max OCEB eligible consumption
0.113 – pre-tax effective OCEB rebate

36000*0.113 = 4068 [OCEB effective rebated consumption]

Max under proposal: 250,000
pre-tax effective rebate: 0.08
Proposal's effective rebated consumption: 250,000*0.08 = 20,000

(20,000-4068)/4068 = **3.9164**

- ~~Blanket r~~Reduction in electricity prices for all users irrespective of consumption amounts hamper efforts to conserve electricity, and mutes TOU price signals.
- [Businesses that fall under the Regulated Price Plan pay little to no HST due to the Input Tax Credit. The 8% reduction can be deemed a windfall for these users.]

**Expanding ICI Eligibility to customers above 1MW in all sectors**

- Not all users with demand above 1MW will be in a position to take full advantage of the ICI expansion (eg. inability to load shift during peaks).
- Consumers in the commercial sector currently do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
  - Expansion of the ICI can give commercial consumers who are able to shift demand during peak hours, the opportunity to opt-in and benefit.

**Updating Rural or Remote Rate Protection**

- According to ENERGY, the RRRP is a $175M program with the majority of program funding ($125.5M) to Hydro One's lowest-density 'R2' customers
- ~~Unclear why customers on RRRP who are not Hydro One's R2 customers are not also targeted for this benefit.~~

**Redirect Cap and Trade Proceeds Recycling**

- Deck implies $60M in savings ~~from 8% Rebate for the RPP consumers.~~compared to earlier climate change electricity price mitigation recycling plan.
  - ~~Unclear, how the redirected amount $60M ($120M-$60M) will be allocated to commercial and industrial users.~~
  - A fiscal offset to the initiative would materialize only if the $60M is diverted to in-plan initiatives.

## IV. Cabinet Committee Discussion Summary

n/a

**Commented [SK5]:** Will need to verify

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**Commented [JK6]:** Which sectors? There was a deck recently that showed the composition of GA in the bills paid by sectors. I believe it was one of the price mitigation decks.

**Commented [SK27R6]:** This is a general statement.

Slide 32 in the 20160902_330pm deck.

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## V. Financial Summary

| $ Millions | 2016-17 | 2017-18 | 2018-19 |
|---|---|---|---|
| Initiative cost requested | 261 | 1,006 | 1,004 |
| Requested program base | 261 | 1,006 | 1,004 |
| Total fiscal impact (draw from c-funds) | 261 | 1,006 | 1,004 |

## VI. Performance Measures

[To estimate the impact of the program, the savings provided to the various consumers, and any potential for adjustments to the program, information should be provided from LDCs on consumption profiles and rebate amounts, particularly those affected by the 8% rebate on Regulated Price Plan Consumers.]

| | |
|---|---|
| **Name of analyst:** | Shajee Kathirgamanathan (416-325-1402) |
| **Date:** | September 6, 2016 |
| **Branch / Division:** | Electricity Finance Branch / Corporate and Electricity Finance Division |

## APPENDIX A: PROPOSED POLICY MINUTE

[WORK IN PROGRESS, WAITING ON ENERGY'S FINAL SUBMISSION]

CABINET AGREED THAT:

1. THE MINISTRY OF ENERGY (ENERGY), WITH SUPPORT FROM THE MINISTRY OF FINANCE (MOF), SHALL PREPARE LEGISLATION THAT WOULD PROVIDE AN EIGHT PERCENT (8%) REBATE ON THE PRE-TAX COST OF ELECTRICITY FOR THE FOLLOWING CLASSES OF CONSUMERS:
   A. ALL CONSUMERS ELIGIBLE TO BE BILLED UNDER THE ONTARIO ENERGY BOARD'S REGULATED PRICE PLAN; AND
   B. ANY OTHER CONSUMERS WHO WERE ELIGIBLE FOR FINANCIAL ASSISTANCE UNDER THE *ONTARIO CLEAN ENERGY BENEFIT ACT, 2010* (OCEBA) DURING THE PERIOD THAT PROGRAM WAS IN PLACE.

2. THE LEGISLATION SHALL BE GENERALLY MODELLED UPON THE OCEBA, AND WOULD INCLUDE THE FOLLOWING ELEMENTS:
   A. THE REBATE WOULD BE AVAILABLE STARTING JANUARY 1, 2017 AND BEFORE SUCH DATE AS MAY BE PRESCRIBED;
   B. THE REBATE WOULD NOT BE SUBJECT TO A CAP UNLESS A CAP IS PRESCRIBED;
   C. THE LEGISLATION WOULD SPECIFY THE TYPES OF COSTS TO WHICH THE REBATE WOULD OR WOULD NOT BE APPLIED, WITH AUTHORITY TO MAKE CHANGES BY REGULATION;
   D. THE LEGISLATION WOULD ADDRESS INVOICING REQUIREMENTS, INCLUDING AUTHORITY TO PRESCRIBE HOW THE REBATE IS TO APPEAR ON CONSUMER ELECTRICITY BILLS;
   E. THE LEGISLATION WOULD INCLUDE AUTHORITY TO PRESCRIBE THE WAY IN WHICH THE REBATE IS TO BE FLOWED THROUGH TO CONSUMERS, AND THE WAY IN WHICH ELECTRICITY VENDORS PROVIDING THE REBATE ARE TO BE REIMBURSED;
   F. THE LEGISLATION WOULD INCLUDE RECORD-KEEPING REQUIREMENTS FOR ELECTRICITY VENDORS AND ANY OTHER PRESCRIBED PERSONS; AND
   G. THE LEGISLATION WOULD INCLUDE INSPECTION POWERS FOR INSPECTORS APPOINTED BY THE MINISTER OF FINANCE, INCLUDING POWERS RELATED TO RECOVERY OF OVERPAYMENTS.
3. ENERGY AMEND O. REG. 429/04 (ADJUSTMENTS UNDER SECTION 25.33 OF THE ACT) MADE UNDER THE ELECTRICITY ACT, 1998 TO EXPAND ELIGIBILITY FOR CLASS A CONSUMERS AND CLASS A MARKET PARTICIPANTS UNDER THE INDUSTRIAL CONSERVATION INITIATIVE (ICI) TO ALL ELECTRICITY CONSUMERS AND MARKET PARTICIPANTS WITH A PEAK DEMAND ABOVE AN AVERAGE OF ONE MEGAWATT (1MW) WITH NO SECTORAL RESTRICTIONS ON PARTICIPATION.
4. ENERGY AMEND O. REG 442/01 (RURAL OR REMOTE ELECTRICITY RATE PROTECTION) MADE UNDER THE ONTARIO ENERGY BOARD ACT, 1998 TO INCREASE THE TOTAL AMOUNT OF RATE PROTECTION AVAILABLE TO LOW DENSITY HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE RATE PROTECTION PROGRAM BY $110 MILLION, EFFECTIVE JANUARY 1, 2017.
5. ENERGY CONSIDER AND, IF APPROPRIATE, UTILIZE A MECHANISM TO PERIODICALLY ADJUST THE TOTAL ANNUAL AMOUNT OF RATE PROTECTION AVAILABLE TO HYDRO ONE INC. CONSUMERS UNDER THE RURAL OR REMOTE ELECTRICITY RATE PROTECTION REGULATION / PROGRAM, EFFECTIVE JANUARY 1, 2018.

6. ENERGY TO RECYCLE UP TO AN AVERAGE OF $270 MILLION OF CAP AND TRADE AUCTION PROCEEDS FROM THE GREENHOUSE GAS REDUCTION ACCOUNT PER YEAR OVER THE FIRST COMPLIANCE PERIOD (2017-2020) TO COMMERCIAL AND INDUSTRIAL ELECTRICITY CONSUMERS.
7. ENERGY AND MOF TO WORK WITH CABINET OFFICE (CO) AND PREMIER'S OFFICE (PO) ON COMMUNICATIONS PLAN.

## APPENDIX B: BACKGROUND – ONTARIO CLEAN ENERGY BENEFIT

- OCEB was in effect from 2011 to 2015, and provided residential, farm, small business and other small users with a benefit equal to 10 per cent of the total cost of electricity on their bills, including tax.
    - Effective September 2012 electricity consumption eligible for the 10 per cent benefit was capped at the first 3,000 kWh of electricity consumed per month.
- OCEB helped Ontario families through the transition to a more reliable and cleaner electricity system, with the monthly cap balancing the fiscal implications of providing electricity relief.
- OCEB costs totalled $1,006 million in 2013-14 and $1,078 million in 2014-15, with a projected cost for 2015-16 of $860 million (for the 9 months remaining in the program).

| **Eligible Consumers** | |
|---|---|
| **Categories Listed in Legislation (coincides with categories eligible for RPP)** | |
| **Residential** | • a dwelling<br>• a property within the meaning of the Condominium Act, 1998<br>• a residential complex, within the meaning of the Residential Tenancies Act, 2006<br>• a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the Co-operative Corporations Act |
| **Farms** | • carries on a business that is a farming business for the purposes of the Farm Registration and Farm Organizations Funding Act, 1993, and<br>• holds a valid registration number assigned under that Act or the consumer's obligation to file a farming business registration form was waived pursuant to an order made under subsection 22 (6) of that Act |
| **Demand for electricity of 50 kW or less, or consumes not more than 250,000 kWh annually** | Would include small business, smaller broader- public-sector entities, and other small users. |
| **Special Cases (not eligible for RPP, but eligible for OCEB)** | |
| **Consumers On Retail Contracts** | Includes consumers with existing retail contracts and those who sign them during the duration of the program. |
| **Cornwall Electric and Hydro One Remote Communities Inc.** | Included since they are licensed distributors. |
| **Other Consumers Prescribed by Regulation** | 10 First Nations remote unlicensed distributors have been added by regulation. |
| **Exclusions** | |
| **Generators** | Generation station service and the microFIT distribution service charge are excluded in legislation. |

**From:** Ronald Kwan
**To:** John Kim
**Cc:** Tomasz Bugajski; Shajee Kathirgamanathan
**Subject:** Re: Cabinet note
**Date:** Friday, September 09, 2016 10:09:29 AM

---

Hi,

Let me review that. I think their estimates may have been based on OCEB anyway, so may need to rephrase.

Ron

On Sep 9, 2016, at 9:41 AM, John Kim <John.Kim@ofina.on.ca> wrote:

> Thanks Ron. Pls. see attached addressing your comments.
>
> We have put in a bullet in the Consideration section about the 64-68 TWh in OCEB range and that it could represent 10-17% higher program cost. Hope that was okay with you.
>
> John.
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Friday, September 09, 2016 8:36 AM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
> **Subject:** RE: Cabinet note
>
> Hi John,
>
> A few quick comments on the note and Minute.
>
> Ron
>
> ---
>
> **From:** John Kim
> **Sent:** September-08-16 9:09 PM
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
> **Subject:** RE: Cabinet note
>
> Hi Ron,
>
> Pls. see attached updated note. It's not clear if this item will stay on the agenda

tomorrow afternoon for the TBS DM briefing but we would like to get it done and send to TBS for the record.

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** Wednesday, September 07, 2016 2:51 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Cabinet note

Hi John,

I did not have time for a full review. I made a few quick suggestions. Is this briefing still happening?

Ron

---

**From:** John Kim
**Sent:** September 7, 2016 7:00 AM
**To:** Ronald Kwan
**Cc:** Tomasz Bugajski; Shajee Kathirgamanathan
**Subject:** Cabinet note

Hi Ron,

Pls. see attached draft note we intend to use for Associate briefing today at 4pm.

Thanks,

John.

Y. John Kim
Director(A), Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

<Cabinet Note - Electricity Price Mitigation v9.docx>

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Ronald Kwan; Francisco Chinchon; Emily Kerr |
| **Cc:** | Gavin He |
| **Subject:** | Re: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx |
| **Date:** | Monday, January 16, 2017 6:21:38 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v11 (CEFD)_Blackline.docx |

Good morning. Just having a look now and did a file compare for everyone's convenience.

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** January 16, 2017 6:16 AM
**To:** Francisco Chinchon; John Kim; Emily Kerr
**Cc:** Gavin He
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi,

I made a couple more changes to the table at the end of the BN.

Ron

---

**From:** Ronald Kwan
**Sent:** January-16-17 6:06 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi All,

I made some additional changes. Revised version attached. Please review ASAP in the morning.

Thanks,
Ron

---

**From:** Emily Kerr
**Sent:** January-15-17 9:35 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Sorry, one more change in the attached.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 8:42 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi all, I added on the TT per Ron's comment.

Francisco

On Jan 15, 2017, at 6:56 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi,
>
> Just started to review. Looks good.
>
> On the table, I marked out some requests – split OESP and RRRP into separate rows, and add a 17-18 fiscal cost / exposure column (including commenting more on and adding in the fiscal risk of the OPG efficiencies related proposal). On the Trillium Trust, it might be fair to point out that Energy raises the prospect of investing in projects that would not otherwise be viewed by the OEB as projects that meet a system benefits test – so not really a rate saving if the projects would not have been done on the rate base. Really a tax-based subsidisation for other policy reasons.
>
> I'll review more later this evening.
>
> Thanks,
> Ron
>
> ---
>
> **From:** Gavin He
> **Sent:** January-15-17 4:40 PM
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
> **Subject:** RE: Rate Mitigation
>
> Hi Ron,
>
> Please find attached updated notes and Energy's deck with proposed edits and comments from SIFB, EFB, and SPFB.
>
> The files are also saved under below folder:
> S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Energy_Jan16

Thanks,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>

> Serge
>
>
> Sent from my iPad

<Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup2.docx>

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

**CONTEXT**

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

**COMMENTS**

- A significant number of Energy's proposals involve shifting costs from the rate base to the tax base.
- While the subset of ~~costed~~ proposals costed by Energy may have a fairly limited residential rate payer impact (e.g. about $6-7/month for residential, or less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (about $2 billion in 2017-18~~), with some~~).
- Additional fiscal exposure comes from proposals not yet costed by Energy (e.g., conservation costs, with Energy consulting OPCD on accounting). Energy also presents other proposals where costs and impacts are "TBD".

- In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts (e.g., of ~~more than $2 billion annually~~about $5.5 Bn in calendar 2017) during the period that GA costs are deferred, depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

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- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

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| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

~~Energy's Broad Policy Themes / Rationales~~

## ENERGY'S BROAD POLICY THEMES / RATIONALES

A key theme / rationale cited by Energy is to no longer use the rate-base to pay for "social programs" by shifting the cost of OESP, RRRP and a proposed First Nation Rate to the tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by ≈ $0.55 in 2017, increasing to ≈ $1.45 in 2022.**<br><br>**Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.** | • Would provide on-bill benefits.<br>~~• Funding programs through tax base estimated to reduce average monthly residential bill by approximately $0.55 in 2017, increasing to approximately $1.45 in 2022.~~<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. | • 2017-18: $162 M<br>• Increasing to $322 M in 2020-21.<br><br>• 2017-18: $666 M<br>• Increasing to $719 M in 2020-21 |

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| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| • Estimated to reduce average monthly residential bill by ≈ $1.55 in 2017, increasing to ≈ $1.75 in 2022. | | |
| ~~Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.~~ | • ~~Funding programs through tax base estimated to reduce average monthly residential bill by approximately $1.55 in 2017, increasing to approximately $1.75 in 2022.~~<br>• ~~Could contemplate phase-in to manage fiscal impact.~~ | • ~~2017-18: $666 M~~<br>• ~~Increasing to $719 M in 2020-21~~ |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • ~~It~~Ministry of Energy is ~~unclear~~ consulting OPCD on whether consevation costs ~~could~~can be amortized according to accounting standards. ~~If this option was pursued without establishing Provincial Controller agreement on~~ Without the ability under accounting standards to amortise the cost, there ~~could~~would be a fiscal ~~risk~~impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.<br>o Conservation programs ~~do~~ provide ~~an~~ electricity system benefits~~, but fiscal~~. Fiscal-fundingwould result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the ~~dicral~~fiscal plan | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M~~.~~.] [TBC] |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, ~~unless~~even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and ~~impact~~affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that | • Up to $390 million annually from 2017-18 to 2020-21. |

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| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | they might have been able to add to their ratebase and earn a return<br>• ~~In the case of projects located in First Nation territories it could~~Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects ~~(~~[TBC with OPCD~~).~~].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a fiscal windfall. It was net fiscally neutral~~,~~ -- while it represented revenue to OEFC ~~and~~, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | • $260 million annually from 2017-18 to 2020-21. |
| **~~Empower Energy Agencies~~OPG to Increase Cost Effectiveness and Improve Efficiency** | ~~• IESO to modernize the electricity market through market renewal~~<br>~~• OEB to identify opportunities for future LDC efficiencies/rates~~<br>~~• OEB to work with OPG operational efficiencies and pass on to ratepayers~~Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding ~~th~~the Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • ~~End~~Current legislated March 31, 2018 end of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end ~~April 1, 2018~~.<br>~~• End of the DRC had previously been linked to retirement of residual stranded debt~~<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |

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| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant annual fiscal impact ~~due to creation of large liability item~~and increase in net debt (estimated by Energy to be up to ~~$66Bn) either directly~~66 Bn, depending on ~~the Province's books or upon consolidation~~Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • ~~Fiscal~~Annual fiscal impact not yet determined. |

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~~**Detail on Proposals**~~

**DETAIL ON ENERGY PROPOSALS**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by

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the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller ~~(OPC~~Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs ~~was~~is not permitted, a fiscal impact ~~could~~would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects~~.~~.

~~o~~ ~~in~~In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.

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  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that ~~projects that the OEB does not currently consider eligible (as system benefits probably don't exceed investment costs) could be considered. This would mean moving forward projects for other policy objectives rather than rate mitigation.~~investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset by a reduction in ~~ESDI resulting~~the Province's revenue from ~~reduced~~ net income ~~(expense)~~ of Hydro One~~.~~ (dollar-for-dollar lower due to the departure tax expense).
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. ~~[As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]~~
- Having OEFC help implement this measure may require introducing changes to OEFC's objects~~ as is legal mandate is to help reduce and pay down stranded debt~~.
- This would be a one-time measure, potentially spread out over a few years, ~~and fiscal impact,~~ as the departure tax ~~amount~~ was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.

  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
  - Moving to “technology-agnostic” procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
  - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
  - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister’s Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG’s current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could ~~impact~~affect its net income and payments-in-lieu of taxes to OEFC, and the Province’s fiscal plan~~.~~ (Energy estimates it at $240 million per year).

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to ~~or more than~~ $2 billion annually (under options 2&3), or more (e.g., about $5.5 bn in 2017 under option 4), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact~~, such as having to book a large deficit amount.~~ [TBC].

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

**SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION**

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| Conservation Funding | | TBD | TBD | TBD | TBD |
| [Trillium Trust] | 100 | 390 | 390 | 390 | 390 |
| Departure Tax | 260 | 260 | 260 | 260 | 260 |
| DRC removal for Class B | 110 | 450 | | | |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total:[3] | ~~470~~530 | ~~1,927~~2,167 | 1,~~560~~800 | 1,~~362~~602 | 1,~~419~~659 |
| | | | | | |
| Amortise and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total:[3] | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| ~~TOTAL~~[3]TOTAL (Excl. GA)[3] | 1,695 | 3,933 | 3,275 | 3,188 | 3,245 |

1. Based on estimated / forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**January ~~15, 2016~~16, 2017**

**From:** John Kim
**To:** Gavin He
**Subject:** Re: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx
**Date:** Sunday, January 15, 2017 10:41:50 PM

---

Ok good. Was asleep

---

**From:** Gavin He
**Sent:** January 15, 2017 9:30:26 PM
**To:** John Kim
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi John,

I was updating the table but it seems Emily already got this updated. I just reviewed her edits and they look fine to me.

Regards,
Gavin He

---

**From:** Emily Kerr
**Sent:** Sunday, January 15, 2017 9:27 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi,

I separated OESP and RRRP in the table and added a fiscal impact column to the table. I wasn't sure what to put for the section on empowering energy agencies to increase cost effectiveness and improve efficiency.

The current version of the note is attached.

Emily

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 8:42 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi all, I added on the TT per Ron's comment.

Francisco

On Jan 15, 2017, at 6:56 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

Hi,

Just started to review. Looks good.

On the table, I marked out some requests – split OESP and RRRP into separate rows, and add a 17-18 fiscal cost / exposure column (including commenting more on and adding in the fiscal risk of the OPG efficiencies related proposal). On the Trillium Trust, it might be fair to point out that Energy raises the prospect of investing in projects that would not otherwise be viewed by the OEB as projects that meet a system benefits test – so not really a rate saving if the projects would not have been done on the rate base. Really a tax-based subsidisation for other policy reasons.

I'll review more later this evening.

Thanks,
Ron

---

**From:** Gavin He
**Sent:** January-15-17 4:40 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi Ron,

Please find attached updated notes and Energy's deck with proposed edits and comments from SIFB, EFB, and SPFB.

The files are also saved under below folder:
S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Energy_Jan16

Thanks,
Gavin He

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Saturday, January 14, 2017 8:16 AM
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fw: Rate Mitigation
>
>
> Good morning,
> Attached are materials for Monday's rate mitigation meeting.
> Keley
>
> Original Message
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
> Sent: Saturday, January 14, 2017 7:49 AM
> To: Orsini, Steve (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Rate Mitigation
>
> Hi Steve,
>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
> Serge
>
>
> Sent from my iPad

<Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup2.docx>

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Ronald Kwan; Francisco Chinchon; Emily Kerr |
| **Cc:** | Gavin He |
| **Subject:** | Re: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx |
| **Date:** | Monday, January 16, 2017 6:51:56 AM |
| **Attachments:** | Comments on Electricity Sector Transformation Proposals v11 (CEFD)_Markup.docx<br>Book1.xlsx |

Went through the tables and double checked the numbers, also based on updated. (Sorry about the messy check file but attached, as an fyi.)

Thanks,

John.

---

**From:** John Kim
**Sent:** January 16, 2017 6:21 AM
**To:** Ronald Kwan; Francisco Chinchon; Emily Kerr
**Cc:** Gavin He
**Subject:** Re: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Good morning. Just having a look now and did a file compare for everyone's convenience.

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** January 16, 2017 6:16 AM
**To:** Francisco Chinchon; John Kim; Emily Kerr
**Cc:** Gavin He
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi,

I made a couple more changes to the table at the end of the BN.

Ron

---

**From:** Ronald Kwan
**Sent:** January-16-17 6:06 AM

**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Hi All,

I made some additional changes. Revised version attached. Please review ASAP in the morning.

Thanks,
Ron

---

**From:** Emily Kerr
**Sent:** January-15-17 9:35 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup3.docx

Sorry, one more change in the attached.

---

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**Subject:** RE: Rate Mitigation

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To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
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<Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup2.docx>

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear, LRP II), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC), which is providing a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017, for eligible small businesses, farms and residential consumers, and has expanded the Rural or Remote Electricity Rate Protection program, saving eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

- A significant number of Energy's proposals involve shifting costs from the rate base to the tax base.
- While the subset of proposals costed by Energy may have a fairly limited residential rate payer impact (e.g. about $6-7/month for residential, or less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost (about $2 billion in 2017-18).
- Additional fiscal exposure comes from proposals not yet costed by Energy (e.g., conservation costs, with Energy consulting OPCD on accounting). Energy also presents other proposals where costs and impacts are "TBD".
- In addition to the fiscal costs above, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts (e.g., of about $5.5 Bn in calendar 2017) during the period that GA costs are deferred, depending on the scenario. ENERGY has approached the Ontario Provincial Controller Division (OPCD) for accounting advice.

- Over the past five years, the existing fiscally-funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,~~005~~035 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

## ENERGY'S BROAD POLICY THEMES / RATIONALES

A key theme / rationale cited by Energy is to no longer use the rate-base to pay for "social programs" by shifting the cost of OESP, RRRP and a proposed First Nation Rate to the tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **Fund cost-shifting through Tax base.**<br><br>**Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility.**<br>• **Estimated to reduce average monthly residential bill by ≈ $0.55 in 2017, increasing to ≈ $1.45 in 2022.** | • Would provide on-bill benefits.<br><br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. | • 2017-18: $162 M<br><br>• Increasing to $322 M in 2020-21. |
| **Provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.**<br>• **Estimated to reduce average monthly residential bill by ≈** | | • 2017-18: $666 M<br><br>• Increasing to $719 M in 2020-21 |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| **$1.55 in 2017, increasing to ≈ $1.75 in 2022.** | | |
| | | |
| **Amortize conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account.** | • Ministry of Energy is consulting OPCD on whether consevation costs can be amortized according to accounting standards. Without the ability under accounting standards to amortise the cost, there would be a fiscal impact. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base.<br>o Conservation programs provide electricity system benefits. Fiscal-fundingwould result in a cross-subsidisation from tax-base<br>o Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the fiscal plan | • [If amortization is not permitted, 2017-18 fiscal impact of $450 M.] [TBC] |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term rate impact, even if TT funding displaces near-term, non-incremental projects coming onto service – amortised annual costs are small<br>• May have no rate mitigation impact in some cases if, as indicated by Energy, investments are made in incremental projects that would not have been built due to cost barriers under the OEB's beneficiaries pay principle<br>• Could lower utility value (share price) and affect fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• Could have an upfront fiscal impact if Province does not own the asset and is not able to amortize those projects [TBC with OPCD].<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. | • Up to $390 million annually from 2017-18 to 2020-21. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax". | • $260 million annually from |

| Energy Theme / Rationale | Key Staff Comments | Estimated Fiscal Cost |
|---|---|---|
| | • The departure tax was not a fiscal windfall. It was net fiscally neutral -- while it represented revenue to OEFC, it was an expense to Hydro One and to the Province on consolidation into Public Accounts.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. | 2017-18 to 2020-21. |
| **OPG to Increase Cost Effectiveness and Improve Efficiency** | • Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh), with OPG regulated rates set on this basis.<br>• Dollar-for-dollar fiscal exposure if OPG is not able to meet the targeted lower cost targets. | • $240 million per year. |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding the Global Adjustment (GA) | • No expected fiscal impact. |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • Current legislated March 31, 2018 end of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end.<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported | • $450 M in 2017-18 |
| **Consider options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA)** | • Incurring debt to pay the generators their contracted or regulated payments<br>• Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant annual fiscal impact and increase in net debt (estimated by Energy to be up to $66 Bn, depending on Energy's scenario) – Energy to consult with OPCD on accounting treatment<br>• Likely requires legislation to implement.<br>• Furthermore, likely entails significant legal / Constitutional Law risks | • Risk of fiscal impact of more than $2 billion in 2017-18 and ongoing during period GA costs are derferred. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit | • Annual fiscal impact not yet determined. |

**DETAIL ON ENERGY PROPOSALS**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022):

Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), and Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs.
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

Amortize Conservation Program Costs:

Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller Division (OPCD) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization accounting of conservation costs is not permitted, a fiscal impact would result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
    - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

<u>Expanding the scope of the Trillium Trust to invest in energy infrastructure:</u>

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
    - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
    - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects.
- In effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.
    - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
    - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
    - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.
- Energy also suggests that investments could be made into projects that are currently not preceding due to cost barriers under the OEB's beneficiary pays principle.

<u>Departure Tax</u>:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This would have a dollar-for-dolar fiscal impact.
- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province on consolidation, as the income (revenue) to the OEFC was fully offset

by a reduction in the Province's revenue from net income of Hydro One (dollar-for-dollar lower due to the departure tax expense).

- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase.
- Having OEFC help implement this measure may require introducing changes to OEFC's objects.
- This would be a one-time measure, potentially spread out over a few years, as the departure tax was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
    - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
    - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."
    - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
    - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
    - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
    - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
    - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
    - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.

- If OPG is unable to meet more aggressive cost targets, this could affect its net income and payments-in-lieu of taxes to OEFC, and the Province's fiscal plan (Energy estimates it at $240 million per year).

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments. This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts, e.g., of up to $2 billion annually (under options 2&3), or more (e.g., about $5.5 bn in 2017 under option 4), as estimated by Energy, during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
  - Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years
- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact [TBC].

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

## SUMMARY: TAXPAYER FUNDED ELECTRICITY PRICE MITIGATION

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | TBD | TBD | TBD | TBD |
| Conservation Funding | | TBD | TBD | TBD | TBD |
| [Trillium Trust] | 100 | 390 | 390 | 390 | 390 |
| Departure Tax | 260 | 260 | 260 | 260 | 260 |
| DRC removal for Class B | 110 | 450 | | | |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total:[3] | **530** | **2,1687** | **1,800** | **1,869602** | **1,931659** |
| | | | | | |
| Amortise and Debt-Finance Global Adjustment Costs | TBD | TBD | TBD | TBD | TBD |
| | | | | | |
| EXISTING TAX-BASE FUNDED PROGRAMS | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total: | **1,225** | **2,0305** | **1,715** | **1,826** | **1,826** |
| TOTAL (Excl. GA)[3] | 1,695 | 3,9334,203 | 3,2753,515 | 3,1883,695 | 3,2453,757 |

1. Based on estimated / forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**January 16, 2017**

| | |
|---|---|
| 43.0275 | |
| 83.54 | 0.515053 |
| 149.52 | |
| 0.558721 | |

Where the

| | | | | |
|---|---|---|---|---|
| | 666 | 684 | 433 |
| | 162 | 226 | 279 |
| | TBD | TBD | TBD |
| 100 | 390 | 390 | 390 |
| 260 | 260 | 260 | 260 |
| 110 | 450 | | |
| TBD | TBD | TBD | TBD |
| 470 | 1928 | 1560 | 1362 |
| **Existing Program Total:[3]** | **1,225** | **2,005** | **1,715** | **1,826** |
| 1695 | 3933 | 3275 | 3188 |

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ENERGY'S Recommended Initiatives* | | | | | |
| RRRP | | 666 | 684 | 700 | 719 |
| OESP – Enhance Benefit | | 162 | 226 | 279 | 322 |
| OESP – Expand Eligibility | | | | | |
| Conservation Funding | | | | | |
| [Trillium Trust] | 100 | 390 | 390 | 390 | 390 |
| Departure Tax | 260 | 260 | 260 | 260 | 260 |
| DRC removal for Class B | 110 | 450 | | | |
| Risk Exposure: OPG Operational Efficiencies | 60 | 240 | 240 | 240 | 240 |
| Tax Relief for Solar and Wind | | | | | |
| Check | 530 | 2168 | 1800 | 1869 | 1931 |
| **Proposed Program Total:[3]** | **530** | **2,167** | **1,800** | **1,602** | **1,659** |
| | | | | | |
| Amortise and Debt-Finance Global Adjustment Costs | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **EXISTING TAX-BASE FUNDED PROGRAMS** | | | | | |
| **OREC** | 300 | 1,100 | 1,100 | 1,200 | 1,200 |
| **Ending DRC** | 330 | 330 | -- | -- | -- |
| **NIERP** | 120 | 120 | 120 | 120 | 120 |
| **NOEC** | 25 | 25 | 25 | 25 | 25 |
| **OEPTC**[2] | 450 | 460 | 470 | 481 | 481 |
| **Check** | 1225 | 2035 | 1715 | 1826 | 1826 |
| **Existing Program Total:** | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| **TOTAL (Excl. GA)**[3] | **1,695** | **3,933** | **3,275** | **3,188** | **3,245** |

Delta

problem lied earlier.

| |
|---|
| 447 |
| 322 |
| TBD |
| 390 |
| 260 |
| |
| TBD |

1419

**1,826**

3245

| | 2019-20 | 2020-21 |
|---|---|---|
| Delta | 267 | 272 |

| | | | | | |
|---|---|---|---|---|---|
| | 2017-18 | | | | |
| Delta | 30 | | | | |
| 1755 | 4203 | 3515 | 3695 | 3757 | |
| 60 | 270 | 240 | 507 | 512 | |

**From:** Ronald Kwan
**To:** John Kim
**Cc:** Emily Kerr; Shajee Kathirgamanathan; Tomasz Bugajski
**Subject:** Re: Cost Shifts in the Electricity Sector
**Date:** Sunday, November 20, 2016 11:16:16 AM

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Thanks John.

Ron

> On Nov 20, 2016, at 10:30 AM, John Kim <John.Kim@ofina.on.ca> wrote:
>
> Hi Ron,
>
> Sure, will provide you a draft tomorrow.
>
> Thanks,
>
> John.
>
> -----Original Message-----
> From: Ronald Kwan
> Sent: Sunday, November 20, 2016 10:27 AM
> To: John Kim <John.Kim@ofina.on.ca>
> Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> Subject: Re: Cost Shifts in the Electricity Sector
>
> Hi,
>
> As a first product, is a quick draft of a table on the cost of current rate migration fiscal costs doable for Monday?
>
> Ron
>
>> On Nov 19, 2016, at 9:08 PM, John Kim <John.Kim@ofina.on.ca> wrote:
>>
>> Hi Ron,
>>
>> Sorry, just saw the FYI and didn't realize there was a question on the approximate timeline.
>>
>> We should be able to expedite things if needed but I'd estimate middle of week would be certainly within the normal turnaround.
>>
>> Let us know if you have a turnaround in mind.
>>
>> Thanks,
>>
>> John.
>>
>> -----Original Message-----
>> From: Ronald Kwan
>> Sent: Friday, November 18, 2016 6:11 PM
>> To: John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
>> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>

>> Subject: FW: Cost Shifts in the Electricity Sector
>> Importance: High
>>
>> Hi All,
>>
>> FYI.  I think we need to do our own version in order to provide better balance and a more complete picture.
>>
>> How long do you think it might take?
>>
>> Ron
>>
>> -----Original Message-----
>> From: Ronald Kwan
>> Sent: November-18-16 18:09
>> To: Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>
>> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
>> Subject: RE: Cost Shifts in the Electricity Sector
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>> Hi,
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>>
>> Ron
>>
>> -----Original Message-----
>> From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
>> Sent: November-18-16 17:48
>> To: Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
>> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
>> Subject: FW: Cost Shifts in the Electricity Sector
>>
>> FYI both.
>>
>>
>> _____
>> From: Imbrogno, Serge (ENERGY)
>> Sent: Friday, November 18, 2016 5:26:11 PM (UTC-05:00) Eastern Time (US & Canada)
>> To: Orsini, Steve (CAB)
>> Cc: Bromm, William (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF)
>> Subject: Fw: Cost Shifts in the Electricity Sector
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>> The attached shows costs shifts within the electricity sector which are the result of rate mitigation programs which benefit some consumers. It also shows the total cost of these programs. This was produced in response to a request from Ed.
>> Serge

**From:** Ronald Kwan
**To:** John Kim
**Cc:** Emily Kerr; Shajee Kathirgamanathan; Tomasz Bugajski
**Subject:** Re: Cost Shifts in the Electricity Sector
**Date:** Sunday, November 20, 2016 10:27:23 AM

---

Hi,

As a first product, is a quick draft of a table on the cost of current rate migration fiscal costs doable for Monday?

Ron

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>
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>
> Let us know if you have a turnaround in mind.
>
> Thanks,
>
> John.
>
> -----Original Message-----
> From: Ronald Kwan
> Sent: Friday, November 18, 2016 6:11 PM
> To: John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
> Cc: Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> Subject: FW: Cost Shifts in the Electricity Sector
> Importance: High
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> Serge

**From:** Ronald Kwan
**To:** John Kim
**Cc:** Shajee Kathirgamanathan; Emily Kerr; Tomasz Bugajski
**Subject:** Re: Cost Shifts in the Electricity Sector
**Date:** Tuesday, November 22, 2016 7:33:24 PM

---

Thanks John, et al. I'll take a look.

Ron

On Nov 22, 2016, at 6:54 PM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Ron,
>
> Pls. see attached with input from both branches. We have actual numbers from OEP on OEPTC. NOEC and NIER were PA figures even in the previous version.
>
> Thanks,
>
> John.
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Monday, November 21, 2016 6:26 PM
> **To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
> **Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> **Subject:** RE: Cost Shifts in the Electricity Sector
>
> Thanks.
>
> Ron
>
> ---
>
> **From:** John Kim
> **Sent:** November-21-16 18:22
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
> **Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> **Subject:** RE: Cost Shifts in the Electricity Sector
>
> Sure, we will aim for another version tomorrow.
>
> John.

**From:** Ronald Kwan
**Sent:** Monday, November 21, 2016 6:19 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Cost Shifts in the Electricity Sector

Thanks.

We should be able to get some historical year-by-year OEPTC and NOEC and NIER numbers.

DRC amount forgone I think was a little higher in the original submission. And the OREC amount in the LRC submission earlier this month is now at $1.2.

Can we do comments/markups of Energy's slides too?

Ron

---

**From:** Shajee Kathirgamanathan
**Sent:** November-21-16 18:12
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Cost Shifts in the Electricity Sector

Hi Ron,

EFB and SPFB developed some additional slides providing an overview of tax payer funded electricity price mitigation programs; fiscal impacts, overview and history/timeline.

File attached, also found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Cost Shifts\Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v5.pptx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Senior Advisor
Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
Office: 416-325-1402 | Mobile: 647-294-3359

shajee.kathirgamanathan@ofina.on.ca

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From: Ronald Kwan
Sent: Sunday, November 20, 2016 11:16 AM
To: John Kim <John.Kim@ofina.on.ca>
Cc: Emily Kerr <Emily.Kerr@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
Subject: Re: Cost Shifts in the Electricity Sector

Thanks John.

Ron

> On Nov 20, 2016, at 10:30 AM, John Kim <John.Kim@ofina.on.ca> wrote:
>
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<Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides v7_Markup.pptx>

| | |
|---|---|
| **From:** | Karim Javeri |
| **To:** | John Kim |
| **Cc:** | Emily Kerr |
| **Subject:** | Re: Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup.pptx |
| **Date:** | Friday, January 13, 2017 11:58:08 AM |
| **Attachments:** | Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup.pptx |

---

Hi John,

We had a couple of comments to add to this. Our additions are in bold.

Thanks

Karim

Ontario

MINISTRY OF
ENERGY

# Debt Financing the Global Adjustment

January 10, 2017

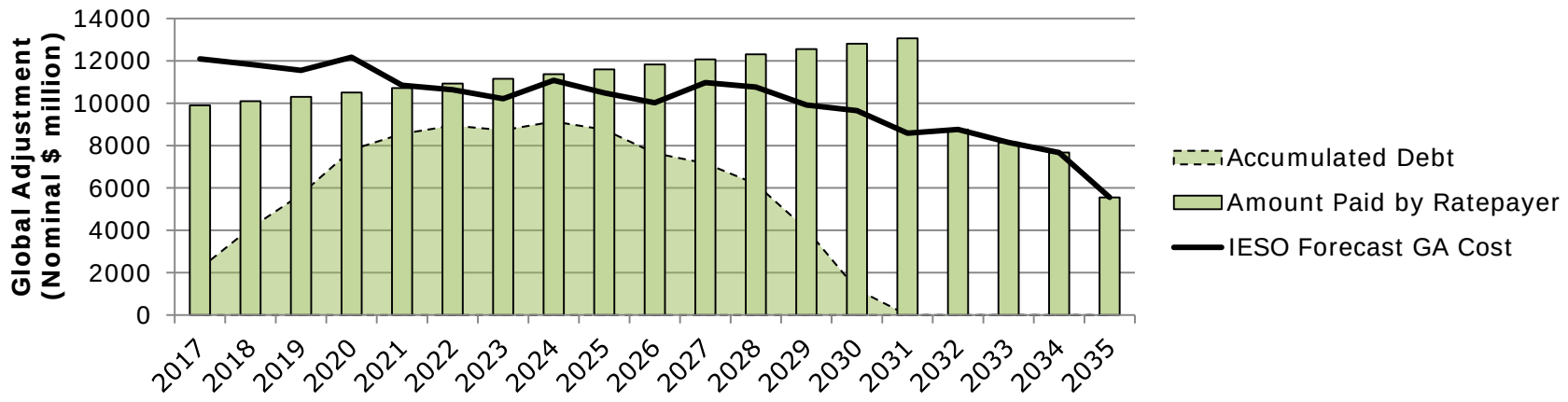
*Working Draft for Discussion Purposes Only*

# Purpose

- To analyze the system cost and ratepayer impact of partially financing the cost of the global adjustment (GA) by incurring debt to defer some of the cost.
- An indicative GA financing proposal is presented followed by a qualitative discussion of the proposal's risks.
- The remainder of the presentation quantitatively examines several different scenarios for debt financing the GA, showing:
  - The amount of debt incurred;
  - Impact on total system cost; and
  - Impact on residential bills.

# Indicative Proposal to Debt Finance the Global Adjustment

- For the purpose of discussion, the amount of GA paid by ratepayers in each year over the forecast period is set at a fixed amount until the accumulated debt has been completely paid off.
- All scenarios consider setting the 2017 amount of GA paid by ratepayers at a value lower than the true cost of GA and increasing that amount year-over-year at inflation (assumed to be 2%) until the debt has been paid off.
- In this way, GA costs will be "tilted" over time by lowering costs in the short term and increasing costs in the long term.
- In some scenarios, the amount of GA paid by ratepayers *above* the expected true cost of GA is capped so as to limit large increases in the cost of electricity in any given year.
- Analysis is based on forecasts from Independent Electricity System Operator's (IESO) Ontario Planning Outlook.




**Sample debt financing**: Ratepayers pay less than the cost of GA in early years, accumulating $9 billion of debt that is paid off in 2031 by paying more than the cost of GA in later years.

# Considerations and Risks – Ratepayer

Ratepayer:

- Incurring debt to finance the GA, while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.

- The GA financing proposal involves accruing large amounts of debt to reduce electricity rates. This debt would be highly sensitive to interest rates which could extend repayment timelines or put significant pressure on rates (see Scenario 3 for an example of such interest rate risk).

- GA and HOEP provide a natural hedge against each other. Smoothing only one component would lead to greater price volatility. For example, if HOEP is higher than expected (due to higher gas or carbon prices, for example), all-in rates will rise significantly as the natural decrease in GA would not occur given the prescribed GA rate.

- Conversely, if GA is higher than forecast (i.e., because of lower HOEP or additional out-of-market costs), the debt would increase to a higher amount, requiring additional debt service payments and/or a longer recovery period.

- Should Ontario demand be lower than forecasted, the cost of paying off the debt will be shared by a smaller pool of consumption, further increasing future costs for individual ratepayers.

# Considerations and Risks – Legal, Fiscal and Stakeholder

Legal:

- Such changes to the financing of the GA may require legislative or other amendments and will require further consultation with Legal Services Branch.

Fiscal / Accounting:

- Further analysis is required on whether such changes to the financing of the GA would affect the Province's current accounting treatment for the GA and represent a potential fiscal risk. As such, early engagement with Legal Services Branch and Treasury Board Secretariat is advised.

- The significant amount of additional Provincial borrowing needed to debt finance the GA, and associated risks (e.g., interest rates, repayment timelines), could put pressure on the Province's credit rating. Further analysis is required and would suggest early engagement with Ministry of Finance / Ontario Financing Authority.

Stakeholder:

- The significant deferral of electricity system costs over a long time-horizon and associated interest costs may draw criticism from some stakeholders as creating a new "stranded debt" of the sector. Note: the Debt Retirement Charge was removed from residential bills in 2016 and will be removed for remaining customers in 2018.

# GA Debt Financing Scenarios

1. Status Quo
   - Ratepayers continue paying the full cost of the GA in each year without incurring any debt.

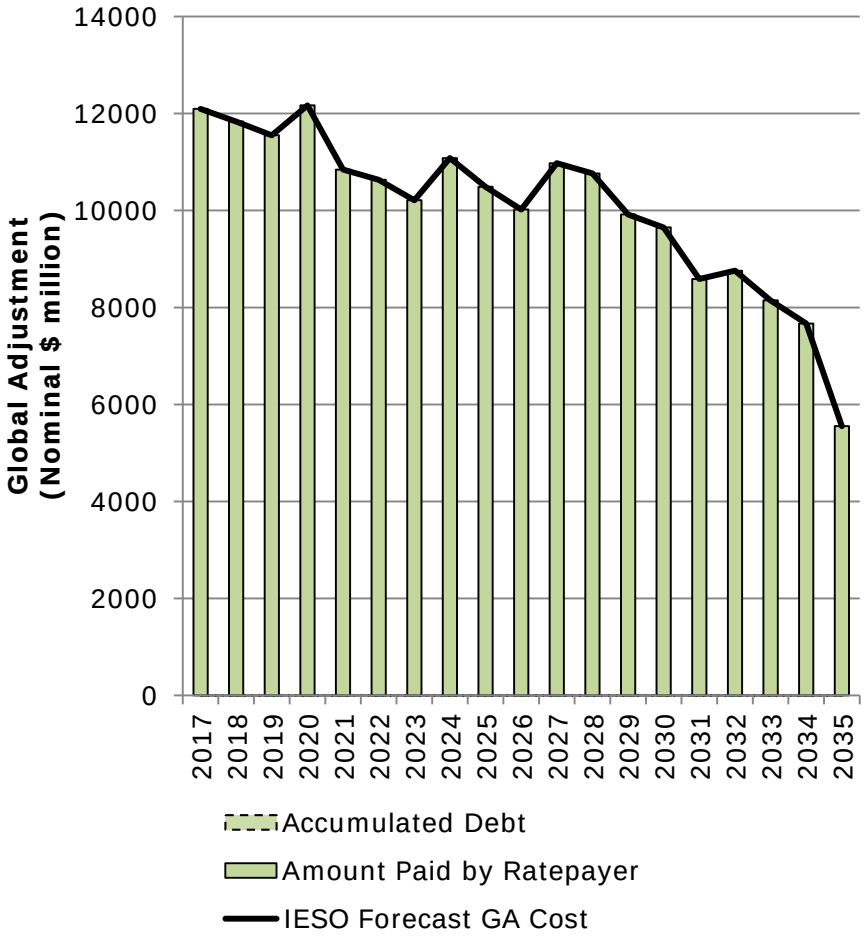
2. Maximize short-term cost reductions
   - This scenario considers the maximum amount by which ratepayer GA costs in 2017 can be reduced such that the accumulated debt is paid off over a 25-30 year financing period. This scenario assumes a 3% borrowing interest rate.

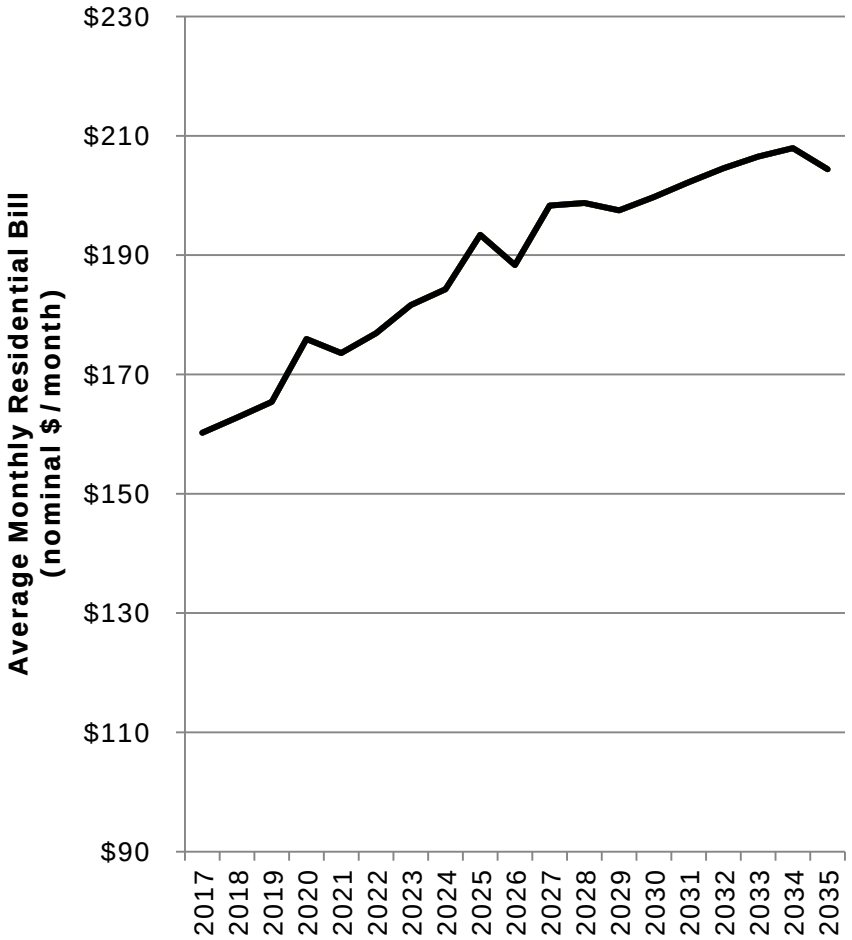
3. Interest Rate Risk
   - Using the 30-year financing case from Scenario 2, this scenario looks at the consequence of an increase of 2 percentage points in the borrowing interest rate.

4. Maximize short-term cost reductions with limits
   - The same as Scenario 2 but with GA over-payments capped at $2 billion above the true cost of GA in any given year.

# 1. Status Quo – Global and Residential Impacts

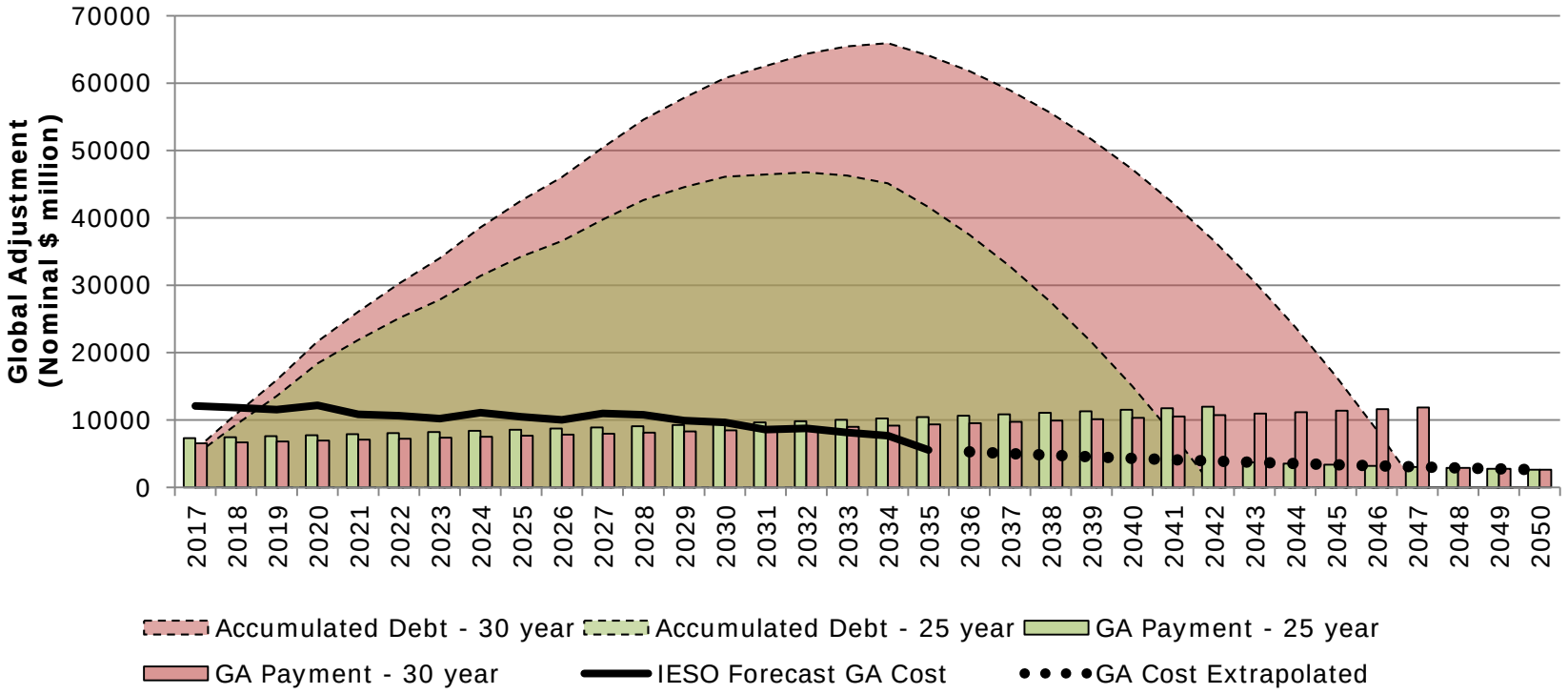
- Ratepayers continue paying the true cost of GA.



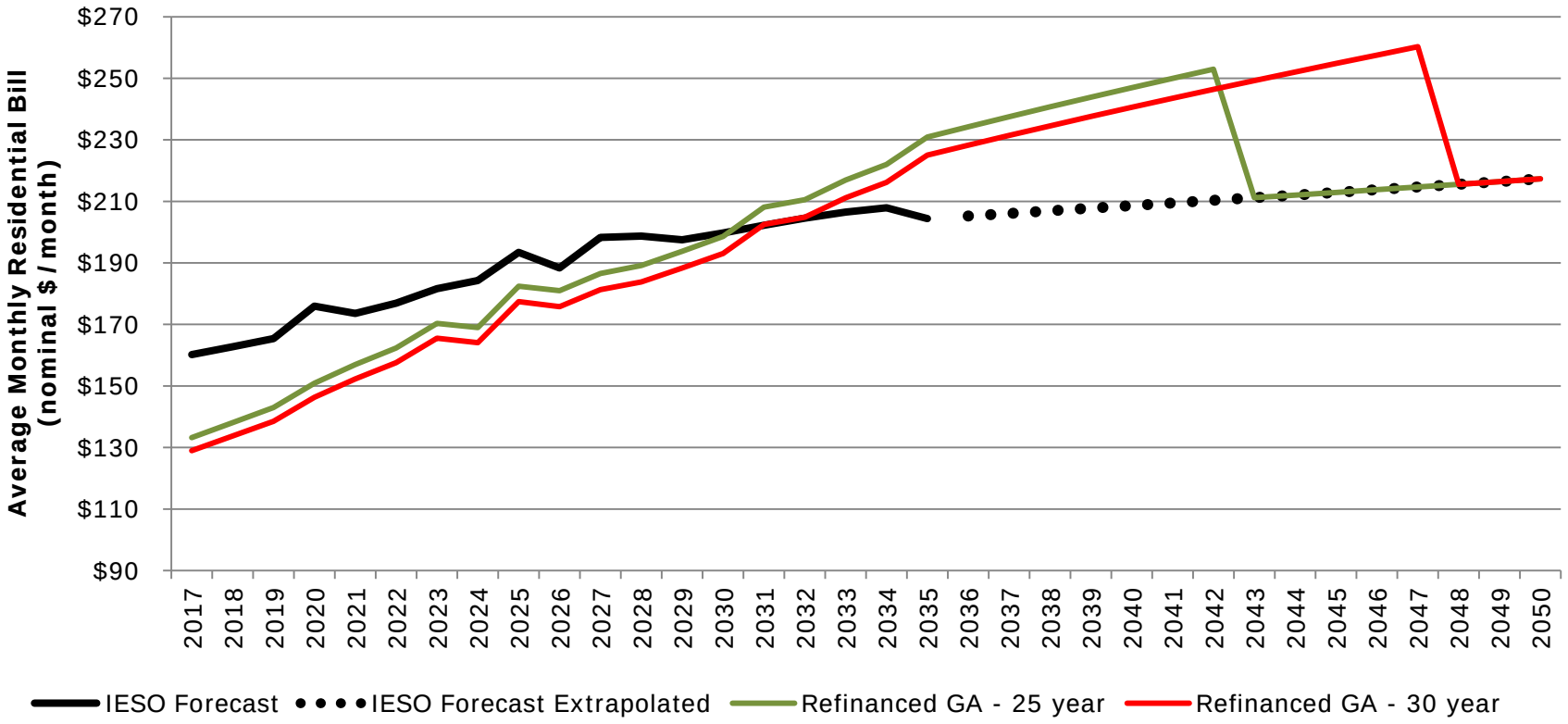
# 2. Maximize Short-term Cost Reduction – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year financing, green) and 2047 (30 year financing, red) respectively.




- A **reduction of 40-46% in GA payments** in 2017 is possible in this scenario by **accumulating up to $66 billion of debt.**
- Further reductions would require additional payments beyond those indicated in order to pay off the debt by 2042 and 2047 in each of the scenarios respectively.

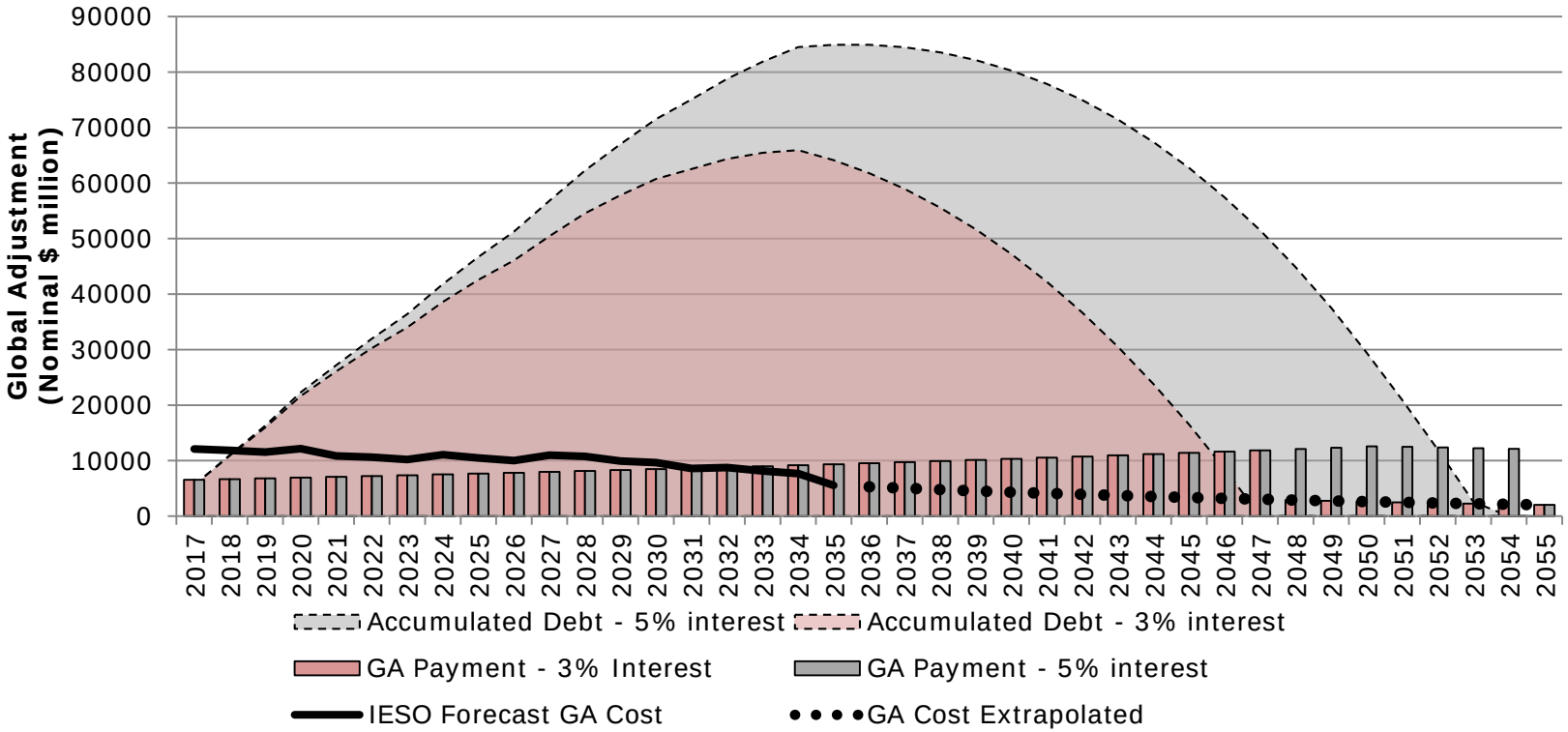
# 2. Maximize Short-term Cost Reduction – Residential Impacts




- This scenario results in a **short-term reduction of up $27-$31/month** in 2017 at the cost of **a long-term increase of up to $43-$46/month** relative to the IESO forecast.
- Due to the significant increase in electricity bills in later years, Scenario 4 considers limiting the amount above the true cost of the GA that is paid by ratepayers.

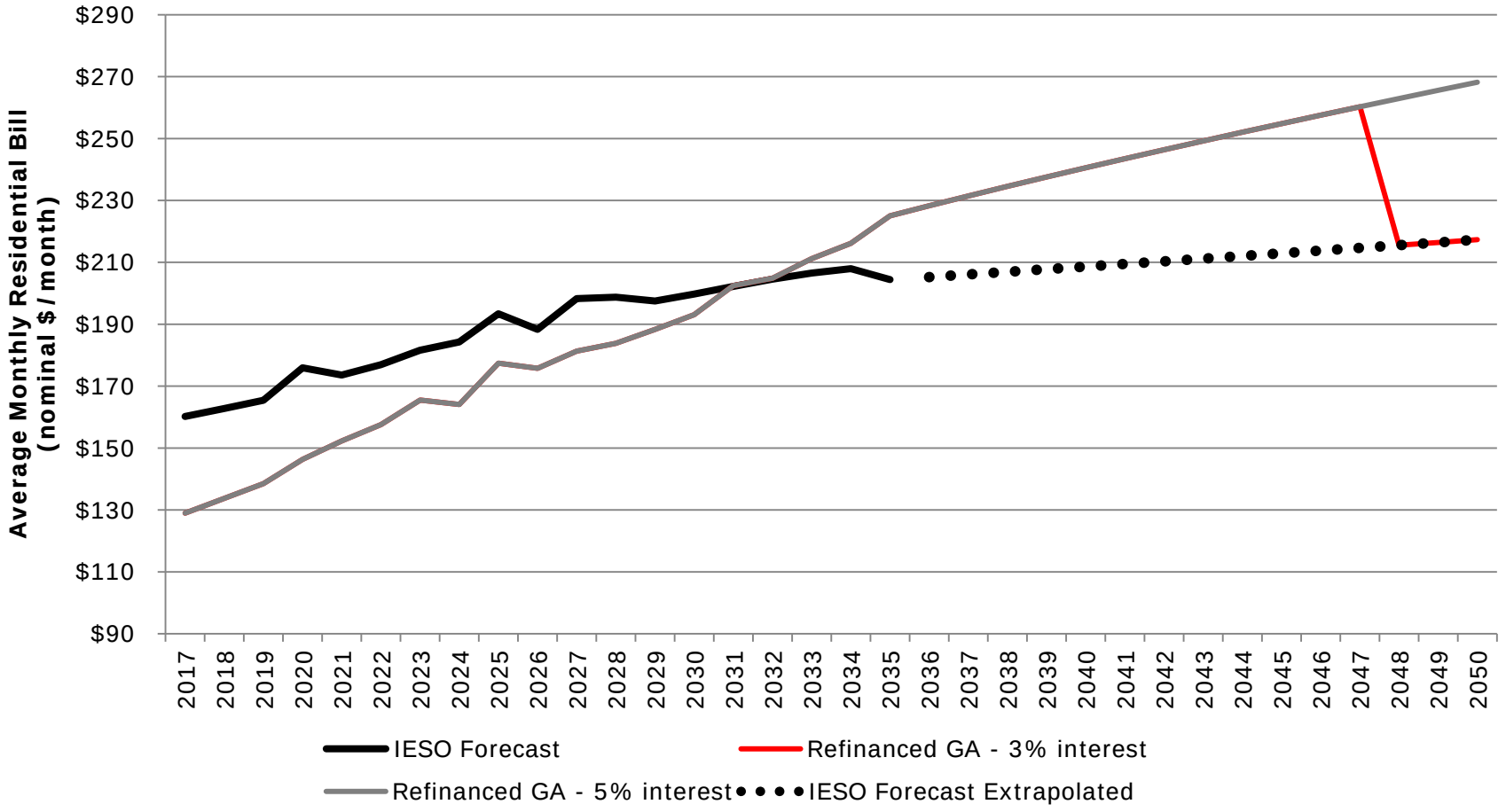
# 3. Interest Rate Risk – Global Impacts

- This scenario compares the maximal 30-year financing case from Scenario 2 (red, assuming a 3% interest rate) and calculates the resulting debt that would accrue due to an increase of two percentage points in the borrowing interest rate (grey, 5% interest).




- Under a 30-year financing payment schedule that assumes a borrowing interest rate of 3% (red), an increase in interest rate to 5% results in **more than $50 billion of accumulated debt in 2047** (grey) requiring further GA over-payments beyond 2047 in order to service the debt.

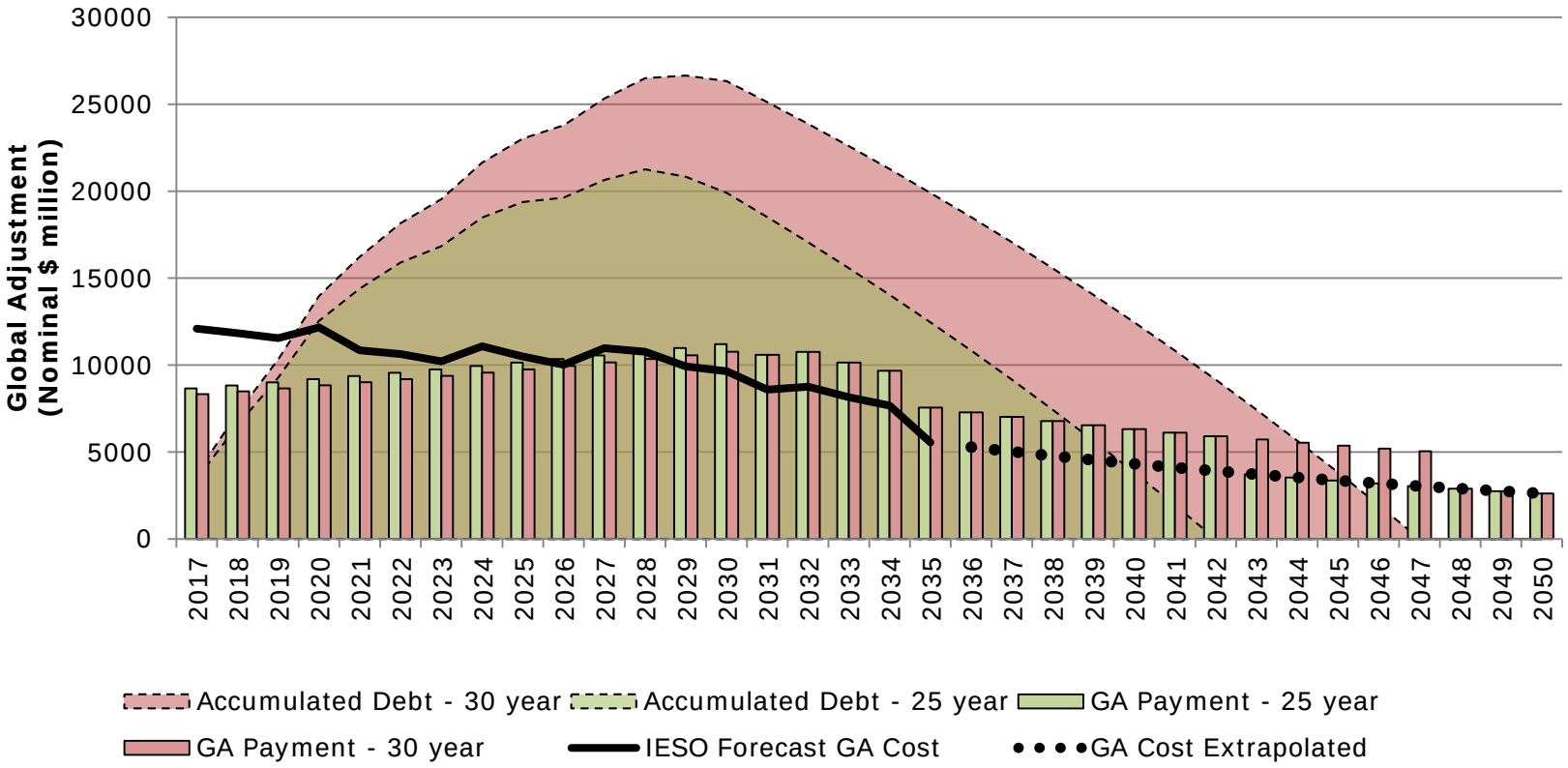
# 3. Interest Rate Risk – Residential Impacts




- In this scenario, an increase in the borrowing interest rate lengthens the financing period beyond 2047.

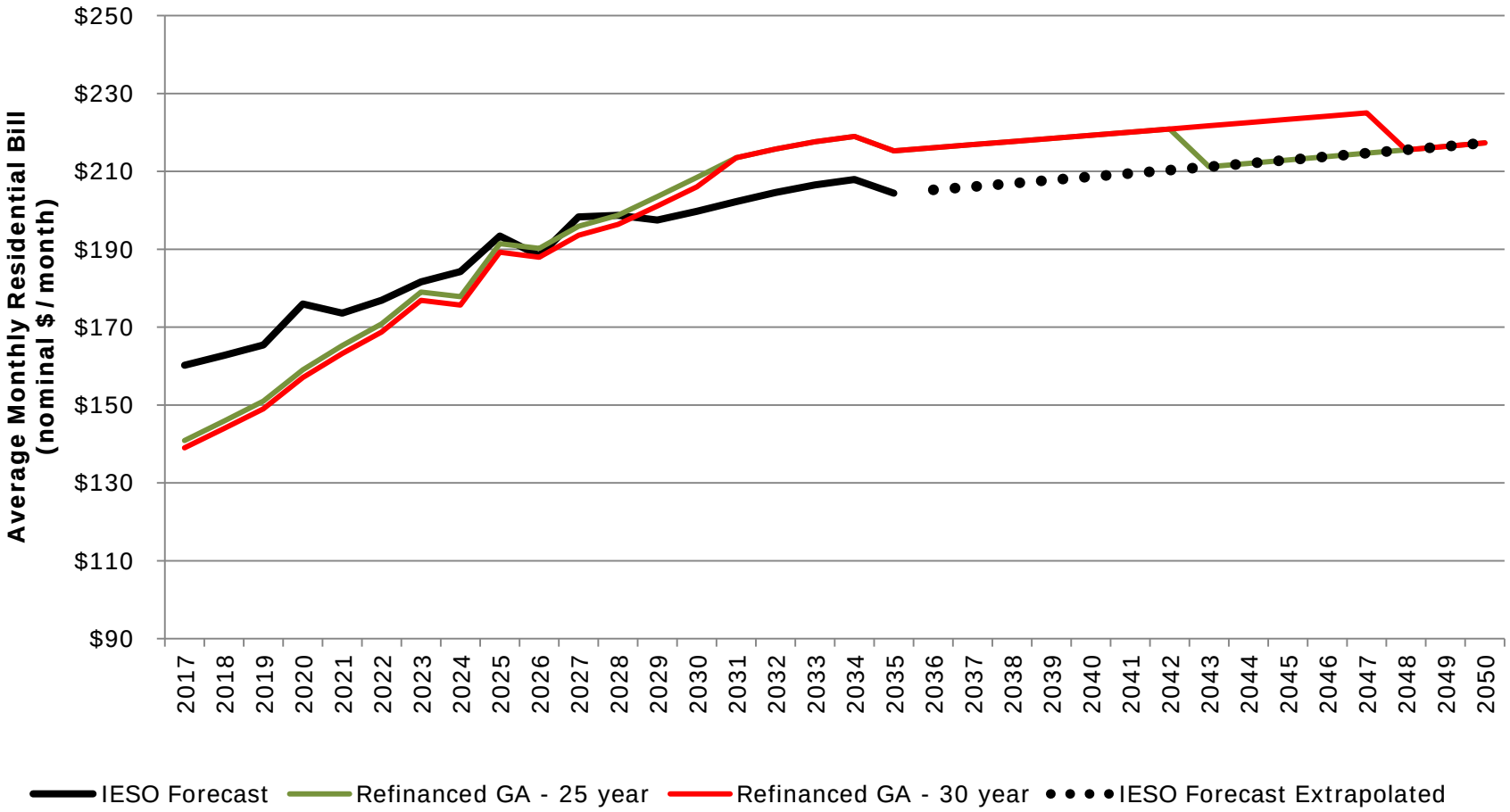
# 4. Maximize Short-term Cost Reduction with Limits – Global Impacts

- In this scenario, the starting ratepayer GA payments in 2017 are lowered as far as possible so that the accumulated debt is fully paid in 2042 (25 year, green) and 2047 (30 year, red) respectively subject to limiting ratepayer over-payments to no more than $2 billion above the true cost of GA.




- A **reduction of 28-31% in GA payments** in 2017 is possible in this scenario by **accumulating up to $26 billion of debt.**

# 4. Maximize Short-term Cost Reduction with Limits – Residential Impacts




- This scenario results in **a short-term reduction of up $19-$21/month** in 2017 at the cost of **a long-term increase of up to $11/month** in 2029-2047 relative to the IESO forecast.

**From:** Gavin He
**To:** John Kim; Emily Kerr; Francisco Chinchon
**Subject:** Re: Decks
**Date:** Tuesday, January 24, 2017 10:48:09 PM

---

Password is the same "snowplow".

> On Jan 24, 2017, at 22:35, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> Hi,
>
> See attached. Key comments are welcome.
>
> Thanks,
> Ron
>
> From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
> Sent: January-24-17 10:32 PM
> To: Ghiassi, Ali (MOF) <Ali.Ghiassi@ontario.ca>; Elizabeth Mendes (MOF) <Elizabeth.Mendes@ontario.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Tim Schuurman (MOF) <Tim.Schuurman@ontario.ca>; Ronald Jaikaran (MOF) <Ronald.Jaikaran@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
> Cc: David McLean (MOF) <David.McLean@ontario.ca>
> Subject: FW: Decks
>
> FYI all. Attached are the two Energy decks for FPC tomorrow. Note a second attachment which provides background and analysis on distribution costs and pressures.
>
> _____
> From: Imbrogno, Serge (ENERGY)
> Sent: Tuesday, January 24, 2017 10:15:17 PM (UTC-05:00) Eastern Time (US & Canada)
> To: Orsini, Steve (CAB); Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
> Cc: Bromm, William (CAB)
> Subject: Decks
> Hi,
>
> Decks for tomorrow's meeting. My MO is still reviewing and they may have some edits.
>
> Serge
> <Delivery Line Overview and Options v1.pptx>
> <Rate Mitigation Plan Options 20170124__Clean1.pptx>

**From:** John Kim
**To:** Ronald Kwan
**Cc:** Tomasz Bugajski; Shajee Kathirgamanathan
**Subject:** Re: Draft BN for Monday TB/MBC Meeting
**Date:** Sunday, September 11, 2016 7:52:22 AM

---

No, I don't believe this was discussed in prior briefing at all. Followed up with tbs counterparts for the basis of change.

Thanks,

John

On Sep 11, 2016, at 3:22 AM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi John,
>
> When did the request go to $300M for 16-17, $1.1B for 17-18, 18-19, and $1.2B for 19-20?
>
> And there still does seem to be any more specification in the Minute on the RRRP adjustment mechanism.
>
> Were either of those discussed at the prior briefings?
>
> Ron
>
> ---
>
> **From:** John Kim
> **Sent:** September-10-16 6:52 PM
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
> **Subject:** Fwd: Draft BN for Monday TB/MBC Meeting
>
> FYI
>
> Begin forwarded message:
>
> > **From:** "Strang, James (TBS)" <James.Strang@ontario.ca>
> > **To:** "Keley Katona (ENERGY)" <Keley.Katona@ontario.ca>
> > **Cc:** "Felix Fung (MOF)" <Felix.Fung@ontario.ca>, "Madeleine Morgenstern (PPAGS)" <Madeleine.Morgenstern@ontario.ca>, "Sriram Subrahmanyan (MOF)" <Sriram.Subrahmanyan@ontario.ca>, "Ann Langleben (MOF)" <Ann.Langleben@ontario.ca>, "Patrick Laughton (MOF)" <Patrick.Laughton@ontario.ca>, "Nina Arbabzadeh (EDU)" <Nina.Arbabzadeh@ontario.ca>, "John Kim"

<John.Kim@ofina.on.ca>, "Nick Smook (MOF)"
<Nick.Smook@ontario.ca>, "Paul Kaufman (MOHLTC)"
<Paul.Kaufman@ontario.ca>, "Len Hatzis (MGS)"
<Len.Hatzis@ontario.ca>, "Shajee Kathirgamanathan"
<Shajee.Kathirgamanathan@ofina.on.ca>, "Moore, Karen (CAB)"
<Karen.Moore4@ontario.ca>, "Helen Graham (MOF)"
<Helen.Graham@ontario.ca>, "Inglis, Liane (MOF)"
<Liane.Inglis@ontario.ca>, "Jenarra DeSouza (MEDTE/MRI)"
<Jenarra.DeSouza@ontario.ca>
**Subject: Draft BN for Monday TB/MBC Meeting**

Attached is the draft briefing note for TB/MBC on Monday. We followed the minute for OCEB then refined it for this item.

James

| | |
|---|---|
| **From:** | John Kim |
| **To:** | James Strang (MOF) |
| **Cc:** | Felix Fung (MOF); Madeleine Morgenstern (PPAGS); Shajee Kathirgamanathan |
| **Subject:** | Re: Draft BN for Monday TB/MBC Meeting |
| **Date:** | Sunday, September 11, 2016 7:50:40 AM |

---

Hi James, Felix, Madeleine,

Noticing the amounts have changed to 1.1 and 1.2. What was the basis of the amounts? Was there an update from Energy?

Thanks,

John

> On Sep 10, 2016, at 6:49 PM, Strang, James (TBS) <James.Strang@ontario.ca> wrote:
>
> Attached is the draft briefing note for TB/MBC on Monday. We followed the minute for OCEB then refined it for this item.
>
>
>
>
>
> James
> <RAN Electricity Price Mitigation v11 2016 09 10.doc>

| | |
|---|---|
| **From:** | Fung, Felix (TBS) |
| **To:** | John Kim; James Strang (MOF) |
| **Cc:** | Madeleine Morgenstern (PPAGS); Shajee Kathirgamanathan |
| **Subject:** | Re: Draft BN for Monday TB/MBC Meeting |
| **Date:** | Sunday, September 11, 2016 9:21:45 AM |

---

Hi John, yes the changes came from Energy's final cabinet submission. Let me send that to you. We received it yesterday afternoon.

Thanks

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: John Kim
Sent: Sunday, September 11, 2016 7:50 AM
To: Strang, James (TBS)
Cc: Fung, Felix (TBS); Morgenstern, Madeleine (TBS); Kathirgamanathan,Shajee (OFA)
Subject: Re: Draft BN for Monday TB/MBC Meeting

Hi James, Felix, Madeleine,

Noticing the amounts have changed to 1.1 and 1.2. What was the basis of the amounts? Was there an update from Energy?

Thanks,

John

> On Sep 10, 2016, at 6:49 PM, Strang, James (TBS) <James.Strang@ontario.ca> wrote:
>
> Attached is the draft briefing note for TB/MBC on Monday. We followed the minute for OCEB then refined it for this item.
>
>
>
>
>
> James
> <RAN Electricity Price Mitigation v11 2016 09 10.doc>

---

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

**From:** Ronald Kwan
**To:** Salman Qadir
**Cc:** John Kim; Gavin He
**Subject:** Re: GA scenario
**Date:** Thursday, January 26, 2017 5:42:41 PM

Thanks Salman.

Ron

On Jan 26, 2017, at 5:19 PM, Salman Qadir <Salman.Qadir@ofina.on.ca> wrote:

> No problem - I can build it into the spreadsheet to start.
>
> Salman
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Thursday, January 26, 2017 5:17 PM
> **To:** Salman Qadir <Salman.Qadir@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Cc:** Gavin He <Gavin.He@ofina.on.ca>
> **Subject:** RE: GA scenario
>
> Thanks, I see that now in his email. We should make an adjustment, and/or get his adjusted numbers.
>
> Ron
>
> ---
>
> **From:** Salman Qadir
> **Sent:** January-26-17 17:15
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Cc:** Gavin He <Gavin.He@ofina.on.ca>
> **Subject:** RE: GA scenario
>
> Hi Ron,
>
> You're absolutely correct. This is confirmed in the original email response below from Tim Christie as well.
>
> I've changed the language to Fiscal Exposure and added a Notes box with that note.
>
> Saved it here:
> Z:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA
>
> Salman
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Thursday, January 26, 2017 5:04 PM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
> **Subject:** RE: GA scenario
>
> Hi,
>
> So assumption is borrowing is all end of year, not 1/12 per month, or even assumed mid-year on average? Not realistic, if so.
>
> And can we label it fiscal exposure, and footnote it as accounting treatment is TBD?
>
> Thanks,
> Ron
>
> ---
>
> **From:** John Kim
> **Sent:** January-26-17 16:59
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Salman Qadir <Salman.Qadir@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
> **Subject:** FW: GA scenario
>
> Hi Ron,
>
> Pls. see attached spreadsheet from Salman which ties in with the scenarios provided.
>
> Thanks,
>
> John.
>
> ---
>
> **From:** Salman Qadir
> **Sent:** Thursday, January 26, 2017 1:33 PM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
> **Subject:** RE: GA scenario
>
> Apologies, there was a referencing error in the charting. Updated is attached.
>
> Salman
>
> ---
>
> **From:** Salman Qadir
> **Sent:** Thursday, January 26, 2017 12:07 PM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
> **Subject:** RE: GA scenario
>
> Hi John,
>
> Attached is a few charts for the fiscal impact for each scenario. Note that the assumption is that the debt is drawn down at the end of the year and interest on that drawdown incurs the following year.
>
> Salman
>
> ---
>
> **From:** John Kim
> **Sent:** Thursday, January 26, 2017 10:53 AM
> **To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
> **Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
> **Subject:** FW: GA scenario
>
> Hi Salman,
>
> Would you mind doing a fiscal impact chart for each scenarios? Essentially, the bump up in the debt would potentially be fiscal impact on the downside.
>
> Thanks,
>
> John.
>
> ---
>
> **From:** Malecki, Justin (ENERGY) [mailto:Justin.Malecki@ontario.ca]
> **Sent:** Thursday, January 26, 2017 9:34 AM
> **To:** John Kim <John.Kim@ofina.on.ca>; Tim Christie (ENERGY) <Tim.Christie@ontario.ca>
> **Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>
> **Subject:** RE: GA scenario
>
> Hello John,
>
> Yes, the table Tim sent you yesterday is the 30-year financing version of scenario 1a. Below is the same table but for the 30-year financing version of scenario 1b. Don't hesitate to let us know if there is anything else you need.
>
> Cheers,
>
> Justin Malecki, PhD
> Senior Advisor, Energy System Planning
> Ontario Ministry of Energy
> 416-325-9372

| ***Debt Borrowing Payment Schedule for Scenario 1b. Moderate / GA 30-year financing with delayed increase in payments ($ million)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 10,679 | 9,912 | 9,200 | 8,540 | 8,798 | 9,063 | 9,337 | 9,619 | 9,910 | 10,209 | 10,517 | 10,835 | 11,162 | 11,499 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| annual interest) | 1,416 | 3,410 | 5,932 | 9,857 | 12,396 | 14,586 | 16,190 | 18,462 | 19,964 | 20,774 | 22,271 | 23,313 | 23,236 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-26-17 8:17 AM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA); Malecki, Justin (ENERGY)
**Subject:** RE: GA scenario

Thanks Tim.

Am I right in thinking this is the latest 1A? Could we also get the 1B?

John.

---

**From:** Christie, Tim (ENERGY) [mailto:Tim.Christie@ontario.ca]
**Sent:** Wednesday, January 25, 2017 3:59 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Justin Malecki (ENERGY) <Justin.Malecki@ontario.ca>
**Subject:** RE: GA scenario

John, here's the data you requested. Note that we have not included in-year interest costs (so any deferral doesn't start accumulating interest until the next year). We have since done it using a monthly schedule, but this is the version that was used in the deck. Let me know if you have any questions.

| **Debt Borrowing/Payment Schedule for Scenario 1a. Moderate / GA Financing 30-year financing** ***($ millions)*** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** | **2032** | **2033** | **2034** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IESO GA cost forecast + extrapolation | 12,095 | 11,835 | 11,552 | 12,168 | 10,844 | 10,634 | 10,212 | 11,081 | 10,489 | 10,020 | 10,975 | 10,764 | 9,919 | 9,650 | 8,587 | 8,758 | 8,147 | 7,670 | 5,553 | 5,281 | 5,022 | 4,777 | 4,543 | 4,320 | 4,109 | 3,908 | 3,717 | 3,535 | 3,362 | 3,197 | 3,041 | 2,892 | 2,750 | 2,616 |
| Ratepayer GA Payment | 8,769 | 8,944 | 9,123 | 9,306 | 9,492 | 9,682 | 9,875 | 10,073 | 10,274 | 10,480 | 10,689 | 10,903 | 11,121 | 11,344 | 10,587 | 10,758 | 10,147 | 9,670 | 7,553 | 7,281 | 7,022 | 6,777 | 6,543 | 6,320 | 6,109 | 5,908 | 5,717 | 5,535 | 5,362 | 5,197 | 5,041 | 2,892 | 2,750 | 2,616 |
| Accumulated debt in present year (including 5% annual interest) | 3,326 | 6,383 | 9,131 | 12,451 | 14,425 | 16,098 | 17,240 | 19,111 | 20,281 | 20,836 | 22,164 | 23,133 | 23,087 | 22,548 | 21,676 | 20,759 | 19,797 | 18,787 | 17,727 | 16,613 | 15,443 | 14,216 | 12,926 | 11,573 | 10,151 | 8,659 | 7,092 | 5,446 | 3,719 | 1,905 | 0 | 0 | 0 | 0 |

---

**From:** John Kim [mailto:John.Kim@ofina.on.ca]
**Sent:** January-23-17 4:50 PM
**To:** Christie, Tim (ENERGY)
**Cc:** Kerr, Emily (OFA)
**Subject:** GA scenario

Hi Tim,

Hope all's well.

I left you a voicemail and wanted to clarify what I'm looking for. Would you have the accumulated debt figure, by year, for the 23bn scenario?

Thanks,

John.

Y. John Kim
Director, Electricity Finance Branch
Corporate & Electricity Finance Division
Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

---

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**From:** Ronald Kwan
**To:** Karim Javeri
**Cc:** Tomasz Bugajski; Sandy Roberts; John Kim
**Subject:** Re: LRC note for fact check - comments due Monday 5 pm
**Date:** Monday, November 07, 2016 6:12:24 PM

---

Thanks. Pease remove the internal comments and comments and comments.

We should clarify my earlier comment on fiscal cost risk that what was presented in September was an annualized cost of $1 bn, and communicated that way publicly. And the fiscal plan includes that amount, not the $1.2 bn.

Thanks,
Ron

On Nov 7, 2016, at 5:39 PM, Karim Javeri <Karim.Javeri@ofina.on.ca> wrote:

> Hello,
>
> Combined edits with TPD's and addressed/commented on Ron's notes/comments.
>
> Karim
>
> ---
>
> **From:** Tomasz Bugajski
> **Sent:** Monday, November 07, 2016 5:18 PM
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Karim Javeri <Karim.Javeri@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Subject:** RE: LRC note for fact check - comments due Monday 5 pm
>
> DMO reached out for the regs, but they want to know if they're necessary before we submit comments.
>
> **Tomasz Bugajski**
> EA & Special Policy Advisor
> Corporate and Electricity Finance Division
> Ontario Financing Authority
> 416-325-0924 | tomasz.bugajski@ofina.on.ca
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Monday, November 07, 2016 5:06 PM
> **To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> **Cc:** Karim Javeri <Karim.Javeri@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Subject:** Re: LRC note for fact check - comments due Monday 5 pm

Hi,

Thanks. I made a few suggested edits.

Do we know if others in MOF (TPD?) or TBS are reviewing and commenting?

And can we get copies of the proposed regulations too?

Ron

---

**From:** Tomasz Bugajski
**Sent:** November 7, 2016 4:04 PM
**To:** Ronald Kwan
**Cc:** Karim Javeri; Sandy Roberts
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

Thanks Karim.

Ron – see SPFB's comments on the LRC note for the ENERGY item. CO asked for our comments by 4pm.

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

---

**From:** Karim Javeri
**Sent:** Monday, November 07, 2016 4:02 PM
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>
**Subject:** RE: LRC note for fact check - comments due Monday 5 pm

Hi Tomasz - Our comments are attached.

---

**From:** Tomasz Bugajski
**Sent:** Monday, November 07, 2016 3:53 PM
**To:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

How's this coming along?

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

---

**From:** Tomasz Bugajski
**Sent:** Monday, November 07, 2016 2:19 PM
**To:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

Here are the final materials.

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

---

**From:** Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
**Sent:** Monday, November 07, 2016 2:17 PM
**To:** Jenarra DeSouza (MEDTE/MRI) <Jenarra.DeSouza@ontario.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Cc:** Gwendolynne Young (ENE) <Gwendolynne.Young@ontario.ca>; David McLean (MOF) <David.McLean@ontario.ca>
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

FYI – in context of electricity rate mitigation pink note fact check. Final materials attached.

---

**From:** Wittman, Nancy (CAB)
**Sent:** November 7, 2016 2:15 PM
**To:** Pearce, Christopher (MOF)
**Subject:** LRC note for fact check - comments due Monday 5 pm

Chris – here you go.

Nancy

<REG-11246_ID47240_LRC_Committee_Note Nov 7 to minisries for fact check_CEFD_TPD.docx>

**From:** Ronald Kwan
**To:** Tomasz Bugajski
**Cc:** Karim Javeri; Sandy Roberts; John Kim
**Subject:** Re: LRC note for fact check - comments due Monday 5 pm
**Date:** Monday, November 07, 2016 5:06:26 PM
**Attachments:** REG-11246_ID47240_LRC_Committee_Note Nov 7 to minisries for fact check_CEFD_v2.docx

---

Hi,

Thanks. I made a few suggested edits.

Do we know if others in MOF (TPD?) or TBS are reviewing and commenting?

And can we get copies of the proposed regulations too?

Ron

---

**From:** Tomasz Bugajski
**Sent:** November 7, 2016 4:04 PM
**To:** Ronald Kwan
**Cc:** Karim Javeri; Sandy Roberts
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

Thanks Karim.

Ron – see SPFB's comments on the LRC note for the ENERGY item. CO asked for our comments by 4pm.

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

---

**From:** Karim Javeri
**Sent:** Monday, November 07, 2016 4:02 PM
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>
**Subject:** RE: LRC note for fact check - comments due Monday 5 pm

Hi Tomasz - Our comments are attached.

---

**From:** Tomasz Bugajski
**Sent:** Monday, November 07, 2016 3:53 PM

**To:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

How's this coming along?

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

---

**From:** Tomasz Bugajski
**Sent:** Monday, November 07, 2016 2:19 PM
**To:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

Here are the final materials.

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

---

**From:** Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
**Sent:** Monday, November 07, 2016 2:17 PM
**To:** Jenarra DeSouza (MEDTE/MRI) <Jenarra.DeSouza@ontario.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Cc:** Gwendolynne Young (ENE) <Gwendolynne.Young@ontario.ca>; David McLean (MOF) <David.McLean@ontario.ca>
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

FYI – in context of electricity rate mitigation pink note fact check. Final materials attached.

---

**From:** Wittman, Nancy (CAB)
**Sent:** November 7, 2016 2:15 PM
**To:** Pearce, Christopher (MOF)
**Subject:** LRC note for fact check - comments due Monday 5 pm

Chris – here you go.

Nancy

**LEGISLATION AND REGULATIONS COMMITTEE**
**BRIEFING NOTE**

Energy
**Electricity Rate Mitigation**

| CAB | TB/MBC | LRC | CAB | Effective Date |
|---|---|---|---|---|
| Sept. 12, 2016 | Sept. 12, 2016 | Nov. 14, 2016 | Nov. 16, 2016 | January 1, 2017 |

## Summary of Proposal

The following proposal contains a variance from Cabinet direction, which is detailed in the Cabinet Office Analysis section of this note and attached variance memo.

The following proposal is posted on the Regulatory Registry until November 12th. This note contains a placeholder for a summary of feedback from the Regulatory Registry.

**Context for Decision:**

On Sept. 12, 2016 the Ministry of Energy received Cabinet Approval to introduce legislation that would enable a broader Electricity Rate Mitigation Strategy for electricity consumers across the province. On September 15, the Minister of Energy introduced Bill 13, the *Ontario Rebate for Electricity for Electricity Consumers Act, 2016,* (ORECA) that puts in place an 8% rebate for residential, small business customers and farms. Bill 13 is scheduled to come into force on January 1, 2017.

**Commented [RK1]:** Could include wording that the Bill passed and has received Royal Assent.

**Summary of Proposal:**

To implement the rate relief provided for under Bill 13, one additional regulation and several regulatory amendments are needed.

1. Creating a new General regulation under the *Ontario Rebate for Electricity Consumers Act, 2016*.

   This proposed new regulation will provide the necessary mechanics to support the implementation of the 8% rebate. Provisions in this regulation include direction to Local Distribution Companies (LDCs) on:

   - Base invoice amounts for invoices (direction on what amounts should be included in the calculation of the 8% rebate).
   - Flow through of financial assistance (direction on passing through the rebate to eligible consumers).

- Records keeping, reimbursement requirements for vendors, financial assistance re: fees and charges imposed by unit sub-meter providers.

2. Amending O. Reg. 442/01(Rural or Remote Electricity Rate Protection) made under the *Ontario Energy Board Act, 1998*.
   - This proposed amendment will update the Rural or Remote Rate Protection (RRRP) program, to provide increased rate relief to eligible rural customers (low-density customers of Hydro One). The increased subsidy would result in an approximate increased monthly subsidy from $31.50 to $60.50.
   - Cabinet previously approved an increase of $110 million. Hydro One has provided updated numbers of eligible customers and ENERGY is seeking approval for a regulation that would result in an additional $6.4 million from the rate base in order to fulfill the intention of the proposal.
3. Amending O. Reg. 429/04 (Adjustments under Section 25.33 of the Act) made under the *Electricity Act, 1998.*
   - This regulation governs how the Global Adjustment is charged to different classes of electricity consumers. This includes setting eligibility requirements for being a participant in the Industrial Conservation Initiative).
   - Under this proposed amendment, the Industrial Conservation Initiative would be expanded so that all electricity consumers over 1 MW would be eligible for the program. Currently, only electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A electricity consumers). ~~This proposed amendment would provide eligible electricity consumers with an average monthly peak demand between 1 MW and 5 MW with the opportunity to participate in the Industrial Conservation Initiative.~~ Current sector restrictions for consumers in the 3 to 5 MW range would be removed and smaller industrial, institutional and commercial businesses between 1 and 3 MW would be eligible. Newly eligible consumers would have to opt-in, should they wish to participate.
4. Amending O. Reg 495/10 (General) made under the *Ontario Clean Energy Benefit Act, 2010.*
   - For the period of 2011-2015 the Ontario Clean Energy Benefit provided certain consumers with a credit of ten percent of the total cost of electricity. The credit was put in place as a temporary measure, and there is currently no end date by which to claim retroactive payments.
   - The proposed amendment will prescribe an end date for electricity consumers to submit Ontario Clean Energy Benefit claims to service providers, and a second end date for licensed distributors and sub-meter providers to submit invoices.

5. and 6. Amending O. Reg. 275/04 (Information on Invoices to Certain Classes of Consumer of Electricity) made under the *Ontario Energy Board Act, 1998* and O.

**Formatted:** English (Canada)

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**Commented [KJ2]:** Energy deck: Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A electricity consumers).

Under the reg change:

ICI would be expanded so that all electricity consumers over 1 MW are eligible for the program.

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Reg 161/99 (Definitions and Exemptions) made under the *Ontario Energy Board Act, 1998*.

- These proposed amendments are consequential to the implementation of the *Ontario Rebate for Electricity Consumers Act, 2016,* including adding the ORECA to the list of Acts and Regulations that can alter the presentation of the invoice from the standard messaging.

**Terms you need to know**

- **Local Distribution Companies (LDCs)** – Local electricity utilities, responsible for distributing power from transmission lines to people's homes (e.g., Hydro Ottawa, Toronto Hydro, etc.)
- **Regulated Price Plan (RPP)** - Since April 2005, the Ontario Energy Board (OEB) has administered an electricity price plan that provides stable and predictable electricity pricing, encourages conservation and ensures the price consumers pay for electricity better reflects the price paid to generators. This pricing plan is known as the Regulated Price Plan (RPP). About 5 million residential consumers, small businesses and farms are eligible for the RPP.
- **Class B Consumer** – commercial, institutional and small industrial consumers, typically with load size between 0.05 – 3 MW. Class B consumers pay GA as a flat rate applied to electricity consumption. Class B consumers include those that choose not to become Class A.
- **Class A Consumer** – large commercial and large industrial consumers with average peak load size above 3 MW, subject to eligibility. Class A consumers pay GA based on their electricity consumption during the five highest peak demand hours during the year.

**Why does Ontario need these changes? Why now?**

Electricity costs have been increasing as investments have been made to decarbonize and modernize the province's electricity infrastructure. Since 2010, electricity prices have risen considerably, particularly for households and small businesses.

The Ministry of Energy, working with the ~~and~~ Ministry of Finance, w~~ere~~as asked to develop a proposal to provide rate relief to Ontario electricity consumers. On September 12, in the Speech from the Throne, the government committed to introducing measures that would provide consumers with rate relief on their electricity bills.

**What is the expected cost to government?**

The 8% rebate is expected to cost about $1.2 billion per year (approximately $4 billion from 2017-2020). Other smaller incremental costs include that LDCs and other providers will likely incur some costs with updating their systems~~;~~, however, as the LDCs recently delivered the OCEB set up costs should not be substantial, and increased administrative costs or borrowing costs for the IESO.

The cost of the ICI and RRRP program expansions will be shared across the electricity rate base, and are estimated to cost approximately $0.60/month (RRRP) and $0.74/month (ICI) for the average residential customer. The total new costs to the rate base for each program expansion are $82 million and $116.4 million, respectively (pending Cabinet approval of the additional support for the RRRP through this proposal).

## Cabinet Office Analysis

Following the Speech from the Throne and the introduction of the ORECA in September, Ontarians are expecting to see electricity rate relief in January 2017. This proposal provides the mechanisms to implement this commitment. For the rate relief to be implementation by January 1, there is a need to move forward with the regulation changes as soon as possible (e.g. so that bill issuers can prepare Customer Information Systems for setting new RRRP rates and calculate associated benefits, so that LDCs have time to prepare for the expected increase in the ICI program, all in advance of the January implementation). The following regulations and regulatory amendments are being proposed:

**Commented [RK3]:** Substitute as passage and the date

1. General Regulation

The proposed General Regulation under the Ontario Electricity Rebate Act, 2016 will put in place a framework very similar to the framework developed to deliver the Ontario Clean Energy Benefit. The regulation provides instruction to LDCs on how the rebate is to be calculated (e.g., rebate is calculated before taxes; clarifies how the rebate is applied to those receiving Ontario Electricity Support Program assistance).

The proposed General Regulation also provides an outline on how the payments flow through to customers. Through the proposed General Regulation, a parallel process will be created to ensure that Independent Power Authorities and have the opportunity to participate and have their customers receive the provincial rebate. There were six communities that did not enroll to receive the OCEB. These communities would be eligible for the 8% rebate, but would need to go through the enrollment process.

2. Rural or Remote Electricity Rate Protection (RRRP) Expansion – Regulation

The RRRP framework was put in place to ensure that all Ontario residents pay similar prices for electricity distribution, regardless of their geographic location. The Ministry of Energy is seeking to increase the amount of rate protection available for eligible rural or remote electricity customers. Under the RRRP regulation the amount of rate protection available to Hydro One's R2 customers (residential customers who are classified as low density) is capped at a fixed amount of $127 million – which amounts to a monthly subsidy of $31.50. The RRRP program is paid for by all electricity customers across the province, and costs the average residential consumer approximately $1/month.

**Commented [KJ4]:** This calculation is based on the total cost of the RRRP program - $174 million, not $127 million as implied in the text.

OEB "This RRRP rate is underpinned by a RRRP amount to be provided to eligible customers in 2015 of $174 million. Also, the IESO's 2015 demand forecast is 136 TWh. The resulting RRRP rate is therefore 0.13 cents (rounded) per kilowatt-hour."

In September 2016, Cabinet approved an additional $110 million in RRRP program funding that was intended to provide an increased benefit of approximately $29/month for all eligible Hydro One R2~~RRRP~~ customers. The additional monthly cost of this proposal for an average residential consumer was estimated to be $0.60.

**Variance from cabinet direction:** The Ministry of Energy is proposing to increase rate protection for eligible customers by an additional $6.4M, based on a revised estimate of eligible customers provided by Hydro One. The additional $6.4M will not increase the monthly cost for an average residential consumer.

As part of the Price Mitigation initiatives, Cabinet directed that the funding for R2 customers be adjusted annually to reflect any increases on their electricity bills. The proposed amendments to the regulation will add an escalating factor to the new base rate protection amount. Starting in 2018, and every year after, the total amount of rate protection available to Hydro One's R2 customers would be increased by a percentage, as calculated by the Ontario Energy Board.

3. Industrial Conservation Initiative Expansion (ICI)

The ICI is intended to incent a greater number of Ontario businesses to lower their electricity costs by shifting energy demand away from peak demand periods. Reducing peak demand increases the reliability of the power grid, reduces greenhouse gas (GHG) emissions and helps to defer the need to procure more resources. In 2010, when Ontario introduced ICI, the program was available to customers with a peak demand greater than 5 MW and in 2013 was subsequently expanded to allow eligible customers in certain sectors with a peak demand for electricity above 3 MW and less than or equal to 5 MW to opt in to the program.

The Ministry of Energy is proposing to expand eligibility under ICI to include all electricity consumers and market participants with an average monthly peak demand greater than one MW and to remove sector restrictions so that smaller (1-5MW?) institutional and commercial businesses would also be eligible. This would expand the ICI to include more than 1000 new customers. Non-ICI participants will likely see an increase on their bills but the extent of the impact is dependent on the uptake of the expanded ICI program.

4. Amending O. Reg. 495/10 (General) made under the Ontario Clean Energy Benefit Act, 2010

In addition to enacting the provisions for the 8% rebate, Bill 13 also included amendments to the Ontario Clean Energy Benefit Act, 2010 that provided the necessary authority to prescribe end dates for retroactive claims, eliminating further crown liability for reimbursements after the prescribed date. Proposed amendments will establish February 1, 2017 as the cut-off date for customers with an eligible account to claim unpaid OCEB amounts.

**Commented [MC5]:** ENERGY to fact check

**Commented [KJ6]:** RRRP is funded by ratepayers. Might be better to change to:

The impact of this $6.4 million increase is minimal and has no material impact on the estimated cost of approximately $0.60 per month for an average consumer using 750 kWh per month.

(From LRC Appendix C)

**Commented [RK7]:** Should Energy be asked to specify, at least for the Minute, what the escalating factor would be – e.g., linked to CPI, or to an index of urban residential electricity prices?

**Commented [RK8]:** How? Based on what?

Although this proposal is not expected to affect the majority of OCEB customers (as the Ministry of Finance has concluded that there were minimal errors in the application of the program), the potential size of the liability related to retroactive payments is highly uncertain due to data limitations. ENERGY's rough estimate for this liability is $10 million.

Commented [MC9]: ENERGY to provide a sense of magnitude – how much was paid out under OCEB during the life of the program?

5. Amending O. Reg. 161/99 (Definitions and Exemptions) made under the Ontario Energy Board Act, 1998.

This proposed amendment is required to help ensure that the 8% rebate is passed on to individual units in multi-unit complexes.

Commented [MC10]: ENERGY to clarify - to what degree of certainty? To individually metered units or to all individual units?

6. Amending O. Reg. 275/04 (Information on Invoices to Certain Classes of Consumer of Electricity) made under the Ontario Energy Board Act, 1998

This amendment allows for the rebate legislation and any regulations under it to alter the presentation of invoices. This proposal is necessary for the invoice to present the 8% rebate as a separate line item.

There is also one related Minister's Regulation on invoicing requirements (to provide clear direction to energy vendors) that is moving forward in parallel with this package.

**Linkages:**

Ontario's Climate Change Action Plan (CCAP)

The CCAP, released in summer 2016, reiterated the 2016 Budget commitment and stated that Ontario intends to invest in initiatives that both reduce greenhouse gas (GHG) emissions and ensure that the net impact of cap and trade would not result in an overall increase in electricity costs for commercial and industrial consumers, and that there would be a modest benefit of up to $2 per month, on average, to residential consumers.

At the time, it was estimated that redirecting cap and trade auction proceeds to lower the cost of electricity would reduce up to 3,000,000 tonnes of greenhouse gas (GHG) emissions by 2020.

Electricity Rate Mitigation Initiatives:

The OCEB was a five-year legislated program put in place as a broad-based, transitional measure to a cleaner electricity system. OCEB was also put in place following the implementation of the Harmonised Sales Tax (HST). The Province also put in place the energy portion of the Ontario Energy and Property Tax Credit, as well as the Northern Ontario Energy Credit at that time to provide on-going targeted relief, in addition to the general sales tax credit. Unlike the previous provincial Retail Sales Tax (RST), the HST (and GST) included electricity in the taxable base. OCEB expired on December 31, 2015.

As part of the transition to the end of the OCEB, ~~T~~the government also recently ended the electricity Debt Retirement Charge (DRC) on residential users earlier than planned,

as of January 1, 2016, and put in place the low-income targeted Ontario Electricity Support Program (OESP).

**Delivery:**

For the 8% rebate, LDCs have indicated they will likely be operational by January 1 2017. However, the legislation gives LDCs until July 1 2017 to begin delivering the 8% rebate and associated messaging. If LDCs are not operational on January 1 2017, customers would receive any back-owed rebate in a lump sum once the LDC is able to deliver the rebate.

A dedicated information portal will be created by ENERGY for oversight and tracking of the rebate (similar to what was created under the Clean Energy Benefit program).

Pending approval of the increased amount of rate protection through the RRRP, the OEB will be required to set the RRRP rate. This rate is typically set by the OEB in December and then Hydro One would implement the changes. This would be complete by January 1 2017.

**Commented [MC11]:** ENERGY to confirm

The ICI expansion would be implemented by the IESO and LDCs by XXX

**Commented [MC12]:** ENERGY to provide.

**Stakeholder Consultations:**

Regulatory Registry

- On September 28, the Ministry of Energy posted a proposal for comment on the Regulatory Registry to provide stakeholders with the opportunity to comment on the electricity mitigation initiative.
- The posting included the proposed changes to the RRRP, ICI and new regulations needed to support the 8% rebate.
- **[placeholder – summary of RR feedback]**

LDC Working Group

- In October 2016 The Ministry hosted an LDC Working Group with nearly 40 LDCs representatives where feedback was provided to the ministry to consider in the development of the regulatory package. This included feedback on the billing system limitations that was incorporated into proposed bill presentment requirements.

**Commented [MC13]:** What was the specific change?

Standing Committee of Justice – Public Hearings for Bill 13

- On October 3, a number of organizations as well as individual citizens made presentations to the standing committee on Justice regarding Bill 13, including

requesting additional rate relief, support for the rate relief package, and support for provisions that would limit disconnection of customers.

**Risks**

- The 8% rebate would be structured and delivered in a similar fashion to the former OCEB. There is a risk that the government could be criticized for replacing the OCEB with a smaller rate relief package, just one year after the OCEB ended.
    - The new rebate would have a wider base, and would be uncapped, compared to the OCEB, which was capped at 3,000 kWh per month (and per residential unit in a bulk-metered, multi-residential building).
- The rebate is likely to have a higher annualised fiscal cost than the earlier presented annualised cost estimate of $1 billion. With the increase in the base of eligible consumers that was decided on in the latter part of the policy development, the Ministry of Energy had circulated cost estimates that were rising to about $1.1 to $1.2 billion over the next two years. It was indicated that revised estimates would be part of Energy's PRRT submission.
- For the rate-based portions of the proposal (i.e., the expansion of ICI and RRRP) the result is an increase in costs for ratepayers not included in those programs (i.e., primarily residential, small business and farms). Shifting costs to some electricity consumers to lower rates for others carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.
- Under the proposal, some eligible consumers (e.g., multi-unit residential buildings) may receive multiple benefits (8% rebate and proceeds recycling), while others would be eligible for only one type of benefit.
- The Electricity Distributor Association raised concerns related to the costs of supporting the proposed increased RRRP, as the RRRP is paid for by a charge across all LDCs

**Commented [MC14]:** ENERGY to note any additional risks

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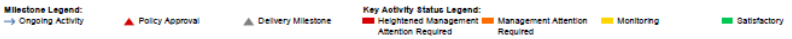
**Commented [MC15]:** ENERGY to comment

**Commented [KJ16]:** Legal should review this language. It is likely too strong given recent com law opinions.

**Commented [MC17]:** ENERGY to provide – response to the concern/mitigation measures

## APPENDIX A: Multi-Year Action Plan (Electricity Rate Mitigation)

*Below is an extract taken from the MYAP which demonstrates the overall strategic plan for the initiative that this policy submission supports. This excerpt represents the approved plan to date, and may not reflect the specific policy and delivery timelines identified in the Cabinet Minute above.*




**MYAP Slice 2016-11-06**

| KEY ACTIVITIES | YEAR 1 (2014-2015) | YEAR 2 (2015-2016) | YEAR 3 (2016-2017) | YEAR 4 (2017-2018) | YEAR 5 (2018-2019) | GOVERNANCE AND RISKS |
|---|---|---|---|---|---|---|
| 15.21 \| Electricity Rate Mitigation<br><br>Pillar: Managing Ontario's Energy Resources | | CCAP Update | Price Mitig Leg introduced<br>Electricity Price Mitigation | Price Mitig implemented | | Lead: ENERGY<br>Risk Categories:<br>Last updated: 24-10-16 |

**From:** Ronald Kwan
**To:** Karim Javeri
**Cc:** Tomasz Bugajski; Sandy Roberts; John Kim
**Subject:** Re: LRC note for fact check - comments due Monday 5 pm
**Date:** Monday, November 07, 2016 6:20:03 PM

---

Thanks.

Tomasz, please get it in.

Ron

On Nov 7, 2016, at 6:18 PM, Karim Javeri <Karim.Javeri@ofina.on.ca> wrote:

> Hi all –
>
> Please see attached. I have removed all the internal comments.
>
> Regards,
>
> Karim
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Monday, November 07, 2016 6:12 PM
> **To:** Karim Javeri <Karim.Javeri@ofina.on.ca>
> **Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Subject:** Re: LRC note for fact check - comments due Monday 5 pm
>
> Thanks. Pease remove the internal comments and comments and comments.
>
> We should clarify my earlier comment on fiscal cost risk that what was presented in September was an annualized cost of $1 bn, and communicated that way publicly. And the fiscal plan includes that amount, not the $1.2 bn.
>
> Thanks,
> Ron
>
> On Nov 7, 2016, at 5:39 PM, Karim Javeri <Karim.Javeri@ofina.on.ca> wrote:
>
> > Hello,
> >
> > Combined edits with TPD's and addressed/commented on Ron's notes/comments.
> >
> > Karim
> >
> > ---

**From:** Tomasz Bugajski
**Sent:** Monday, November 07, 2016 5:18 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Karim Javeri <Karim.Javeri@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: LRC note for fact check - comments due Monday 5 pm

DMO reached out for the regs, but they want to know if they're necessary before we submit comments.

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

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**From:** Ronald Kwan
**Sent:** Monday, November 07, 2016 5:06 PM
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Cc:** Karim Javeri <Karim.Javeri@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: LRC note for fact check - comments due Monday 5 pm

Hi,

Thanks. I made a few suggested edits.

Do we know if others in MOF (TPD?) or TBS are reviewing and commenting?

And can we get copies of the proposed regulations too?

Ron

---

**From:** Tomasz Bugajski
**Sent:** November 7, 2016 4:04 PM
**To:** Ronald Kwan
**Cc:** Karim Javeri; Sandy Roberts
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

Thanks Karim.

Ron – see SPFB's comments on the LRC note for the ENERGY item. CO

asked for our comments by 4pm.

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

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**From:** Karim Javeri
**Sent:** Monday, November 07, 2016 4:02 PM
**To:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Sandy Roberts <Sandy.Roberts@ofina.on.ca>
**Subject:** RE: LRC note for fact check - comments due Monday 5 pm

Hi Tomasz - Our comments are attached.

---

**From:** Tomasz Bugajski
**Sent:** Monday, November 07, 2016 3:53 PM
**To:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

How's this coming along?

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

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**From:** Tomasz Bugajski
**Sent:** Monday, November 07, 2016 2:19 PM
**To:** Sandy Roberts <Sandy.Roberts@ofina.on.ca>; Karim Javeri <Karim.Javeri@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

Here are the final materials.

**Tomasz Bugajski**
EA & Special Policy Advisor
Corporate and Electricity Finance Division
Ontario Financing Authority
416-325-0924 | tomasz.bugajski@ofina.on.ca

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**From:** Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]

**Sent:** Monday, November 07, 2016 2:17 PM
**To:** Jenarra DeSouza (MEDTE/MRI) <Jenarra.DeSouza@ontario.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
**Cc:** Gwendolynne Young (ENE) <Gwendolynne.Young@ontario.ca>; David McLean (MOF) <David.McLean@ontario.ca>
**Subject:** FW: LRC note for fact check - comments due Monday 5 pm

FYI – in context of electricity rate mitigation pink note fact check. Final materials attached.

---

**From:** Wittman, Nancy (CAB)
**Sent:** November 7, 2016 2:15 PM
**To:** Pearce, Christopher (MOF)
**Subject:** LRC note for fact check - comments due Monday 5 pm

Chris – here you go.

Nancy

<REG-11246_ID47240_LRC_Committee_Note Nov 7 to minisries for fact check_CEFD_TPD.docx>

<REG-11246_ID47240_LRC_Committee_Note Nov 7 to minisries for fact check_CEFD_TPD v2.docx>

**From:** Gavin He
**To:** John Kim
**Subject:** Re: MoE - OFA MOU for OREC
**Date:** Friday, December 09, 2016 4:43:14 PM

---

Hi John,

I will add that comment in.

Regards,
Gavin He

On Dec 9, 2016, at 16:39, John Kim <John.Kim@ofina.on.ca> wrote:

> For sure. I do think though that there's strategic interest in having that bullet in….for our benefit but not sure if Ron'd agree.
>
> John.
>
> ---
>
> **From:** Gavin He
> **Sent:** Friday, December 09, 2016 4:33 PM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Subject:** RE: MoE - OFA MOU for OREC
>
> Hi John,
>
> It seems Ken already made a comment on that bullet point. Are you okay with the attached version going to Ron to review?
>
> Thanks,
> Gavin He
>
> ---
>
> **From:** John Kim
> **Sent:** Friday, December 09, 2016 4:00 PM
> **To:** Gavin He <Gavin.He@ofina.on.ca>
> **Subject:** RE: MoE - OFA MOU for OREC
>
> Ok, thanks. On the second major change, I think there's strategic value in that but Ron will need to take a look.
>
> ---
>
> **From:** Gavin He
> **Sent:** Friday, December 09, 2016 3:47 PM
> **To:** John Kim <John.Kim@ofina.on.ca>

**Subject:** RE: MoE - OFA MOU for OREC

Hi John,

Sure, will do.

Also, Ken got back to me on my question on “Reimbursements” and “Payments” and they should stay the way it was. So I will reserve the edits and send it to Ron to review.

Thanks,
Gavin He

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**From:** John Kim
**Sent:** Friday, December 09, 2016 3:44 PM
**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Thanks Ken.

Gavin, could you send this on to Ron for his review?

John.

---

**From:** Kenneth Russell
**Sent:** Friday, December 09, 2016 3:18 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Gavin

The revised language for section3. (b) is fine.

Ken

---

**From:** Gavin He
**Sent:** Friday, December 09, 2016 9:38 AM
**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Hi Ken,

In addition to the question below, Energy updated the language in the MOU Section 3. (b) to be:

"The OFA will keep and maintain all records related to the OREC for a period of seven (7) years, and will provide the Ministry with electronic copies (or paper copies, if requested by the Ministry) of such of those records as the Ministry may request from time to time."

Can you please let us know if you are okay with the revised language?

Thanks,
Gavin He

---

**From:** Gavin He
**Sent:** Thursday, December 08, 2016 6:43 PM
**To:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: MoE - OFA MOU for OREC

Hi Ken,

Quick question in the attached MOU. In bullet #2, "reimbursements" was defined, and then in #3, "reimbursements" was re-defined as "payments". Can we not just use the term "payments" across the whole document? Could you please let us know what your thoughts are on this?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Wednesday, December 07, 2016 11:20 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: MoE - OFA MOU for OREC

Do you mind taking a look? I want to move this to Ron this afternoon….

Thanks,

John.

---

**From:** Salman Qadir
**Sent:** Wednesday, December 07, 2016 8:20 AM

**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Fwd: MoE - OFA MOU for OREC

Hi John,

See Kens comment in the attached. He has a good point in the sense as to what sort of "are in agreement" looks like, especially since we seen that Energys PRRT didn't really mention the OFA as playing a role in the forecasting.

Salman

Begin forwarded message:

> **From:** Kenneth Russell <Kenneth.Russell@ofina.on.ca>
> **Date:** December 6, 2016 at 3:28:07 PM EST
> **To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
> **Cc:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>
> **Subject: RE: MoE - OFA MOU for OREC**
>
> Salman
>
> My comments on your notes to the draft MOU are attached. I am not in a position to comment on the description of the program structure in the draft MOU.
>
> Ken
>
> ---
>
> **From:** Salman Qadir
> **Sent:** Monday, December 05, 2016 10:46 AM
> **To:** Caroline Swerdlyk <Caroline.Swerdlyk@ofina.on.ca>; Kenneth Russell <Kenneth.Russell@ofina.on.ca>
> **Cc:** John Kim <John.Kim@ofina.on.ca>
> **Subject:** MoE - OFA MOU for OREC
>
> Hi Caroline/Ken,
>
> We have received a marked up version of the MOU between the OFA and MoE related to the OREC regulation. I did a quick blackline and there were actually other changes that were not highlighted and was advisable to check with you whether you see any issues/comments. The changes seem to revolve around the definitions of the program etc.
>
> V3_clean = what we had last sent over
> DAP Nov 25 = the latest markup we received

Track changes to v3_clean - quick blackline to show additional changes not shown in the markup received.

Hoping you can take a quick look.

Thank you,
Salman

**From:** John Kim
**To:** Ronald Kwan
**Cc:** Shajee Kathirgamanathan; Tomasz Bugajski
**Subject:** Re: New price mitigation products for review - use this email
**Date:** Saturday, September 10, 2016 9:30:01 AM

---

I am at an appointment but will have a look when I get home. The way I looked at the email from webmail last night I only saw one attachment for some reason.

On Sep 10, 2016, at 4:28 AM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi Shajee,
>
> Thanks. I accepted some and not all of the suggestions. Please see attached.
>
> Ron
>
> ---
>
> **From:** Shajee Kathirgamanathan
> **Sent:** September-10-16 2:36 AM
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> **Subject:** RE: New price mitigation products for review - use this email
>
> Some mostly minor edits.
>
> Note: I added RRRP to the existing programs Key Facts.
>
> Thanks
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Friday, September 09, 2016 10:18 PM
> **To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
> **Cc:** Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>
> **Subject:** Fwd: New price mitigation products for review - use this email
>
> Hi,
>
> See attached for review.
>
> Thanks,
> Ron
>
> Begin forwarded message:
>
> **From:** "Patel, Lesley (MOF)" <Lesley.Patel@ontario.ca>

**Date:** September 9, 2016 at 9:57:50 PM EDT
**To:** "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Lawson, Lynn (MOF)" <Lynn.Lawson@ontario.ca>, "Subrahmanyan, Sriram (MOF)" <Sriram.Subrahmanyan@ontario.ca>, "Waterston, Michael (MOF)" <Michael.Waterston@ontario.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>, "Lewis, Brian (MOF)" <Brian.Lewis@Ontario.ca>, "Lewis, Shannon (MOF)" <Shannon.Lewis@ontario.ca>
**Cc:** "Lone, Dianne (MOF)" <Dianne.Lone@ontario.ca>, "DeSouza, Jenarra (MOF)" <Jenarra.DeSouza@ontario.ca>, "Langleben, Ann (MOF)" <Ann.Langleben@ontario.ca>, "Bugajski, Tomasz (OFA)" <Tomasz.Bugajski@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>, "Ize-Dukuze, Marilyn (MOF)" <Marilyn.Ize-Dukuze@ontario.ca>, "Young, Gwendolynne (MOF)" <Gwendolynne.Young@ontario.ca>, "Inglis, Liane (MOF)" <Liane.Inglis@ontario.ca>
**Subject: RE: New price mitigation products for review - use this email**

Hi - please use this email thread where everyone is looped in to provide your feedback.

_____

From: Patel, Lesley (MOF)
Sent: Friday, September 09, 2016 9:51 PM
To: Ronald Kwan; Ingram, Kelsey (MOF); Birks, Ryan (MOF); Lawson, Lynn (MOF); Subrahmanyan, Sriram (MOF); Waterston, Michael (MOF); Schuurman, Tim (MOF); Lewis, Brian (MOF); Lewis, Shannon (MOF)
Cc: Lone, Dianne (MOF); DeSouza, Jenarra (MOF); Langleben, Ann (MOF); Bugajski, Tomasz (OFA); McLean, David (MOF); Ize-Dukuze, Marilyn (MOF); Young, Gwendolynne (MOF); Inglis, Liane (MOF)
Subject: New price mitigation products for review

Hi everyone,

Please find attached new MOE products for review. I have tracked changes on the new September 15 news release that speaks to the introduction of the bill to ensure it was consistent with the language in last news release we just finalized. MOE has also added small farms to the users that benefit from this program in this new release - I have deleted that, but it may be worth considering if we want to add it. New components on the release include mention of additional programs and a new quote from Minister Thibeault that definitely should be reviewed.

Please send your edits/changes to these products as soon as possible as CO/PO still needs to review everything. A reminder to please keep changes consistent with the discussions we've been having

throughout the day, if possible - I realize there is also some new material that may warrant further discussion.

Thanks,
Lesley

<20160909 Key Facts - Exsisting Programs - MO Edits 5 pm_Markup v3.doc>

<20160909 ICI Backgounder 6pm all edits CLEAN_Markup _v3.docx>

<20160909 September 15 NR - Price Mitigation 6 pm csb - CEFDv2.docx>

<20160909 Key Facts - New Initiatives- Sept 9 5pm version CLEAN_Markup_v3.doc>

<20160909 Key Facts - 3 Things You Need To Know - 5 pm CLEAN_Markup_v3.doc>

<20160909 Combined Rebate and RRRP Backgounder 5 pm CLEAN_Markup_v2.docx>

**From:** Ronald Kwan
**To:** John Kim
**Subject:** Re: OFA-IESO loan
**Date:** Saturday, January 21, 2017 12:14:13 PM

---

Thanks John.

Ron

On Jan 21, 2017, at 5:08 AM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Ron,
>
> For sure, I briefly looked at the IESO financials after coming back from the meeting yesterday. They only have the 90M on their books.
>
> We are conducting due diligence on IESO's credit facility request as we speak so we will have a very close look at the market book, etc. While not the OFA facility, we will use it as an opportunity to delve deeply into the accounting considerations, etc.
>
> Thanks,
>
> John.
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Friday, January 20, 2017 5:39 PM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Subject:** FW: OFA-IESO loan
>
> Hi John,
>
> Take note.
>
> Thanks,
> Ron
>
> ---
>
> **From:** Petsche, Nadine (TBS) [mailto:Nadine.Petsche@ontario.ca]
> **Sent:** January-20-17 17:37
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Bharat Patel (MOF) <Bharat.Patel3@ontario.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; John Psinas <John.Psinas@ofina.on.ca>
> **Subject:** FW: OFA-IESO loan
>
> Ronald,
> Since you were on today's call, I thought it might be helpful to loop you in on this

request as well. N

---

**From:** Patel, Bharat (TBS)
**Sent:** January-20-17 5:13 PM
**To:** Kandeepan, Ken (OFA); John Psinas
**Cc:** Petsche, Nadine (TBS); Veinot, Cindy (TBS)
**Subject:** FW: OFA-IESO loan

Ken/John,

Not sure if you are the right person to ask, but can you please help to get the answer for $100M RRP program support that OFA provides to IESO? We are interested in how this loan is recorded (i.e. on the books vs. market)? if on the books where? And if market how it works?

Thanks,
Bharat

---

**From:** Veinot, Cindy (TBS)
**Sent:** January-20-17 5:05 PM
**To:** Patel, Bharat (TBS)
**Cc:** Petsche, Nadine (TBS)
**Subject:** FW: OFA-IESO loan

See below – can you see how OFA has this amount recorded – its apparently on the market books.

---

**From:** Kim Marshall [mailto:Kim.Marshall@ieso.ca]
**Sent:** January-20-17 3:36 PM
**To:** Veinot, Cindy (TBS)
**Subject:** RE: OFA-IESO loan

market

**Kimberly Marshall** | VP, Corporate Services & CFO
Independent Electricity System Operator (IESO) | T: (416) 969-6232 | C: (416) 545-7202
120 Adelaide Street West, Suite 1600, Toronto, ON M5H 1T1
Web: www.ieso.ca[ieso.ca] | Twitter: IESO_Tweets[twitter.com] | LinkedIn: IESO[linkedin.com]

***Corporate Services collaborates with you to deliver solutions and expertise that enable the IESO to achieve its goals.***

Conservation: www.saveONenergy.ca[saveONenergy.ca] | Twitter: saveONenergyOnt[twitter.com] | LinkedIn: saveONenergy[linkedin.com]

---

**From:** Veinot, Cindy (TBS) [mailto:Cindy.Veinot@ontario.ca]
**Sent:** January 20, 2017 3:35 PM
**To:** Kim Marshall

**Subject:** RE: OFA-IESO loan

*** EXTERNAL email. Please be cautious and evaluate before you click on links, open attachments, or provide credentials. ***

Thanks – is this loan recorded on the accounting books (vs. the market books?)

Cindy

---

**From:** Kim Marshall [mailto:Kim.Marshall@ieso.ca]
**Sent:** January-20-17 3:32 PM
**To:** Veinot, Cindy (TBS)
**Subject:** OFA-IESO loan

Cindy, the IESO currently has a monthly payable to the OFA. Right now it is in the 100million range support the rpp program. Not sure how that is currently treated by the OFA. thanks

**Kimberly Marshall** | VP, Corporate Services & CFO
Independent Electricity System Operator (IESO) | T: (416) 969-6232 | C: (416) 545-7202
120 Adelaide Street West, Suite 1600, Toronto, ON M5H 1T1
Web: www.ieso.ca[ieso.ca] | Twitter: IESO_Tweets[twitter.com] | LinkedIn: IESO[linkedin.com]

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**From:** Emily Kerr
**To:** John Kim
**Cc:** Gavin He
**Subject:** Re: Potential Rate Mitigation
**Date:** Monday, December 05, 2016 9:46:33 PM

---

I don't have the information directly, but I will look and see if I can figure it out from other info.

On Dec 5, 2016, at 9:38 PM, John Kim <John.Kim@ofina.on.ca> wrote:

> Sorry, I meant excluding residential….
>
> ---
>
> **From:** John Kim
> **Sent:** Monday, December 05, 2016 9:35 PM
> **To:** Gavin He <Gavin.He@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
> **Subject:** RE: Potential Rate Mitigation
>
> Hi Emily,
>
> Would you know the composition of Class B consumption from the total? Just wondering if you have that readily available….
>
> Thanks,
>
> John.
>
> ---
>
> **From:** Gavin He
> **Sent:** Monday, December 05, 2016 9:21 PM
> **To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
> **Subject:** Fwd: Potential Rate Mitigation
>
> Hi John/Emily,
>
> Just forwarding the following up communications on this with you.
>
> Regards,
> Gavin He
>
> Begin forwarded message:
>
> > **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> > **Date:** December 5, 2016 at 21:18:37 EST
> > **To:** Gadi Mayman <Gadi.Mayman@ofina.on.ca>
> > **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>,

"Tim Schuurman (MOF)" <Tim.Schuurman@ontario.ca>, "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, Christina Zhang <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "David McLean (MOF)" <David.McLean@ontario.ca>
**Subject: Re: Potential Rate Mitigation**

Hi Gadi,

If you recall, we did that table a couple weeks ago on existing fiscally funded mitigation programs. We can suggest adding that in. And, as for the GGRA, I think one of the challenges is it was supposed to be for incremental measures to reduce GHGs (not replacing funding for existing measures. But, that said, that was notion I noodled on too, but it would require at least a change in positioning, convincing the Minister of MOECC, as the arbiter of such and/or change the legislation.

Ron

> On Dec 5, 2016, at 9:08 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:
>
> Big numbers, and I didn't in my scan through see much credit given to the fiscal sacrifices already made. Maybe those amounts could be added in the context section?
>
> Would any of the fiscal plan hits be eligible as offsets for our Cap and Trade revenues? I suppose because so little of our electricity production is carbon producing, probably not, but if ICI moves consumption off-peak does it reduce the need for gas plants to operate?
>
> And at least the idea of offsetting the federal portion of the HST is gone
>
> > On Dec 5, 2016, at 8:03 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
> >
> > Hi Chris,
> >
> > Will do.
> >
> > Ron

On Dec 5, 2016, at 8:02 PM, Pearce, Christopher (MOF) <Christopher.Pearce@ontario.ca> wrote:

Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.

From: Katona, Keley (ENERGY)

Sent: December 5, 2016 7:44 PM

To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Potential Rate Mitigation

Hi,

See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?

If there are questions, I'm happy to discuss.

Thanks,

Keley

From: Imbrogno, Serge (ENERGY)

Sent: December-05-16 7:41 PM

To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)

Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

<Price Mitigation Proposals_Dec5-16_v11.pptx>

**From:** John Kim
**To:** Shajee Kathirgamanathan; Salman Qadir; Adam Prokop
**Cc:** Gavin He
**Subject:** Re: Potential Rate Mitigation
**Date:** Monday, December 05, 2016 9:29:20 PM

---

We will need a sense of Class B share of DRC fairly quickly....if I'm not mistaken, we've seen that during the OREC modeling process?

---

**From:** John Kim
**Sent:** December 5, 2016 9:24 PM
**To:** Shajee Kathirgamanathan; Salman Qadir; Adam Prokop
**Cc:** Gavin He
**Subject:** Fw: Potential Rate Mitigation

Hi,

Something we will need to react quickly to. Remember also that we did a few slides a couple of weeks ago?

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** December 5, 2016 8:14 PM
**To:** Francisco Chinchon; John Kim; Emily Kerr; Darren Scanlan
**Subject:** Fwd: Potential Rate Mitigation

Hi,

Lets meet in the morning to discuss.

We'll need a product for EOD. Could be an annotated slide deck, as well as a markup. Suggestion on any other formats?

Ron

Begin forwarded message:

**From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
**Date:** December 5, 2016 at 8:02:36 PM EST
**To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
**Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>
**Subject: Fw: Potential Rate Mitigation**

Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.

From: Katona, Keley (ENERGY)
Sent: December 5, 2016 7:44 PM
To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)
Subject: FW: Potential Rate Mitigation

Hi,

See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?

If there are questions, I'm happy to discuss.

Thanks,
Keley

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated.  Keley can coordinate with your EAs.  I understand that Andrew T. plans to share with PO/your MOs.

Serge

| | |
|---|---|
| **From:** | Francisco Chinchon |
| **To:** | Ronald Kwan |
| **Cc:** | John Kim; Emily Kerr; Darren Scanlan |
| **Subject:** | Re: Potential Rate Mitigation |
| **Date:** | Monday, December 05, 2016 8:37:17 PM |

---

Hi,

I think annotated version works well given timelines and type of discussion.

Thanks,

Francisco

On Dec 5, 2016, at 8:14 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi,
>
> Lets meet in the morning to discuss.
>
> We'll need a product for EOD. Could be an annotated slide deck, as well as a markup. Suggestion on any other formats?
>
> Ron
>
> Begin forwarded message:
>
> **From:** "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Date:** December 5, 2016 at 8:02:36 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
> **Cc:** "Birks, Ryan (MOF)" <Ryan.Birks@ontario.ca>, "Zhang, Christina (OFA)" <Christina.Zhang@ofina.on.ca>, Gavin He <Gavin.He@ofina.on.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>
> **Subject: Fw: Potential Rate Mitigation**
>
> Ron - can CEFD take the lead on assessing Energy's rate mitigation deck? Per energy this is apparently tracking to MPC on Thursday, though that's news to us here. Will share with MO shortly.

From: Katona, Keley (ENERGY)
Sent: December 5, 2016 7:44 PM
To: McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB); Kwamena, Boafoa (CAB)
Subject: FW: Potential Rate Mitigation

Hi,

See attached and below. We are aiming to turn around a new version of the deck, incorporating any comments your ministries might have before major projects on Thursday. As such, could you please pass along your comments by end of day tomorrow?

If there are questions, I'm happy to discuss.

Thanks,
Keley

From: Imbrogno, Serge (ENERGY)
Sent: December-05-16 7:41 PM
To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: Potential Rate Mitigation

Hi,

Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.

Serge

<Price Mitigation Proposals_Dec5-16_v11.pptx>

**From:** Francisco Chinchon
**To:** Ronald Kwan
**Cc:** John Kim; Emily Kerr; Darren Scanlan; Gavin He
**Subject:** Re: Potential Rate Mitigation
**Date:** Wednesday, December 07, 2016 10:38:41 PM

---

Hi,

I'm glad they kept the fiscal slide in. I still miss a clear bullet saying that the impacts to bills would be nominal at best. Beyond that not sure there is much more we can do at this point.

Thanks,

Francisco

> On Dec 7, 2016, at 10:27 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> Hi,
>
> Comments?
>
> Ron
>
> -----Original Message-----
> From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]
> Sent: December-07-16 7:10 PM
> To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Marianne Nguyen (MCYS) <Marianne.Nguyen@ontario.ca>; Elizabeth Mendes (MOF) <Elizabeth.Mendes@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
> Subject: Fw: Potential Rate Mitigation
>
> FYI - tomorrow's deck.
>
> Sent from my BlackBerry 10 smartphone on the Rogers network.
> From: McLean, David (MOF) <David.McLean@ontario.ca>
> Sent: Wednesday, December 7, 2016 6:56 PM
> To: Pearce, Christopher (MOF); Young, Gwendolynne (MOF); Ize-Dukuze, Marilyn (MOF); Clarke-Darshanand, Jamille (MOF)
> Subject: Fw: Potential Rate Mitigation
>
>
> For MPC tomorrow
>
> Sent from my BlackBerry 10 smartphone on the Rogers network.
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Wednesday, December 7, 2016 6:55 PM
> To: Kwamena, Boafoa (CAB); McLean, David (MOF); MacIntyre, Kyle (TBS); Foster, Robert (CAB)
> Subject: FW: Potential Rate Mitigation
>
>
> FYI
>
> From: Imbrogno, Serge (ENERGY)

> Sent: December-07-16 6:51 PM
> To: Orsini, Steve (CAB); Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: RE: Potential Rate Mitigation
>
> HI,
> Here's the latest version of the deck. We tried to incorporate comments from MOF / TBS. This version is with my MO for review but it will likely be the version we will use at Major Projects tomorrow. Keley can share with your EAs.
> Serge
>
> From: Imbrogno, Serge (ENERGY)
> Sent: December-05-16 7:41 PM
> To: Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB)
> Cc: Orsini, Steve (CAB); Bromm, William (CAB); Katona, Keley (ENERGY)
> Subject: Potential Rate Mitigation
>
> Hi,
>
> Attached is a draft of the rate mitigation deck. This is tracking to major projects on Thursday for a preliminary discussion. As you can see there are a number of initiatives that have fiscal implications so your input and comments would be appreciated. Keley can coordinate with your EAs. I understand that Andrew T. plans to share with PO/your MOs.
>
> Serge
>
> <Price Mitigation Proposals_Dec7-16_v13 Clean.pptx>

**From:** Ronald Kwan
**To:** Francisco Chinchon
**Cc:** John Kim
**Subject:** Re: Price Mitigation & Accounting Meeting
**Date:** Saturday, January 21, 2017 12:59:35 PM

---

Yes, yesterday John and I noted that latter risk too on the RPP treatment.

Ron

On Jan 21, 2017, at 12:55 PM, Francisco Chinchon <Francisco.Chinchon@ofina.on.ca> wrote:

> Hi,
>
> I'm not sure how this would not represent a fiscal risk at the least.
>
> OEFC would remain exposed to LDCs ability to recover and service the debt in the future. Also, the lack of matching between the asset and the liability that is being introduced would remain and become structural to LDCs and would affect ratepayers differently if not all participate.
>
> As you suggest, I don't see why LDCs would agree to carry the debt. They would be assuming a massive regulatory/accounting risk. Even if well structured it may prevent shareholders (municipal or private) from being able to fully realize their equity in the future.
>
> With respect to the RPP model is it off the books because its short-term nature? I wonder if this will put the whole model at risk forcing to bring everything on the books.
>
> Francisco
>
> On Jan 21, 2017, at 12:13 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> > Hi,
> >
> > FYI and comments -- and not for further distribution.
> >
> > Thanks,
> > Ron
> >
> > Begin forwarded message:
> >
> > **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>

**Date:** January 21, 2017 at 12:09:55 PM EST
**To:** Gadi Mayman <Gadi.Mayman@ofina.on.ca>
**Cc:** "Scott Thompson (CAB)" <Scott.Thompson@ontario.ca>, "Nancy Kennedy (MOHLTC)" <Nancy.Kennedy@ontario.ca>
**Subject: Re: Price Mitigation & Accounting Meeting**

I think Steen is putting his hopes on the RPP as a model, writ larger. There seemed to be quite a lot of interest in IESO"s "market books" treatment  That said, Cindy did raise the issue of how the AG might feel about this, and her general dislike of rate-regulated accounting.

And That said on the RPP.  I agree that an LDC plus model should be explored more fully, but, like other options, it arguably can be seen as a shift  from past policies & narrative of the government on LDCs.

The risk on recovery and impact on the balance sheet, even with the government offering to help out, could be seen as creating a disincentive for further private-sector interest in the sector. Not sure if it would no net push for or impede consolidation, but likely at a lower value for municipalities.

LDC consolidation could be seen as more of an Energy interest than Finance's, though we have supported it in various documents and initiatives.

If government policy is to take on more responsibility for financing the sector, maybe it is consistent to also have the government take on more equity and rely less on private sector capital, debt or equity. But that would be seen as a policy shift too.

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Original Message

From: Ronald Kwan

Sent: Saturday, January 21, 2017 11:41 AM

To: Gadi Mayman

Cc: Scott Thompson (CAB); Nancy Kennedy (MOHLTC)

Subject: Re: Price Mitigation & Accounting Meeting

A few quick comments:

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Is it worth suggesting this to Energy and the internal and external accountants?

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From: Thompson, Scott (MOF)

Sent: Saturday, January 21, 2017 7:33 AM

To: Ronald Kwan; Gadi Mayman; Nancy Kennedy (MOHLTC)

Subject: Re: Price Mitigation & Accounting Meeting

Thanks Ron. Good update

Scott

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Ronald Kwan

Sent: Friday, January 20, 2017 11:39 PM

To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Kennedy, Nancy (MOF)

Subject: Price Mitigation & Accounting Meeting

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**From:** Francisco Chinchon
**To:** Ronald Kwan
**Cc:** John Kim
**Subject:** Re: Price Mitigation & Accounting Meeting
**Date:** Saturday, January 21, 2017 12:55:36 PM

---

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> Hi,
>
> FYI and comments -- and not for further distribution.
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> Thanks,
> Ron
>
> Begin forwarded message:
>
> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 21, 2017 at 12:09:55 PM EST
> **To:** Gadi Mayman <Gadi.Mayman@ofina.on.ca>
> **Cc:** "Scott Thompson (CAB)" <Scott.Thompson@ontario.ca>, "Nancy Kennedy (MOHLTC)" <Nancy.Kennedy@ontario.ca>
> **Subject: Re: Price Mitigation & Accounting Meeting**
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**To:** Francisco Chinchon
**Cc:** John Kim
**Subject:** Re: Price Mitigation & Accounting Meeting
**Date:** Saturday, January 21, 2017 7:01:35 PM

---

And I should have noted that there is also a legal workstream on looking at legislative and regulatory issues. I would think LDCs would have to be required to take this on under this option.

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>
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**Subject: Re: Price Mitigation & Accounting Meeting**

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**From:** Francisco Chinchon
**To:** Ronald Kwan
**Cc:** Gavin He; Darren Scanlan; Shajee Kathirgamanathan; John Kim
**Subject:** Re: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx
**Date:** Tuesday, January 10, 2017 8:01:07 PM

---

I'll review now.

On Jan 10, 2017, at 7:39 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi,
>
> I did a clean version too, if that helps with new markups.
>
> Ron
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** January-10-17 19:33
> **To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
> **Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
>
> Hi,
>
> Thanks all.
>
> I moved some slides around and made some elaborations on the DT and DTB, as attached. Comments?
>
> Ron
>
> ---
>
> **From:** Francisco Chinchon
> **Sent:** January-10-17 11:08
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
>
> Hi Ron,
>
> Attached is a draft deck.

Thanks,

Francisco

---

**From:** Gavin He
**Sent:** Monday, January 09, 2017 5:37 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

FYI - DMO would like to receive the notes by EOD tomorrow.

Thanks,
Gavin He

---

**From:** Gavin He
**Sent:** Friday, January 6, 2017 10:32 AM
**To:** Francisco Chinchon; John Kim; Darren Scanlan; Shajee Kathirgamanathan
**Cc:** Ronald Kwan
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

Attached are the notes along with the request.

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, January 06, 2017 10:25 AM

**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Please see the request. Lease start drafting a thorough analysis.

Thanks,
Ron

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> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 6, 2017 at 10:23:12 AM EST
> **To:** "David McLean (MOF)" <David.McLean@ontario.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, Gavin He <Gavin.He@ofina.on.ca>
> **Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Hi David,
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> Yes, we can work on that for early next week.
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> Ron
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From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]

Sent: December 13, 2016 7:21 AM

To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)

Cc: McLean, David (MOF); Pearce, Christopher (MOF)

Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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Sent: December-12-16 9:18 AM

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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From: Thompson, Scott (MOF)

Sent: December 11, 2016 12:25 PM

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Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)

To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)

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<Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx>

<Rate Mitigation Proposals - Departure Tax (2017 01 10 v3).pptx>

| | |
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| **From:** | John Kim |
| **To:** | Gavin He |
| **Subject:** | Re: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Monday, January 09, 2017 6:55:48 PM |

Thanks....let me know if you need anything.  I will be home most of today.

John.

---

**From:** Gavin He
**Sent:** January 9, 2017 6:54 PM
**To:** John Kim
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi John,

As requested, please find attached the materials we have.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Monday, January 09, 2017 3:50 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Yup, sure, no problem.

---

**From:** Gavin He
**Sent:** January 9, 2017 3:48 PM
**To:** John Kim
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi John,

I am at the Frost Building now and will send you the materials after I got back to the office later today.  Is that ok?

Regards,
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On Jan 9, 2017, at 15:30, John Kim <John.Kim@ofina.on.ca> wrote:

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Could you send me the version that we worked on earlier as well as related file in attachments?

Thanks,

John.

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**From:** Gavin He
**Sent:** January 9, 2017 12:14 PM
**To:** John Kim; Shajee Kathirgamanathan
**Cc:** Francisco Chinchon; Darren Scanlan
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi John/Shajee,

Just a quick update from the meeting. Ron wants a short presentation deck on the Departure Tax proposal, which will include contents on Departure Tax, Deferred Tax Benefit, Stranded Debt impact, and etc. SIFB will lead on this task and will share the deck with EFB for comments on SD related materials.

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**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
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Works for us.

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**Sent:** Monday, January 09, 2017 10:12 AM
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**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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We can have a preliminary discussion today, say at 11:30?

Ron

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Hi Ron,

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Thanks,

Francisco

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**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Welcome back.

Can we set up a time later this morning to discuss.

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| **Subject:** | Re: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Monday, January 09, 2017 5:36:51 PM |

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FYI - DMO would like to receive the notes by EOD tomorrow.

Thanks,
Gavin He

---

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**From:** John Kim
**To:** Gavin He
**Subject:** Re: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx
**Date:** Monday, January 09, 2017 3:49:31 PM

---

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**To:** John Kim
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----

From: Thompson, Scott (MOF)

Sent: December 11, 2016 12:25 PM

To: McLean, David (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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From: Orsini, Steve (CAB)

Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)

To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)

Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: December-11-16 12:04 PM

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Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

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Serge

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<Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx>

**From:** Gavin He
**To:** John Kim
**Subject:** Re: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx
**Date:** Monday, January 09, 2017 3:48:24 PM

---

Hi John,

I am at the Frost Building now and will send you the materials after I got back to the office later today. Is that ok?

Regards,
Gavin He

On Jan 9, 2017, at 15:30, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Gavin,
>
> Could you send me the version that we worked on earlier as well as related file in attachments?
>
> Thanks,
>
> John.

---

**From:** Gavin He
**Sent:** January 9, 2017 12:14 PM
**To:** John Kim; Shajee Kathirgamanathan
**Cc:** Francisco Chinchon; Darren Scanlan
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi John/Shajee,

Just a quick update from the meeting. Ron wants a short presentation deck on the Departure Tax proposal, which will include contents on Departure Tax, Deferred Tax Benefit, Stranded Debt impact, and etc. SIFB will lead on this task and will share the deck with EFB for comments on SD related materials.

Francisco/Darren – please feel free to add anything that I might have missed or stated incorrectly.

Thanks,
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**From:** Francisco Chinchon
**Sent:** Monday, January 09, 2017 10:13 AM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Works for us.

---

**From:** Ronald Kwan
**Sent:** Monday, January 09, 2017 10:12 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi,

We can have a preliminary discussion today, say at 11:30?

Ron

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**Sent:** January-09-17 10:11
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**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

Thanks and happy new year! I understand Shajee is sick today. Darren and I are available or we could wait until tomorrow.

Thanks,

Francisco

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**Cc:** Gavin He <Gavin.He@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Welcome back.

Can we set up a time later this morning to discuss.

Thanks,
Ron

---

**From:** Gavin He
**Sent:** January-06-17 10:32
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

Attached are the notes along with the request.

Thanks,
Gavin He

---

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**Sent:** Friday, January 06, 2017 10:25 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee

Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Please see the request. Lease start drafting a thorough analysis.

Thanks,
Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 6, 2017 at 10:23:12 AM EST
> **To:** "David McLean (MOF)" <David.McLean@ontario.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, Gavin He <Gavin.He@ofina.on.ca>
> **Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Hi David,
>
> Yes, we can work on that for early next week.
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> Ron
>
> > On Jan 6, 2017, at 10:20 AM, McLean, David (MOF) <David.McLean@ontario.ca> wrote:
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> > Hi Ron,
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> > The DM has asked if you and your team could build on the analysis contained in this note on the departure tax component. He'd like something thorough focused specifically on that proposal.
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> > Thanks,
> > Dave
> >
> > -----Original Message-----
> > From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]

Sent: December 13, 2016 7:21 AM

To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)

Cc: McLean, David (MOF); Pearce, Christopher (MOF)

Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

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-----Original Message-----

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Sent: December-12-16 9:18 AM

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Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

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**To:** Gavin He; Shajee Kathirgamanathan
**Subject:** Re: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx
**Date:** Monday, January 09, 2017 3:30:08 PM

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Cc: McLean, David (MOF); Pearce, Christopher (MOF)

Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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**From:** Francisco Chinchon
**To:** John Kim
**Subject:** Re: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx
**Date:** Friday, December 23, 2016 1:23:42 PM

---

I thought you only fly AirKim

On Dec 23, 2016, at 1:22 PM, John Kim <John.Kim@ofina.on.ca> wrote:

> Lol…..not bad. Democracy. :P
>
> Brutal flight though yesterday, nothing positive about 13 hr flight. I'm sure it's so much better than the stop-over in Vancouver but still bad going through it.
>
> ---
>
> **From:** Francisco Chinchon
> **Sent:** Friday, December 23, 2016 1:18 PM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
>
> I told him to keep the full DRC assessment in... didn't spend much time looking at the option without it...
>
> How is NK? I'm surprised you have email access...
>
> On Dec 23, 2016, at 1:14 PM, John Kim <John.Kim@ofina.on.ca> wrote:
>
> > Yeah, not a big deal as both versions or Options appear but I wasn't sure about treating 330 as that and the then next slide the 450 for the ending for Class B is there.
> >
> > ---
> >
> > **From:** Francisco Chinchon
> > **Sent:** Friday, December 23, 2016 1:11 PM
> > **To:** John Kim <John.Kim@ofina.on.ca>
> > **Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
> >
> > As I understood there was a comment suggesting that ending DRC is not a cost to taxpayers but rather just forgone revenue...
> >
> > On Dec 23, 2016, at 1:08 PM, John Kim <John.Kim@ofina.on.ca> wrote:
> >
> > > Didn't want to meddle while not able to fully engage so asking…..but the slides 8 and 9 where the Ending the DRC 330, doesn't ring a bell.
> > >
> > > ---

**From:** Francisco Chinchon
**Sent:** Friday, December 23, 2016 12:02 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks, I made some tweaks.

---

**From:** Shajee Kathirgamanathan
**Sent:** Friday, December 23, 2016 11:57 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi,

I made a few edits to provide additional context and spruced up the chart.

Please see v7 attached. Also found here: S:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016\Price-Mitigation - CEFD Slides-Dec6-2016_v7.pptx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Friday, December 23, 2016 10:32 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's

Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Francisco. I'll update the deck to reflect your comments.

Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Francisco Chinchon
**Sent:** Friday, December 23, 2016 9:56 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Shajee,

My two cents and in the context of Scott's comments:

<!--[if !supportLists]-->1. <!--[endif]-->DRC should stay in the deck but you may want to provide further context as for example that removing it for residential users was a policy decision to help mitigate rate pressures rather than based on defeasance as per the initial concepts.

<!--[if !supportLists]-->2. <!--[endif]-->With respect to the fiscal contributions from OPG, H1 you may want to add context on how OPG and H1 are commercial business corporations expected to produce a return in exchange for the risk the shareholder assumes. Also that there is an opportunity cost on having capital allocated to them. I recognize this may be more of a controversial point (depending on how people see things) but is technically correct to flag if people are somehow challenging the returns or earnings the Province obtains from its commercial enterprises.

Thanks,

Francisco

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, December 22, 2016 6:34 PM
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Ron.

I found a similar file, but began from 2011-12 onwards to be consistent with the table we were developing. In Slide 16, I added a revised chart.

Please see file attached, also found here: S:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016\Price-Mitigation - CEFD Slides-Dec6-2016_v6.pptx

Also per Scott's comments below, I left the option open to use the DRC as a fiscal benefit, as opposed to the DRC ending as a rate mitigation measure (fiscal cost). That's indicated by Option 1 or 2 in the top right corner of the chart.

Happy to update the OEFC Board Orientation file as well to reflect this revision. And please advise if you'd like years going back to 1999-2000.

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

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**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi,

I think you had been previously working on updating slide 9 of the attached.

S:\Users\CEF\Hydro 2016\OEFC\Board\December\Orientation\Archive

Ron

---

**From:** Shajee Kathirgamanathan
**Sent:** December-22-16 14:23
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Sure. Might need to confirm which chart, will take a look first.

Thanks

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Ronald Kwan
**Sent:** Thursday, December 22, 2016 1:54 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>

**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FyI  Shajee.

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> **From:** "Nelms, Scott (ENERGY)" <Scott.Nelms@ontario.ca>
> **Date:** December 22, 2016 at 1:41:45 PM EST
> **To:** "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>
> **Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
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From: Ronald Kwan
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Sent: December 21, 2016 5:11 PM
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Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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Sent: December-21-16 16:55
To: Ronald Kwan
<Ronald.Kwan@ofina.on.ca>; Nancy Kennedy (MOHLTC)
<Nancy.Kennedy@ontario.ca>
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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Sent: December 21, 2016 4:14 PM
To: Kennedy, Nancy (MOF); Nelms, Scott (ENERGY)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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-----Original Message-----
From: Ronald Kwan
Sent: December-13-16 07:21
To: Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi

Mayman <Gadi.Mayman@ofina.on.ca>;
Tim Schuurman (MOF)
<Tim.Schuurman@ontario.ca>
Cc: David McLean (MOF)
<David.McLean@ontario.ca>; Christopher
Pearce (MOI)
<Christopher.Pearce@ontario.ca>
Subject: RE: Proposed Initiatives to
Transform Ontario's Electricity
Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----
From: Pearce, Christopher (MOF)
[mailto:Christopher.Pearce@ontario.ca]
Sent: December-12-16 9:18 AM
To: Ronald Kwan
<Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>;
Christina Zhang
<Christina.Zhang@ofina.on.ca>; Vivienne
Skoberne (MOHLTC)
<Vivienne.Skoberne@ontario.ca>; Birks,
Ryan (MOF) <Ryan.Birks@ontario.ca>
Subject: FW: Proposed Initiatives to
Transform Ontario's Electricity
Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

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To: McLean, David (MOF)
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From: Orsini, Steve (CAB)
Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)
To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)
Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

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Sent: December-11-16 12:04 PM
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Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

---

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intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

**From:** Francisco Chinchon
**To:** John Kim
**Subject:** Re: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx
**Date:** Friday, December 23, 2016 1:18:30 PM

---

I told him to keep the full DRC assessment in... didn't spend much time looking at the option without it...

How is NK? I'm surprised you have email access...

On Dec 23, 2016, at 1:14 PM, John Kim <John.Kim@ofina.on.ca> wrote:

> Yeah, not a big deal as both versions or Options appear but I wasn't sure about treating 330 as that and the then next slide the 450 for the ending for Class B is there.
>
> ---
>
> **From:** Francisco Chinchon
> **Sent:** Friday, December 23, 2016 1:11 PM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
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> > Thanks, I made some tweaks.
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> > **From:** Shajee Kathirgamanathan
> > **Sent:** Friday, December 23, 2016 11:57 AM
> > **To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
> > **Cc:** John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> > **Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi,

I made a few edits to provide additional context and spruced up the chart.

Please see v7 attached. Also found here:
S:\Users\CEF\Hydro 2016\Electricity Prices\Mitigation Proposals - Dec 2016\Price-Mitigation - CEFD Slides-Dec6-2016_v7.pptx

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Friday, December 23, 2016 10:32 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Francisco. I'll update the deck to reflect your comments.

Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Francisco Chinchon
**Sent:** Friday, December 23, 2016 9:56 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** John Kim <John.Kim@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Shajee,

My two cents and in the context of Scott's comments:

<!--[if !supportLists]-->1. <!--[endif]-->DRC should stay in the deck but you may want to provide further context as for example that removing it for residential users was a policy decision to help mitigate rate pressures rather than based on defeasance as per the initial concepts.

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Thanks,

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**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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I found a similar file, but began from 2011-12 onwards to be consistent with the table we were developing. In Slide 16, I added a revised chart.

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Happy to update the OEFC Board Orientation file as well to reflect this revision. And please advise if you'd like years going back to 1999-2000.

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Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

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**Sent:** Thursday, December 22, 2016 6:08 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
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Hi,

I think you had been previously working on updating slide 9 of the attached.

S:\Users\CEF\Hydro 2016\OEFC\Board\December\Orientation\Archive

Ron

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**From:** Shajee Kathirgamanathan
**Sent:** December-22-16 14:23
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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**From:** Francisco Chinchon
**To:** John Kim
**Subject:** Re: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx
**Date:** Friday, December 23, 2016 1:10:46 PM

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**Sent:** December-22-16 14:23
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Sure. Might need to confirm which chart, will take a look first.

Thanks

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Ronald Kwan
**Sent:** Thursday, December 22, 2016 1:54 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FyI Shajee.

Can you update the chart. I believe you had a run at it last month.

Need to add new scenarios, though.

Ron

Begin forwarded message:

**From:** "Nelms, Scott (ENERGY)" <Scott.Nelms@ontario.ca>
**Date:** December 22, 2016 at 1:41:45 PM EST
**To:** "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>
**Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**

Thanks Ron. Do you mind sharing those out year forecasts? Latest OEFC board materials that I have seen only forecast this fiscal.

The table in your presentation also goes back to 2011-12, so assume that the all-in fiscal impact of the electricity sector might have been very different. Might be interesting to show the evolution from a net positive to net drain, as you describe below. Your comment around DRC is a good one. I wondered in the table whether it might be helpful to show DRC revenues (rather than "ending DRC"). That will show the decline, but that it is still a positive to the Province even out to 2017-18.

However, take my comments with a grain of salt as I am outside my area of expertise.

Thanks again for sharing,
Scott

-----Original Message-----
From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: December 21, 2016 5:11 PM
To: Nelms, Scott (ENERGY); Kennedy, Nancy (MOF)
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Scott,

Thanks.

On your comment as you may recall, we used to do that roll-up (initially when Serge was ADM), but that would also include all the OEFC expenses too. And not all the GRC is OEFC related, but helps with MNR and its costs, so not completely straightforward.

Post-DRC, and post much lower Hydro One net income to the Province and lost PILs, as Nancy may recall from some OEFC board presentations (Serge likely missed those Board presentations), OEFC may be close to flat.

Ron

-----Original Message-----
From: Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
Sent: December-21-16 16:55

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

I have not seen a draft since last week. Likely same version you last saw Ron. I did have a chance to speak with folks who are more in the know on this and I can confirm that none of the OPG options are likely to show up in the next iteration.

One suggestion on the note, Ron: if you are going to show all the existing fiscal pressures, it may be helpful to also show the fiscal benefits from the electricity system (OPG/H1 revenues, PILs, GRC etc.).

Thanks,
Scott

-----Original Message-----
From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: December 21, 2016 4:14 PM
To: Kennedy, Nancy (MOF); Nelms, Scott (ENERGY)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Nancy, Scott,

As discussed yesterday, I have not seen any iterations of an Energy deck or other materials on price mitigation options since early last week, when the DMO shared a "bootleg" copy. We sent back some comments on that deck to the Deputy, as attached.

Also attached, for your information, are some comments and a deck we did for the Deputy the previous week, in advance of the Major Projects Committee meeting that week. I had understood that the Deputy shared back the comments with Energy DMO at that time.

As discussed yesterday, CEFD is looking forward to being able to input into the contemplation of potential initiatives. Having said that, staff availability over the next couple weeks will be very limited.

Ron

-----Original Message-----
From: Ronald Kwan
Sent: December-13-16 07:21
To: Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Tim Schuurman (MOF)

<Tim.Schuurman@ontario.ca>
Cc: David McLean (MOF) <David.McLean@ontario.ca>;
Christopher Pearce (MOI) <Christopher.Pearce@ontario.ca>
Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----
From: Pearce, Christopher (MOF)
[mailto:Christopher.Pearce@ontario.ca]
Sent: December-12-16 9:18 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----
From: Thompson, Scott (MOF)
Sent: December 11, 2016 12:25 PM
To: McLean, David (MOF)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

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From: Orsini, Steve (CAB)
Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)
To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)
Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)
Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----
From: Imbrogno, Serge (ENERGY)
Sent: December-11-16 12:04 PM
To: Orsini, Steve (CAB)
Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

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| | |
|---|---|
| **From:** | Francisco Chinchon |
| **To:** | Ronald Kwan |
| **Cc:** | Gavin He; Darren Scanlan; Shajee Kathirgamanathan; John Kim |
| **Subject:** | Re: Proposed Initiatives to Transform Ontario"s Electricity Sector_Dec9-16_v15 copy.pptx |
| **Date:** | Tuesday, January 10, 2017 8:28:53 PM |
| **Attachments:** | Rate Mitigation Proposals - Departure Tax (2017 01 10 v3_markup).pptx<br>ATT00001.htm |

---

Looks good, just a few suggestions. I also confirmed the figures are ok.

On Jan 10, 2017, at 8:01 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Thanks Francisco.
>
> Ron
>
> ---
>
> **From:** Francisco Chinchon
> **Sent:** January-10-17 20:01
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> **Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
>
> I'll review now.
>
> On Jan 10, 2017, at 7:39 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> > Hi,
> >
> > I did a clean version too, if that helps with new markups.
> >
> > Ron
> >
> > ---
> >
> > **From:** Ronald Kwan
> > **Sent:** January-10-17 19:33
> > **To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
> > **Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
> > **Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx
> >
> > Hi,
> >
> > Thanks all.

I moved some slides around and made some elaborations on the DT and DTB, as attached.  Comments?

Ron

---

**From:** Francisco Chinchon
**Sent:** January-10-17 11:08
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Ron,

Attached is a draft deck.

Thanks,

Francisco

---

**From:** Gavin He
**Sent:** Monday, January 09, 2017 5:37 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>
**Cc:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

FYI - DMO would like to receive the notes by EOD tomorrow.

Thanks,
Gavin He

---

**From:** Gavin He
**Sent:** Friday, January 6, 2017 10:32 AM

**To:** Francisco Chinchon; John Kim; Darren Scanlan; Shajee Kathirgamanathan
**Cc:** Ronald Kwan
**Subject:** RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi all,

Attached are the notes along with the request.

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, January 06, 2017 10:25 AM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Fwd: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi All,

Please see the request. Lease start drafting a thorough analysis.

Thanks,
Ron

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 6, 2017 at 10:23:12 AM EST
> **To:** "David McLean (MOF)" <David.McLean@ontario.ca>
> **Cc:** "Christopher Pearce (MOI)" <Christopher.Pearce@ontario.ca>, Gavin He <Gavin.He@ofina.on.ca>
> **Subject: Re: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx**
>
> Hi David,
>
> Yes, we can work on that for early next week.
>
> Ron
>
> > On Jan 6, 2017, at 10:20 AM, McLean,

David (MOF) <David.McLean@ontario.ca> wrote:

Hi Ron,

The DM has asked if you and your team could build on the analysis contained in this note on the departure tax component. He'd like something thorough focused specifically on that proposal.

If possible, he'd like to see something as early as feasible next week. Is that doable?

Thanks,

Dave

-----Original Message-----

From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]

Sent: December 13, 2016 7:21 AM

To: Thompson, Scott (MOF); Mayman, Gadi (OFA); Schuurman, Tim (MOF)

Cc: McLean, David (MOF); Pearce, Christopher (MOF)

Subject: RE: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Thanks Chris.

Scott, Gadi, and Tim, staff have drafted a preliminary note based on the "bootleg" preliminary deck, including some comments on the broad theme/rationale and the more fiscally-based proposals, as attached. It is a work-in-progress and subject to update for any revisions of Energy's deck to be received.

Ron

-----Original Message-----

From: Pearce, Christopher (MOF) [mailto:Christopher.Pearce@ontario.ca]

Sent: December-12-16 9:18 AM

To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Gavin He <Gavin.He@ofina.on.ca>; Christina Zhang <Christina.Zhang@ofina.on.ca>; Vivienne Skoberne (MOHLTC) <Vivienne.Skoberne@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI. This was shared with us as a bootleg, noting that further work is ongoing, including around potential fiscal impact. In addition to obvious electricity sector and fiscal plan tie-ins, there is mention of potential expansion of the Trillium Trust to fund electricity infrastructure projects.

-----Original Message-----

From: Thompson, Scott (MOF)

Sent: December 11, 2016 12:25 PM

To: McLean, David (MOF)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

---

From: Orsini, Steve (CAB)

Sent: Sunday, December 11, 2016 12:24:41 PM (UTC-05:00) Eastern Time (US & Canada)

To: Thompson, Scott (MOF); Angus, Helen (MIT); Davidson, Steven (CAB)

Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)

Subject: FW: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

FYI...

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: December-11-16 12:04 PM

To: Orsini, Steve (CAB)

Subject: Proposed Initiatives to Transform Ontario's Electricity Sector_Dec9-16_v15 copy.pptx

Hi Steve,

Here's an early draft of a rate mitigation package that provides a policy rationale for the proposed measures. It's still an early draft and we need to firm up on the rate relief numbers and fiscal impact. My MO is still reviewing but I wanted you to have an early look.

Serge

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<Comments on Electricity Sector Transformation Proposals v5 (CEFD).docx>

<Rate Mitigation Proposals - Departure Tax (2017 01 10 v3).pptx>

DRAFT

# Rate Mitigation Proposal: Departure Tax

Corporate and Electricity Finance Division
January 10, 2017

# Overview:
# Ministry of Energy and Price Mitigation

- In December 2016, the Ministry of Energy, as part of a suite of potential initiatives to mitigate the rising cost of electricity, has suggested for consideration the potential dedication to ratepayer price mitigation some or all of the $2.6 billion 'departure tax' (DT) payments in lieu of tax (PILs) made by Hydro One to the Ontario Electricity Financial Corporation (OEFC) in November 2015, arising from the Hydro One initial public offering (IPO).

- The discussion of the departure tax is often discussed along with the deferred tax benefit that Hydro One recognised in its 2015 annual financial statements, following the IPO.

- While the departure tax and deferred tax benefit are related, they are also separate and distinct, as described in the following slides.

# Ratepayer/Fiscal Impacts

- The following provides illustrative potential ratepayer and fiscal impacts from allocating the $2.6 billion departure tax to ratepayers.
- The impact to an individual ratepayers' electricity bill may not be very significant, unless used over a very short period of time. If the period that the departure tax amount is used to mitigate prices is increased, the annual ratepayer impact diminishes. In all cases, the annual negative fiscal impacts are significant.
  - As an illustrative scenario, if the $2.6 billion is allocated over 1 year and spread evenly over all Ontario consumption (vs targeted at some consumer classes), the benefit is estimated at about 1.85 cents / kWh [TBC].*
    - For a typical residential ratepayer consuming 750 kWh/month, this is estimated at $13.93/month (pre-tax), or less than 10% of a monthly bill [TBC].
  - Over a 5-year period or 10-year period, the benefit to a typical residential ratepayer is estimated at $2.79/month and $1.39/month, respectively. Industrial ratepayers are estimated to benefit by about 0.37 ¢/kWh and 0.185 ¢/kWh, respectively.
- Note that the electricity price relief would be temporary and would result in a spike in electricity bills following the conclusion of the mitigation initiative. This may introduce pressure to extend or replace the mitigation, resulting in additional fiscal impacts.

| Departure Tax Savings to Ratepayers | Allocation over 1 year | Allocation over 5 years | Allocation over 10 years |
|---|---|---|---|
| **Typical Residential Ratepayer (savings $/mth)** | $13.93 | $2.79 | $1.39 |
| **Savings: cents per kWh** | 1.85 | 0.37 | 0.185 |
| | | | |
| **Negative Fiscal Impact to the Province per annum** | $2.6 billion | $520 million | $260 million |

**Assumes total TWh supplied of 140 hours and monthly demand of 750 KWh per residential household*

# Key Fiscal Considerations

- Dedicating the departure tax to ratepayers would have a negative fiscal impact as the Province would record an expense of up to $2.6 bn related to this mitigation (up-front or over time, depending on how the amount is dedicated to ratepayers).
  - Note that the departure tax (DT) did not represent a fiscal or cash windfall to the Province.
    - **Fiscal:** ~~While~~ OEFC (and the Province upon consolidation) recorded a higher PILs revenue on receipt of the DT from Hydro One; however, this amount was offset by an equal reduction in provincial revenue from Hydro One's net income as a result of the payment (an expense to Hydro One).
    - **Cash:** OEFC (and the Province upon consolidation) received the $2.6 billion in cash from Hydro One as a PILs payment, but the Province also made a $2.6 billion cash capital contribution to Hydro One to invest in additional common shares of the company and support Hydro One's departure tax payment.
    - **Timing**: The DT represents the upfront payment of PILs that Hydro One would have paid to OEFC in absence of exiting the PILs regime. In essence, it is a true up of past deferred PILs / future PILs payments rather than an incremental payment.
- An additional fiscal risk is that the decision that the OEB makes with regards to the allocation of Hydro one's deferred tax benefit (DTB) would be independent of how the Province moves forward with the use of the DT amount as an electricity price mitigation tool.
  - Any use of the DTB by the OEB for Hydro One rate mitigation would result in a negative fiscal impact.
- Reallocating the departure tax from OEFC to ratepayers would also cause the unfunded liability of OEFC (or "stranded debt") to increase by an equivalent amount.
  - It would be the first time since 2003-04 that OEFC's stranded debt would increase.
  - In fiscal 2015-16, OEFC's unfunded liability decreased by $3.7 billion, from $8.1 billion to $4.4 billion, primarily reflecting the impact of the Hydro One initial public offering (IPO). This was the largest annual paydown of stranded debt.
  - Going forward, OEFC would also forgo the interest expense savings from the debt that the departure tax amount would otherwise have paid down. This may affect its going-forward ability to continue to reduce stranded debt over time.
- Dedicating the DT to ratepayers could also put pressure on the Province to adopt a similar policy for all future DT payments (e.g., if a municipality sells its local distribution company to the private sector, it would be subject to a DT)
  - This would lead to additional negative fiscal and stranded debt impacts.

# Implementation Considerations

- Additional legal discussion would be required regarding implementation, including the Province's authority to direct OEFC to make a payment to the Province to support rate mitigation.
  - For example, the Province may have to amend the objects of OEFC and implement a Minister's directive in order for OEFC to make the payment. Further legal analysis would be needed if the government is to proceed with this option.

- If the Province moves forward with a rate mitigation measure linked to funds received from the departure tax (DT), the government could consider implementing in such a way that it would not directly involve OEFC / increase stranded debt.
  - Rather than having funds transferred from OEFC to the Province (resulting in an expense to OEFC, which would increase stranded debt), the Province could alternatively borrow $2.6 billion to pay for the program from the CRF.
  - The Province would in effect be dedicating an "equivalent benefit" to ratepayers, while keeping the OEFC whole and demonstrating its commitment to reducing stranded debt.
  - The government could face criticism that it is "double counting" the DT cash (since it already made a $2.6 billion capital contribution in cash to Hydro One to facilitate the DT payment) and that the rate mitigation measure is not actually linked to the DT, but is a rate mitigation program funded by taxpayers.
  - Borrowing an additional $2.6 billion (or reducing OEFC's debt paydown by $2.6 billion) would also have associated on-going fiscal impacts from additional interest costs incurred. Net debt would also increase by $2.6 billion.

- The government could also decide to use only a portion of the DT payment for rate mitigation, rather than the entire $2.6 billion.
  - For example, the Province could dedicate the portion of the DT related to capital gains but allow OEFC to keep the portion related to recapturing past depreciation expense.
  - This decision would result in a smaller impact on electricity prices, especially if the amounts were allocated over-time, but would help mitigate negative fiscal impacts.
  - This decision would still face similar policy considerations as previously presented.

DRAFT

# Background: Departure Tax and Hydro One's Deferred Tax Benefit

# Departure Tax (DT)

- The "departure tax" is a result of Hydro One exiting the payments in lieu of tax (PILs) regime and entering the corporate tax regime as a result of the IPO in November 2015.
  - The PILs regime applies to tax-exempt electricity utilities in Ontario (e.g., Ontario Power Generation and municipally-owned local distribution companies, and it mirrors the regular tax system, creating a level playing field between publicly-owned and private sector firms.
  - PILS are paid to OEFC to help it manage and pay down electricity sector debt and other liabilities arising from the old Ontario Hydro.
  - Once a utility becomes less than 90% owned by the Province or municipality, its exemption from tax under the federal Income Tax Act and the Taxation Act (Ontario) ends.

- Due to exiting the PILs regime, Hydro One was deemed to have disposed of its assets immediately before it lost its tax exempt status for proceeds equal to the estimated fair market value of those assets at that time.
  - This results in an assessment of potential payments-in-lieu of tax for 'recapture' into taxable income previously claimed depreciation expense that reduced past PILs payable, if the fair value is greater than the depreciated value for tax purposes under the PILs regime.
  - It may also result in a potential taxable capital gain if the fair value is greater than the original value of the assets.
  - Together, this PILs payment is known as a 'departure tax'.
  - It should be noted that this payment is not incremental but rather a true up of the PILs Hydro One would have been expected to pay over time in absence of exiting the PILs regime.
  - The 'departure tax' is also not unique to the PILs regime, but mirrors provisions under the normal tax system when a taxable entity leaves the normal tax system.

- As a result of this deemed disposition, Hydro One was liable to make a DT PIL to OEFC of $2.6 billion. In order to facilitate Hydro One's payment and preserving the equity value of the company prior to the IPO, the Province made a $2.6 billion capital contribution into Hydro One and received new common shares of the company.

# Deferred Tax Benefit (DTB)

- Upon entering the corporate tax regime, Hydro One also revalued the tax basis of its fixed assets at fair market value and recognized eligible capital expenditures.
  - As a result of a higher revaluation of its fixed assets for tax purposes, Hydro One expects to be able to claim higher depreciation expenses for a period of time under the normal corporate tax system to reduce its taxable income and taxes payable.
  - Because of the elimination of the deferred tax liability under the PILs regime (on payment of the departure tax) and the 'tax shield' impact of the depreciation expense, Hydro One recorded $2.81 billion in a one-time non-cash DTB, which increased its net income by the same amount.
    - This DTB was comprised of an elimination of an about $1.2 billion deferred tax liability under the PILs regime, as Hydro One paid the departure tax, and a deferred tax asset recorded by Hydro One of about $1.6 billion.
  - The recording of a DTB contributed to Hydro One's net income in 2015.
    - The Province recognized a non-cash fiscal benefit of approximately $2.4 billion as a result, upon consolidation its proportionate share of 84% of Hydro One's net income on the Province's books.
- From the Province's perspective, allocating the DTB directly as a policy option for rate mitigation is not viable.
  - This benefit was recognized by Hydro One in connection with the IPO, and the Province, as no longer a sole shareholder, does not have the authority to direct the company to provide this benefit to ratepayers, rather than its shareholders.
  - Hydro One's board of directors has a fiduciary duty to act in the best interests of all Hydro One shareholders.
- A decision from the Province to allocate or transfer part or all of the related departure tax payment received by OEFC would not, however, preclude the OEB's ability with respect to Hydro One's rate application and the DTB recognized by Hydro One in 2015.

# Deferred Tax Benefit and OEB Review of 2017-18 Hydro One Transmission Rates

- The Ontario Energy Board (OEB) is currently reviewing Hydro One's 2017-18 transmission rate application to determine whether the deferred tax benefit (DTB) recorded by Hydro One, as a result of entering the normal corporate tax regime following the IPO, should be allocated to the benefit of ratepayers rather than shareholders.
  - In its review, OEB staff flagged that Hydro One realized a deferred tax recovery that was triggered by the revaluation of the tax basis of its fixed assets at fair market value as it entered the corporate tax regime (due to the IPO).
- An additional fiscal risk is that the decision that the OEB makes with regards to the allocation of the DTB would be independent of how the Province moves forward with the use of the DT amount as an electricity price mitigation tool.
- Since Hydro One made its DT payment, funded by equity holders, and did not seek recovery from ratepayers for this payment, Hydro One's position is that the DTB would receive similar treatment (i.e., not impact ratepayers, but would be to the benefit of shareholders, in part to ensure consistency in treatment).
  - A general regulatory principle would be for ratepayers to receive the benefit from assets that they funded through rates, and equity holders would receive the benefit from their investments.
- Should the OEB decide to reverse the benefit of the DTB from Hydro One's shareholders to ratepayers, there would be significant impacts to the Province.
  - The Province would be subject to negative fiscal impacts based on how the OEB provides the benefit to ratepayers. For example, the OEB could determine that Hydro One's revenue requirement will be reduced over time by the cash tax savings from the DTB. This would negatively affect Hydro One's net income, and, therefore, reduce the Province's revenues upon consolidation of its proportionate share of Hydro One net income. (The Province's recorded increased revenues of ~$2.4B in 2015-16 due to the DTB).
  - There would likely be a material decline in Hydro One's share price, as the overall company value would be negatively affected, given reduced net income and cash flows available to finance capital expenditures and pay dividends. Lower share prices would reduce future gains on sales as the Province moves forward on its path to sell down to the 40% ownership level in Hydro One.
  - The Province may also face criticism as it has already credited the Trillium Trust with the $2.4 billion DTB.

**From:** Ronald Kwan
**To:** Francisco Chinchon
**Cc:** John Kim; Emily Kerr; Gavin He
**Subject:** Re: Rate Mitigation
**Date:** Saturday, January 14, 2017 12:14:22 PM

---

Thanks Francisco.

Ron

> On Jan 14, 2017, at 12:11 PM, Francisco Chinchon <Francisco.Chinchon@ofina.on.ca> wrote:
>
> Hi,
>
> I'll review the DT and TT pieces for Sunday.
>
> Thanks,
>
>
> Francisco
>
>
>
>> On Jan 14, 2017, at 11:20 AM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>>
>> Hi,
>>
>> There's a meeting on Monday on Energy's rate mitigation decks.
>>
>> Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?
>>
>> Apologies on the timing.
>>
>> Thanks,
>> Ron
>>
>>
>> Begin forwarded message:
>>
>>> Original Message
>>> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>>> Sent: Saturday, January 14, 2017 8:16 AM
>>> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>>> Subject: Fw: Rate Mitigation
>>>
>>>
>>> Good morning,
>>> Attached are materials for Monday's rate mitigation meeting.
>>> Keley
>>>
>>> Original Message
>>> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
>>> Sent: Saturday, January 14, 2017 7:49 AM
>>> To: Orsini, Steve (CAB)

>>> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
>>> Subject: Rate Mitigation
>>>
>>> Hi Steve,
>>>
>>> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>>>
>>> Serge
>>>
>>>
>>> Sent from my iPad
>> <Revised - Debt-Financing GA 170112 - ESPD ADM Approved w LSB CLEAN.PPTX>
>> <Proposed Initiatives to Transform Ontarios Electricity Sector 20170113.pptx>

**From:** Francisco Chinchon
**To:** Ronald Kwan
**Cc:** John Kim; Emily Kerr; Gavin He
**Subject:** Re: Rate Mitigation
**Date:** Saturday, January 14, 2017 12:11:39 PM

---

Hi,

I'll review the DT and TT pieces for Sunday.

Thanks,

Francisco

> On Jan 14, 2017, at 11:20 AM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
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**From:** Ronald Kwan
**To:** John Kim; Emily Kerr
**Cc:** Gavin He; Francisco Chinchon
**Subject:** Re: Rate Mitigation - Draft MP Deck
**Date:** Wednesday, January 18, 2017 9:19:47 PM

---

Hi,

For early as possible tomorrow morning, can we update our BN (some options seem to have been pushed to the appendix or dropped) and focus comments on the key points, such as on fiscal impact and risk, including risk on the actual GA amount, accounting and intergenerational issues; exposure on borrowing interest rates and increased debt; implementation issues including legislation.

Thanks,
Ron

> On Jan 18, 2017, at 8:47 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> Hi,
>
> Please review.
>
> Thanks,
> Ron
>
>
> Begin forwarded message:
>
> From: "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca<mailto:Christopher.Pearce@ontario.ca>>
> To: "Gadi Mayman" <Gadi.Mayman@ofina.on.ca<mailto:Gadi.Mayman@ofina.on.ca>>, "Ronald Kwan" <Ronald.Kwan@ofina.on.ca<mailto:Ronald.Kwan@ofina.on.ca>>, "Gavin He" <Gavin.He@ofina.on.ca<mailto:Gavin.He@ofina.on.ca>>, "Lynsey Wynberg" <Lynsey.Wynberg@ofina.on.ca<mailto:Lynsey.Wynberg@ofina.on.ca>>, "Marianne Nguyen (MCYS)" <Marianne.Nguyen@ontario.ca<mailto:Marianne.Nguyen@ontario.ca>>, "Elizabeth Mendes (MOF)" <Elizabeth.Mendes@ontario.ca<mailto:Elizabeth.Mendes@ontario.ca>>, "Ghiassi, Ali (MOF)" <Ali.Ghiassi@ontario.ca<mailto:Ali.Ghiassi@ontario.ca>>
> Subject: Fw: Rate Mitigation - Draft MP Deck
>
> FYI. Attached are the rate mitigation materials for MPC tomorrow. PW to follow.
>
> Sent from my BlackBerry 10 smartphone on the Rogers network.
>
> _____
> From: Imbrogno, Serge (ENERGY)
> Sent: Wednesday, January 18, 2017 8:01:35 PM (UTC-05:00) Eastern Time (US & Canada)
> To: Orsini, Steve (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF); Angus, Helen (TBS)
> Cc: Bromm, William (CAB)
> Subject: Rate Mitigation - Draft MP Deck
>
> Hi,
>
> Attached is the rate mitigation deck for tomorrow's MP meeting. I'll send you the pw in a separate email.
>
> Serge
>

> <Rate Mitigation Plan Options 20170118 v2 _MP.pptx>

**From:** John Kim
**To:** Shajee Kathirgamanathan
**Subject:** Re: Rate Mitigation - Final Cab Sub
**Date:** Sunday, September 11, 2016 10:25:36 AM

---

Am I missing something? The Cab Sub says 1bn, no? Wanted to make sure I'm not missing something before going back to Felix...

---

From: Fung, Felix (TBS) <Felix.Fung@ontario.ca>
Sent: September 11, 2016 9:22 AM
To: John Kim; Shajee Kathirgamanathan
Cc: Madeleine Morgenstern (PPAGS)
Subject: Fw: Rate Mitigation - Final Cab Sub

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Laughton, Patrick (TBS) <Patrick.Laughton@ontario.ca>
Sent: Saturday, September 10, 2016 12:26 AM
To: Fung, Felix (TBS); Morgenstern, Madeleine (TBS); Strang, James (TBS)
Cc: Duran-Schneider, Maria (TBS); Dutton, Andrea (TBS); Arbabzadeh, Nina (TBS)
Subject: Fw: Rate Mitigation - Final Cab Sub

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Hughes, Karen (TBS) <Karen.Hughes@ontario.ca>
Sent: Friday, September 9, 2016 11:11 PM
To: Laughton, Patrick (TBS)
Subject: Fw: Rate Mitigation - Final Cab Sub

FYI

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Greenberg, Martha (CAB) <Martha.Greenberg@ontario.ca>
Sent: Friday, September 9, 2016 10:34 PM
To: Hughes, Karen (TBS); Duran-Schneider, Maria (TBS)
Subject: Fw: Rate Mitigation - Final Cab Sub

FYI

From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
Sent: Friday, September 9, 2016 9:26 PM
To: Moore, Karen (CAB)
Cc: Greenberg, Martha (CAB)
Subject: Rate Mitigation - Final Cab Sub

Hi Karen,
Please find attached the final Cabinet submission. We'll bring copies for 8am Monday morning.
Keley

**From:** John Kim
**To:** Felix Fung (MOF); Shajee Kathirgamanathan
**Cc:** Madeleine Morgenstern (PPAGS)
**Subject:** Re: Rate Mitigation - Final Cab Sub
**Date:** Sunday, September 11, 2016 10:38:39 AM

---

Thanks Felix. Maybe I am missing something....it still says 1bn for estimates? Could you point me to the 1.1bn in 2017-18 and 2018-19and 1.2bn in the 2019-20.

---

From: Fung, Felix (TBS) <Felix.Fung@ontario.ca>
Sent: September 11, 2016 9:22 AM
To: John Kim; Shajee Kathirgamanathan
Cc: Madeleine Morgenstern (PPAGS)
Subject: Fw: Rate Mitigation - Final Cab Sub

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Subject: Fw: Rate Mitigation - Final Cab Sub

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Cc: Greenberg, Martha (CAB)
Subject: Rate Mitigation - Final Cab Sub

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Keley

| | |
|---|---|
| **From:** | Ronald Kwan |
| **To:** | Francisco Chinchon |
| **Cc:** | Gavin He; Darren Scanlan; John Kim |
| **Subject:** | Re: Rate Mitigation - H1 Options |
| **Date:** | Friday, January 13, 2017 4:23:54 PM |
| **Attachments:** | 2017 01 13 Rate Mitigation - H1 Options v02_CEFD_markup.pptx |

Hi Francisco,

Thanks. I had similar concerns and added in some additional suggested edits.

Ron

---

**From:** Francisco Chinchon
**Sent:** January 13, 2017 2:35 PM
**To:** Ronald Kwan
**Cc:** Gavin He; Darren Scanlan; John Kim
**Subject:** RE: Rate Mitigation - H1 Options

Hi Ron,

A few comments and edits. I must say we are a bit fussed with the tone of the slide (our deck was way more neutral), in particular with respect to option 3 as it assumes a lot.

Thanks,

Francisco

---

**From:** Ronald Kwan
**Sent:** Friday, January 13, 2017 1:47 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
**Cc:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation - H1 Options

Hi,

Please review ASAP.

Thanks,
Ron

---

**From:** Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]

**Sent:** January-13-17 13:12
**To:** Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** Rate Mitigation - H1 Options

Hi Nancy, Ron,

The attached responds to a request from the SoC for options dealing with the Hydro One deferred tax benefit. This doesn't include a lot by way of pre-amble, as I think we have spent a fair bit of time discussing the issue. Ron, we attempted to take the key elements from your presentation, as well as the note that ENE prepared before the holidays. Please let me know if you have any edits / comments. Apologies for short notice, but I have been asked to share a draft with ENE DMO by EOD.

Thanks,
Scott

# Rate Mitigation Options
# Hydro One-Related Options

# Purpose

- The following presentation considers the following three options in the context of electricity rate mitigation, and the Ontario Energy Board's upcoming transmission rate decision that will include treatment of Hydro One's Deferred Tax Benefit:

    1. Dedicate the Departure Tax to ratepayers
    2. Allocate Trillium Trust Funds to Energy Projects
    3. Await OEB Decision (Status Quo)

# Context: Tax Benefit and the Ontario Energy Board Review

- Hydro One paid a one time Departure Tax of $2.6 B to the Ontario Electricity Financial Corporation (OEFC) towards stranded debt ~~Province~~ prior to exiting the payments-in-lieu of tax regime and then recorded a Deferred Tax Benefit (DTB) of ~$2.8 B, as it entered the income tax regime, post-IPO
  - The Province recorded increased revenues of ~$2.4B due to the DTB, which it has allocated to the Trillium Trust
- The Ontario Energy Board (OEB) is currently reviewing Hydro One's 2017-18 transmission rate application to determine whether the DTB should be allocated to the benefit of ratepayers rather than shareholders
  - There is no clear precedent, has been ~~as it is~~ rare; however, could arise in future in the case of transactions of municipally-owned electricity utilities
    - The OEB may consider the impact of a precedent that could also negatively affect LDC consolidation by reducing value and transaction prices~~for the seller to benefit from tax collections~~
  - Hydro One believes it has a strong argument to keep the DTB, as Hydro One paid the departure tax, investors purchased shares on the basis that the value of the tax shield would flow to their benefit, and ratepayers are no worse off as a result of the transaction
    - This argument is complicated by the Province's equity injection of $2.6 B to Hydro One pre-IPO, which was done to mitigate the negative financial consequences arising from the Departure Tax payment. A shareholder equity injection is consistent with the departure tax being funded by equity holders, not ratepayers, so that an associated DTB should be for the benefit of shareholders as well.
  - Hydro One and the IPO lead bookrunners reached out to regulatory experts in 2015 for an assessment and although outlined as a risk in the prospectus, this was viewed as an unlikely outcome at the time of the IPO
- In the event the OEB requires the benefit from the DTB to flow to ratepayers, the lead bookrunners calculated an earnings impact of ~$1 B on a present value basis (~$1.85 per share). Further impacts to share value could arise depending on whether analysts and investors reconsider regulatory risk
- OEB's transmission rate decision is expected in late winter / early spring 2017, and a similar decision on distribution rates is expected at the end of 2017

# Option 1: Dedicate Departure Tax to Ratepayers

- Dedicate the $2.6B Departure Tax to ratepayers over 5-10 years

- Prior to the OEB's decision on the Hydro One transmission rate application, the Province could commit to providing value equivalent to the tax payment to ratepayers
- This may ~~would~~ reduce the likelihood that OEB would require providing the DTB to ratepayers

| | |
|---|---|
| **Ratepayer Impact** | • Typical Residential ratepayers would save $2.79/month if allocated over 5 years or $1.39/month if allocated over 10 years<br>• Relief would be temporary and could result in a spike in electricity bills following the conclusion of the mitigation initiative<br>• This benefit could apply to all Ontario ratepayers, or be conveyed as targeted relief |
| **Fiscal Impact** | • The tax payment did not result in a net fiscal benefit to the Province as it was offset upon consolidation by the tax expense on Hydro One's financial statements<br>• Dedicating the departure tax to ratepayers would have a negative fiscal impact on a dollar per dollar basis as the Province would record an annual expense of $520M (5yrs) or $260M (10yrs)<br>• Reallocating the departure tax from OEFC to ratepayers would also cause an equivalent increase to the unfunded liability of OEFC (or "stranded debt") |
| **Other** | • Discussions with OEB would be required to ensure this tradeoff is acceptable. Otherwise, there may be an additional fiscal impact ~~risk~~ pending an OEB decision on the treatment of the DTB<br>• This decision may lead to pressure for the Province to adopt a similar policy for future departure tax payments (e.g. municipal utility transactions)<br>• Implementation mechanisms require further consideration, including legal considerations with respect to any involvement from OEFC as its main objective is to reduce stranded debt. |

# Option 2: Allocate Trillium Trust Funds to Energy Projects

- Allocate a portion of the Trillium Trust to investments in electricity sector projects

- In advance of OEB's decision on Hydro One's rate application, the Province could expand the Trillium Trust project types ~~by allocating a portion of the benefit that the Province received from the broadening of ownership of Hydro One,~~ to also include electricity infrastructure projects. However, this would crowd-out Moving Ontario Forward projects already internally identified as Trillium Trust recipients.
- While it is not certain that this would ~~In addition to~~ mitigat~~eing~~ the risk of an adverse regulatory decision, this would help defray the ratepayers' cost of investments that are made to modernize the province's electricity infrastructure, shifting the cost to the tax base. (Potential projects could include transmission connection to remote communities and natural gas expansion)

| | |
|---|---|
| **Ratepayer Impact** | • The ratepayer impact may be small and/or deferred until projects are in-service<br>• Benefits may accrue to a select group of ratepayers depending on the location and type of projects that are funded |
| **Fiscal Impact** | • If invested in Provincially-owned assets, the fiscal cost would be spread over the life of the asset but would be incremental to the amounts included in the current infrastructure plan. If spent on non-provincially-owned assets, the fiscal impact would be upfront as funds are transferred [accounting TBC].<br>• Incremental interest costs associated with funding incremental electricity projects, assuming Moving Ontario Forward projects continue to be funded/financed from another source (debt)<br>• There would be indirect fiscal impacts as there would be fewer infrastructure projects available for electricity sector companies where the Province has a stake and earns a rate of return (OPG, Hydro One).<br>• This could also decrease the value of Hydro One shares if investors consider such measure affects the long-term prospects of Hydro One (i.e., as it would have fewer areas/projects where it could invest). |
| **Other** | • Discussions with OEB would be required to ensure this trade-off is acceptable. Otherwise, there would ~~may~~ be additional fiscal risk pending an OEB decision on the treatment of the DTB<br>• This represents a policy shift, as the asset optimisation amounts have been fully allocated to go to Moving Ontario Forward projects<br>• Depending on structuring, the Province would ~~may~~ have expenses (upfront or over time) associated with electricity infrastructure spending without a mechanism for cost recovery (if the Province owned the rate-regulated or contracted electricity infrastructure with rate recovery, while there may be no fiscal impact, there would be no (or little) ratepayer rate reduction – could raise questions on one rationale for selling Hydro One shares)<br>• Implementation mechanisms require further consideration |

# Option 3: Await OEB Decision (Status Quo)

- Take no action and let the OEB decide, as part of Hydro One's rate filing, whether the DTB should benefit ratepayers or shareholders

- The following table highlights considerations assuming the OEB rules in favour of ratepayers. However, this is not to suggest that there is evidence that this would be the most likely outcome and with respect to some or all of the amount of the DTB.

| | |
|---|---|
| **Ratepayer Impact** | • Residential customers could benefit from a small reduction in rates (~8 cents/month for transmission customers), potentially continuing over several years<br>• Assuming a similar decision is applied to the distribution application, typical medium density Hydro One customers would experience a reduction of ~78 cents/month. However, this benefit would flow only to Hydro One customers and only if the OEB allocates the full amount. |
| **Fiscal and Shareholder Impact** | • Share price could decline by ~$1.85 per share, due in part to the reduction in expected future earnings, and also because this surprise decision would affect perceived regulatory risk<br>• Hydro One may also write down the DTB, which could trigger a negative fiscal impact from a write down of the Province's $2.4B portion of this benefit that has already credited to the Trillium Trust and recognized in the 2015-16 Public Accounts.<br>• As a result of both the decline in share price, and write down of the tax benefit, the Province may have difficulty in achieving its asset optimization target. ~~reaching its objective of $4B in net gains from the broadening of ownership of Hydro One to be dedicated to the Trillium Trust~~ |
| **Other** | • This option would allow for targeted benefits to flow to Hydro One customers, but the Province would not control the size or timing of those benefits<br>• The Province would not be credited for any rate mitigation resulting from this outcome, although the Province could emphasize the OEB's role in protecting consumers<br>• Some of the downside would be absorbed by private investors<br>• If the OEB allows Hydro One to keep the DTB, as is expected by Hydro One, the Province would still be able to introduce rate mitigation measures. |

**From:** Gavin He
**To:** John Kim
**Subject:** Re: Rate Mitigation - H1 Options
**Date:** Saturday, January 14, 2017 5:33:34 PM

---

Correct.

On Jan 14, 2017, at 16:49, John Kim <John.Kim@ofina.on.ca> wrote:

> Which was the version from Energy to which this was Finance's response?
>
> ---
>
> **From:** Gavin He
> **Sent:** January 14, 2017 3:37:32 PM
> **To:** John Kim
> **Subject:** Fw: Rate Mitigation - H1 Options
>
> Hi John,
>
> Is this the deck you were referring to? This was related to the DTB for Hydro One.
>
> Let me know if you were referring to something else.
>
> Regards,
> Gavin He
>
> ---
>
> **From:** Francisco Chinchon
> **Sent:** Friday, January 13, 2017 5:00:05 PM
> **To:** Ronald Kwan
> **Cc:** Gavin He; Darren Scanlan; John Kim
> **Subject:** RE: Rate Mitigation - H1 Options
>
> Hi Ron,
>
> Looks good. One colour version is attached.
>
> Thanks,
>
> Francisco
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Friday, January 13, 2017 4:24 PM
> **To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
> **Cc:** Gavin He <Gavin.He@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>;

John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: Rate Mitigation - H1 Options

Hi Francisco,

Thanks.  I had similar concerns and added in some additional suggested edits.

Ron

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**From:** Francisco Chinchon
**Sent:** January 13, 2017 2:35 PM
**To:** Ronald Kwan
**Cc:** Gavin He; Darren Scanlan; John Kim
**Subject:** RE: Rate Mitigation - H1 Options

Hi Ron,

A few comments and edits. I must say we are a bit fussed with the tone of the slide (our deck was way more neutral), in particular with respect to option 3 as it assumes a lot.

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Francisco

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**From:** Ronald Kwan
**Sent:** Friday, January 13, 2017 1:47 PM
**To:** Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>
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**Subject:** FW: Rate Mitigation - H1 Options

Hi,

Please review ASAP.

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**From:** Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
**Sent:** January-13-17 13:12
**To:** Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>

**Subject:** Rate Mitigation - H1 Options

Hi Nancy, Ron,

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Thanks,
Scott

**From:** Ronald Kwan
**To:** Gavin He
**Cc:** Francisco Chinchon; John Kim; Emily Kerr
**Subject:** Re: Rate Mitigation
**Date:** Sunday, January 15, 2017 6:02:19 PM

---

Thanks All.

I'll take a look.

Ron

> On Jan 15, 2017, at 4:39 PM, Gavin He <Gavin.He@ofina.on.ca> wrote:
>
> Hi Ron,
>
>
>
> Please find attached updated notes and Energy's deck with proposed edits and comments from SIFB, EFB, and SPFB.
>
>
>
> The files are also saved under below folder:
>
> S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Energy_Jan16<file:///\\ofina.on.ca\ofadfs\Users\CEF\Hydro%202017\Electricity%20Prices\Mitigation%20Proposals\Energy_Jan16>

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>> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
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>> Serge
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>> Sent from my iPad
> <Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup.docx>
> <Proposed Initiatives to Transform Ontarios Electricity Sector 20170113_CEFD.pptx>

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Gavin He |
| **Subject:** | Re: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 4:36:31 PM |

---

Thanks Gavin.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:35:58 PM
**To:** John Kim
**Cc:** Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Sure.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:35 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Let's send the first two with the aim to send the third tomorrow if still asked. I will review the third one, the GA one, again either tonight or tomorrow morning.

John.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:32 PM
**To:** John Kim
**Cc:** Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Sure, just to confirm, I will send all the attached to Ron?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:26 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks....let's send to Ron.  Pls. also include the deck from Francisco.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:21 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

I am good with the notes and I don't have any additional comments, saved that in the folder.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:19 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

No reason....updated the RRRP.

I took a look at the comments in the deck and the comments are good.  Given the meeting is on Monday, I am leaning towards not sending back comments on the deck back unless proposing to make edits to the text, like Francisco is in the attached.

I'm OK to send these back with cc: to Emily and Francisco unless you have additional comments, which would be welcome.  Ideally would like to review further but I'm going to bed soon.

Thanks,

John.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:13 PM

**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

I reviewed the debt-financing GA sections and I am good with the edits.

I didn't review the other deck in details, but took a quick look on slide 7 and the new section at the end of the note. Just one question, is there a reason why the RRRP numbers for 2019-2021 were not updated?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:01 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Let me know what you think. If OK, could you save to the folder?

Going to quickly go through the deck.

---

**From:** John Kim
**Sent:** January 15, 2017 3:32 PM
**To:** Gavin He; Shajee Kathirgamanathan
**Subject:** Re: Rate Mitigation

Yeah, I think Shajee's point on slide 7? might be the only path. I am about to take a crack at it but I don't want to minimize the fiscal impact by taking their numbers. Thus being deliberate. Shouldn't take long.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:30 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Based on Emily's update, the impact for OESP & RRRP will be $0.42-0.85 bn in 2017 to $0.62-1.18 bn

in 2022, without detailed impact on each year. So it we are going to update the table, it seems we might need to make some assumption.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:17 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yes, the OESP and RRRP that Emily updated, kind of showed me there were updates.

Ok, I need to go back to that deck.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:13 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Are you referring to the numbers for OESP and RRRP?

Also, the $2B GA amount is from scenario 2 and 3. The cap for the maximum amount of GA above the true cost is $2B.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:10 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yeah, I'm trying to decide if it's worth adding that proposal. While I am trying to minimize work, it's fiscal impact stuff.

And the table. I'm trying to assess if not updating that is an option as I'm getting tired.

What's your sense?

---

**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 3:06 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

If you're referring to #10 on renewables/wind contracts, I think it's not so much tax exempting renewables, but rather paying through the tax base the amounts above competitive electricity rates. (Eg. If competitive amount is say $80/mwh. And they have a community/indigenous adder of $40/mwh. Therefore a total contract price is $120/mwh. The proposal would shift the $40/mwh to the tax base). That's my interpretation at least.

Again it's just another way to transfer to the tax base from the rate base.

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 2:57 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks.....I think we should send the note in for about 6pm so don't worry about it. I will have a look at the deck.

The only thing that concerns me is the additional proposals like tax exempting of renewable contracts, etc. I'm debating whether they need coverage but likely to try to dodge it. I think the table at the bottom needs updating but I'm currently still assessing it.

---

**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 2:54 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

I finished with my comments on the power point file. I think there were some CEFD and Energy Comments from before.

Only way to distinguish are my comments are "**CEFD Comments**" (bold), whereas before it was evidently bold and underlined.

Will take a quick review of the document, but heading out shortly for the evening. Will try to get done what I can.

Thanks,
Shajee

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 2:45 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks....saw this after sending the other.

---

**From:** Gavin He
**Sent:** January 15, 2017 2:41 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

Emily just finished the file. I have copied my edits in her version and saved it as v9.

Thanks,
Gavin He

---

**From:** Gavin He
**Sent:** Sunday, January 15, 2017 2:24 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

In the interest of time, I have worked on v8 from my personal drive, as Emily is still in the note. I have reviewed and updated sections related to debt-financing GA.

John – for the numbers, I wasn't involved in providing the updates, so don't have much knowledge on how the numbers were put together, and the presentation decks don't provide update on those numbers, so I didn't make any update there.

Please review and let me know if you have any questions. I can consolidate my edits once Emily is

done.

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 10:01 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation

FYI.

Hoping to finalize on our end by early afternoon…..Emily might have other comments.

I think what things need to be checked against the updated deck, as well.

John.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 9:59 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John, Emily,

I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.

I also made some edits to Energy's slides but not sure those are needed.

Thanks,

Francisco

> -----Original Message-----
> From: John Kim
> Sent: Saturday, January 14, 2017 11:45 PM
> To: Emily Kerr <Emily.Kerr@ofina.on.ca>
> Subject: RE: Rate Mitigation

Hi Emily,

Just put down some quick updates to the existing note so that we could have a reasonable starting point.  Pls. feel free to edit and update and maybe we could try to combine tomorrow.

Thanks,

John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

Original Message

From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>

Sent: Saturday, January 14, 2017 8:16 AM

To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)

Subject: Fw: Rate Mitigation

Good morning,

Attached are materials for Monday's rate mitigation meeting.

Keley

Original Message

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>

Sent: Saturday, January 14, 2017 7:49 AM

To: Orsini, Steve (CAB)

Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

Hi Steve,

Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Gavin He; Shajee Kathirgamanathan |
| **Subject:** | Re: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 2:45:16 PM |

Thanks....saw this after sending the other.

---

**From:** Gavin He
**Sent:** January 15, 2017 2:41 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

Emily just finished the file. I have copied my edits in her version and saved it as v9.

Thanks,
Gavin He

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**From:** Gavin He
**Sent:** Sunday, January 15, 2017 2:24 PM
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**Subject:** RE: Rate Mitigation

Hi John/Shajee,

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Thanks,
Gavin He

---

**From:** John Kim

**Sent:** Sunday, January 15, 2017 10:01 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation

FYI.

Hoping to finalize on our end by early afternoon…..Emily might have other comments.

I think what things need to be checked against the updated deck, as well.

John.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 9:59 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John, Emily,

I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.

I also made some edits to Energy's slides but not sure those are needed.

Thanks,

Francisco

> -----Original Message-----
> From: John Kim
> Sent: Saturday, January 14, 2017 11:45 PM
> To: Emily Kerr <Emily.Kerr@ofina.on.ca>
> Subject: RE: Rate Mitigation
>
> Hi Emily,
>
> Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.
>
> Thanks,

John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

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> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
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> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
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> Subject: Fw: Rate Mitigation

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Keley

Original Message

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>

Sent: Saturday, January 14, 2017 7:49 AM

To: Orsini, Steve (CAB)

Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

Hi Steve,

Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

**From:** John Kim
**To:** Gavin He
**Subject:** Re: Rate Mitigation
**Date:** Sunday, January 15, 2017 12:57:30 PM

---

Great, thanks, if you could work on updating for any updates numbers, etc it would be helpful.

On Jan 15, 2017, at 11:17 AM, Gavin He <Gavin.He@ofina.on.ca> wrote:

> Hi John,
>
> It seems Emily is working on the note. I will update after she is done.
>
> Regards,
> Gavin He
>
> ---
>
> **From:** John Kim
> **Sent:** Sunday, January 15, 2017 10:01 AM
> **To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
> **Subject:** FW: Rate Mitigation
>
> FYI.
>
> Hoping to finalize on our end by early afternoon…..Emily might have other comments.
>
> I think what things need to be checked against the updated deck, as well.
>
> John.
>
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> **Sent:** Sunday, January 15, 2017 9:59 AM
> **To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
> **Subject:** RE: Rate Mitigation
>
> Hi John, Emily,
>
> I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.
>
> I also made some edits to Energy's slides but not sure those are needed.
>
> Thanks,

Francisco

-----Original Message-----
From: John Kim
Sent: Saturday, January 14, 2017 11:45 PM
To: Emily Kerr <Emily.Kerr@ofina.on.ca>
Subject: RE: Rate Mitigation

Hi Emily,

Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.

Thanks,

John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

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To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
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> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation
>
> Good morning,
>
> Attached are materials for Monday's rate mitigation meeting.
>
> Keley
>
> Original Message
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> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
>
> Sent: Saturday, January 14, 2017 7:49 AM
>
> To: Orsini, Steve (CAB)

Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

Hi Steve,

Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

**From:** Gavin He
**To:** John Kim
**Subject:** Re: Rate Mitigation
**Date:** Sunday, January 15, 2017 10:50:42 AM

---

Hi John,

Sure. I just finished gym and will start reviewing the note after I got home.

Regards,
Gavin He

> On Jan 15, 2017, at 10:00, John Kim <John.Kim@ofina.on.ca> wrote:
>
> FYI.
>
> Hoping to finalize on our end by early afternoon…..Emily might have other comments.
>
> I think what things need to be checked against the updated deck, as well.
>
> John.
>
> From: Francisco Chinchon
> Sent: Sunday, January 15, 2017 9:59 AM
> To: John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
> Subject: RE: Rate Mitigation
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> Hi John, Emily,
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> I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.
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> I also made some edits to Energy's slides but not sure those are needed.
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>
> Francisco
>
>
>
> -----Original Message-----
> From: John Kim
> Sent: Saturday, January 14, 2017 11:45 PM
> To: Emily Kerr <Emily.Kerr@ofina.on.ca<mailto:Emily.Kerr@ofina.on.ca>>
> Subject: RE: Rate Mitigation
>
> Hi Emily,
>
> Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.
>
> Thanks,
>

> John.
>
> -----Original Message-----
> From: Emily Kerr
> Sent: Saturday, January 14, 2017 7:21 PM
> To: John Kim <John.Kim@ofina.on.ca<mailto:John.Kim@ofina.on.ca>>
> Subject: RE: Rate Mitigation
>
> HI John,
>
> Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.
>
> Emily
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> -----Original Message-----
> From: Ronald Kwan
> Sent: Saturday, January 14, 2017 11:21 AM
> To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca<mailto:Francisco.Chinchon@ofina.on.ca>>; John Kim <John.Kim@ofina.on.ca<mailto:John.Kim@ofina.on.ca>>; Emily Kerr <Emily.Kerr@ofina.on.ca<mailto:Emily.Kerr@ofina.on.ca>>
> Cc: Gavin He <Gavin.He@ofina.on.ca<mailto:Gavin.He@ofina.on.ca>>
> Subject: Fwd: Rate Mitigation
>
> Hi,
>
> There's a meeting on Monday on Energy's rate mitigation decks.
>
> Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?
>
> Apologies on the timing.
>
> Thanks,
> Ron
>
>
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>
>
> Original Message
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> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca<mailto:Keley.Katona@ontario.ca>>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation
>
>
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>
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>
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>
>
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> Sent: Saturday, January 14, 2017 7:49 AM
>
> To: Orsini, Steve (CAB)
>
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
>
> Subject: Rate Mitigation
>
>
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> Hi Steve,
>
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>
> Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.
>
>
>
> Serge
>
>
>
>
>
>
> <Comments on Electricity Sector Transformation Proposals v7 (CEFD).docx>
> <Proposed Initiatives to Transform Ontarios Electricity Sector 20170113_CEFD.pptx>

**From:** John Kim
**To:** Gavin He
**Subject:** Re: Rate Mitigation
**Date:** Sunday, January 15, 2017 12:01:38 AM

---

Thanks. Will have a look tomorrow. If you get a chance do you mind adding the 4 options, shorter versions, in the larger note? It's save for in the folder. Tomorrow am is fine! No need to do today

---

**From:** Gavin He
**Sent:** January 14, 2017 11:56:10 PM
**To:** John Kim
**Subject:** RE: Rate Mitigation

Hi John,

Please find attached the draft note for your review. I have updated it based on the latest Debt-Financing GA deck provided this morning.

Please note that they have changed the scenarios, and now are only focusing on short-term cost reductions with and without limits scenarios.

The note is saved under below folder:
S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Saturday, January 14, 2017 10:19 AM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Yup, for sure. Let's try to get bulk of it done over the weekend so we have a finalized product by eod Monday.

---

**From:** Gavin He
**Sent:** Saturday, January 14, 2017 10:17 AM
**To:** John Kim <John.Kim@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Hi John,

Sorry I didn't get a chance to work on that before I left yesterday, but I am planning to update it later today, if that's ok?

Thanks,
Gavin He

On Jan 14, 2017, at 10:07, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Gavin,
>
> How did this go? Let me know where things are….I can jump on it too once you've had a crack at it.
>
> Thanks,
>
> John.
>
> ---
>
> **From:** Gavin He
> **Sent:** Friday, January 13, 2017 3:20 PM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Subject:** RE: Rate Mitigation
>
> Hi John,
>
> Please take a look and let me know if this would work. Also saved under below folder:
>
> S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA
>
> Thanks,
> Gavin He
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Friday, January 13, 2017 2:07 PM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
> **Subject:** Re: Rate Mitigation
>
> Hi,
>
> Would you put down the key issues, comments, questions in a Word document.
>
> Thanks,
> Ron
>
> On Jan 13, 2017, at 1:34 PM, John Kim <John.Kim@ofina.on.ca> wrote:
>
> > Hi Ron,

Pls. see attached with comments from both SPFB and EFB.

Thanks,

John.

---

**From:** Ronald Kwan
**Sent:** Thursday, January 12, 2017 11:42 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** FW: Rate Mitigation

Hi John, Emily,

Please review and let's discuss. Energy has asked to keep this tightly held and not discuss with, e.g., OPCD at this point.

Ron

---

**From:** Gadi Mayman
**Sent:** January-12-17 11:27
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
**Subject:** FW: Rate Mitigation

Here it is. I haven't looked at it, but wanted to send it to you right away

---

**From:** Imbrogno, Serge (ENERGY) [mailto:Serge.Imbrogno@ontario.ca]
**Sent:** Thursday, January 12, 2017 11:26 AM
**To:** Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>
**Subject:** Rate Mitigation

Hi,

Attached is a rate mitigation idea we've been asked to work on related to financing the global adjustment. Ideally, it would provide immediate rate relief without having a fiscal impact. The amounts are scalable but we've provided some illustrative numbers.

Serge

<Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup v1.pptx>

**From:** John Kim
**To:** Gavin He
**Subject:** Re: Rate Mitigation
**Date:** Saturday, January 14, 2017 11:46:23 AM

---

Do you know which product it is from December Ron is referring to?

On Jan 14, 2017, at 10:25 AM, Gavin He <Gavin.He@ofina.on.ca> wrote:

> Yup.
>
> On Jan 14, 2017, at 10:19, John Kim <John.Kim@ofina.on.ca> wrote:
>
> > Yup, for sure. Let's try to get bulk of it done over the weekend so we have a finalized product by eod Monday.
> >
> > ---
> >
> > **From:** Gavin He
> > **Sent:** Saturday, January 14, 2017 10:17 AM
> > **To:** John Kim <John.Kim@ofina.on.ca>
> > **Subject:** Re: Rate Mitigation
> >
> > Hi John,
> >
> > Sorry I didn't get a chance to work on that before I left yesterday, but I am planning to update it later today, if that's ok?
> >
> > Thanks,
> > Gavin He
> >
> > On Jan 14, 2017, at 10:07, John Kim <John.Kim@ofina.on.ca> wrote:
> >
> > > Hi Gavin,
> > >
> > > How did this go? Let me know where things are….I can jump on it too once you've had a crack at it.
> > >
> > > Thanks,
> > >
> > > John.
> > >
> > > ---
> > >
> > > **From:** Gavin He
> > > **Sent:** Friday, January 13, 2017 3:20 PM
> > > **To:** John Kim <John.Kim@ofina.on.ca>
> > > **Subject:** RE: Rate Mitigation

Hi John,

Please take a look and let me know if this would work. Also saved under below folder:

S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA

Thanks,
Gavin He

---

**From:** Ronald Kwan
**Sent:** Friday, January 13, 2017 2:07 PM
**To:** John Kim <John.Kim@ofina.on.ca>
**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Hi,

Would you put down the key issues, comments, questions in a Word document.

Thanks,
Ron

On Jan 13, 2017, at 1:34 PM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Ron,
>
> Pls. see attached with comments from both SPFB and EFB.
>
> Thanks,
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> John.
>
> ---
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Ron

---

**From:** Gadi Mayman
**Sent:** January-12-17 11:27
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
**Subject:** FW: Rate Mitigation

Here it is. I haven't looked at it, but wanted to send it to you right away

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**Sent:** Thursday, January 12, 2017 11:26 AM
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Serge

<Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup v1.pptx>

**From:** Gavin He
**To:** John Kim
**Subject:** Re: Rate Mitigation
**Date:** Saturday, January 14, 2017 10:25:18 AM

---

Yup.

On Jan 14, 2017, at 10:19, John Kim <John.Kim@ofina.on.ca> wrote:

> Yup, for sure. Let's try to get bulk of it done over the weekend so we have a finalized product by eod Monday.
>
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> **From:** Gavin He
> **Sent:** Saturday, January 14, 2017 10:17 AM
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Thanks,
Gavin He

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**Sent:** Friday, January 13, 2017 2:07 PM
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**Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
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Ron

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> **Subject:** FW: Rate Mitigation
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Ron

---

**From:** Gadi Mayman
**Sent:** January-12-17 11:27
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Cc:** Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
**Subject:** FW: Rate Mitigation

Here it is. I haven't looked at it, but wanted to send it to you right away

---

**From:** Imbrogno, Serge (ENERGY) [mailto:Serge.Imbrogno@ontario.ca]
**Sent:** Thursday, January 12, 2017 11:26 AM
**To:** Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>
**Subject:** Rate Mitigation

Hi,

Attached is a rate mitigation idea we've been asked to work on related to financing the global adjustment. Ideally, it would provide immediate rate relief without having a fiscal impact. The amounts are scalable but we've provided some illustrative numbers.

Serge

<Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup v1.pptx>

**From:** Gavin He
**To:** John Kim
**Subject:** Re: Rate Mitigation
**Date:** Saturday, January 14, 2017 10:17:02 AM

---

Hi John,

Sorry I didn't get a chance to work on that before I left yesterday, but I am planning to update it later today, if that's ok?

Thanks,
Gavin He

On Jan 14, 2017, at 10:07, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Gavin,
>
> How did this go? Let me know where things are….I can jump on it too once you've had a crack at it.
>
> Thanks,
>
> John.
>
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> **From:** Gavin He
> **Sent:** Friday, January 13, 2017 3:20 PM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Subject:** RE: Rate Mitigation
>
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>
> Please take a look and let me know if this would work. Also saved under below folder:
>
> S:\Users\CEF\Hydro 2017\Electricity Prices\Mitigation Proposals\Debt Financing the GA
>
> Thanks,
> Gavin He
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Friday, January 13, 2017 2:07 PM
> **To:** John Kim <John.Kim@ofina.on.ca>
> **Cc:** Emily Kerr <Emily.Kerr@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
> **Subject:** Re: Rate Mitigation

Hi,

Would you put down the key issues, comments, questions in a Word document.

Thanks,
Ron

On Jan 13, 2017, at 1:34 PM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Ron,
>
> Pls. see attached with comments from both SPFB and EFB.
>
> Thanks,
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> John.
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Thursday, January 12, 2017 11:42 AM
> **To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
> **Subject:** FW: Rate Mitigation
>
> Hi John, Emily,
>
> Please review and let's discuss. Energy has asked to keep this tightly held and not discuss with, e.g., OPCD at this point.
>
> Ron
>
> ---
>
> **From:** Gadi Mayman
> **Sent:** January-12-17 11:27
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
> **Subject:** FW: Rate Mitigation
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> **Sent:** Thursday, January 12, 2017 11:26 AM
> **To:** Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>
> **Subject:** Rate Mitigation

Hi,

Attached is a rate mitigation idea we've been asked to work on related to financing the global adjustment. Ideally, it would provide immediate rate relief without having a fiscal impact. The amounts are scalable but we've provided some illustrative numbers.

Serge

<Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup v1.pptx>

**From:** Ronald Kwan
**To:** John Kim
**Cc:** Emily Kerr; Gavin He
**Subject:** Re: Rate Mitigation
**Date:** Friday, January 13, 2017 2:07:28 PM

---

Hi,

Would you put down the key issues, comments, questions in a Word document.

Thanks,
Ron

On Jan 13, 2017, at 1:34 PM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Ron,
>
> Pls. see attached with comments from both SPFB and EFB.
>
> Thanks,
>
> John.
>
> ---
>
> **From:** Ronald Kwan
> **Sent:** Thursday, January 12, 2017 11:42 AM
> **To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
> **Subject:** FW: Rate Mitigation
>
> Hi John, Emily,
>
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> Ron
>
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>
> **From:** Gadi Mayman
> **Sent:** January-12-17 11:27
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
> **Subject:** FW: Rate Mitigation
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>
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>
> **From:** Imbrogno, Serge (ENERGY) [mailto:Serge.Imbrogno@ontario.ca]
> **Sent:** Thursday, January 12, 2017 11:26 AM

**To:** Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>
**Subject:** Rate Mitigation

Hi,

Attached is a rate mitigation idea we've been asked to work on related to financing the global adjustment. Ideally, it would provide immediate rate relief without having a fiscal impact. The amounts are scalable but we've provided some illustrative numbers.

Serge

<Debt-Financing GA - Sent to MO on 2017-01-10_EFB_SPFB_Markup v1.pptx>

**From:** John Kim
**To:** Gavin He
**Cc:** Shajee Kathirgamanathan
**Subject:** Re: Rate Mitigation
**Date:** Sunday, January 15, 2017 4:35:29 PM

---

Let's send the first two with the aim to send the third tomorrow if still asked. I will review the third one, the GA one, again either tonight or tomorrow morning.

John.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:32 PM
**To:** John Kim
**Cc:** Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Sure, just to confirm, I will send all the attached to Ron?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:26 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks....let's send to Ron. Pls. also include the deck from Francisco.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:21 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

I am good with the notes and I don't have any additional comments, saved that in the folder.

Regards,

Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:19 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

No reason....updated the RRRP.

I took a look at the comments in the deck and the comments are good. Given the meeting is on Monday, I am leaning towards not sending back comments on the deck back unless proposing to make edits to the text, like Francisco is in the attached.

I'm OK to send these back with cc: to Emily and Francisco unless you have additional comments, which would be welcome. Ideally would like to review further but I'm going to bed soon.

Thanks,

John.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:13 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

I reviewed the debt-financing GA sections and I am good with the edits.

I didn't review the other deck in details, but took a quick look on slide 7 and the new section at the end of the note. Just one question, is there a reason why the RRRP numbers for 2019-2021 were not updated?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:01 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan

<Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Let me know what you think.  If OK, could you save to the folder?

Going to quickly go through the deck.

---

**From:** John Kim
**Sent:** January 15, 2017 3:32 PM
**To:** Gavin He; Shajee Kathirgamanathan
**Subject:** Re: Rate Mitigation

Yeah, I think Shajee's point on slide 7? might be the only path.  I am about to take a crack at it but I don't want to minimize the fiscal impact by taking their numbers.  Thus being deliberate. Shouldn't take long.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:30 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Based on Emily's update, the impact for OESP & RRRP will be $0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022, without detailed impact on each year.  So it we are going to update the table, it seems we might need to make some assumption.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:17 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yes, the OESP and RRRP that Emily updated, kind of showed me there were updates.

Ok, I need to go back to that deck.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:13 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Are you referring to the numbers for OESP and RRRP?

Also, the $2B GA amount is from scenario 2 and 3. The cap for the maximum amount of GA above the true cost is $2B.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:10 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yeah, I'm trying to decide if it's worth adding that proposal. While I am trying to minimize work, it's fiscal impact stuff.

And the table. I'm trying to assess if not updating that is an option as I'm getting tired.

What's your sense?

---

**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 3:06 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

If you're referring to #10 on renewables/wind contracts, I think it's not so much tax exempting renewables, but rather paying through the tax base the amounts above competitive electricity rates. (Eg. If competitive amount is say $80/mwh. And they have a community/indigenous adder of $40/mwh. Therefore a total contract price is $120/mwh. The proposal would shift the $40/mwh to the tax base). That's my interpretation at least.

Again it's just another way to transfer to the tax base from the rate base.

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 2:57 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks.....I think we should send the note in for about 6pm so don't worry about it. I will have a look at the deck.

The only thing that concerns me is the additional proposals like tax exempting of renewable contracts, etc. I'm debating whether they need coverage but likely to try to dodge it. I think the table at the bottom needs updating but I'm currently still assessing it.

---

**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 2:54 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

I finished with my comments on the power point file. I think there were some CEFD and Energy Comments from before.

Only way to distinguish are my comments are "**CEFD Comments**" (bold), whereas before it was evidently bold and underlined.

Will take a quick review of the document, but heading out shortly for the evening. Will try to get done what I can.

Thanks,
Shajee

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 2:45 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks....saw this after sending the other.

---

**From:** Gavin He

**Sent:** January 15, 2017 2:41 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

Emily just finished the file. I have copied my edits in her version and saved it as v9.

Thanks,
Gavin He

---

**From:** Gavin He
**Sent:** Sunday, January 15, 2017 2:24 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

In the interest of time, I have worked on v8 from my personal drive, as Emily is still in the note. I have reviewed and updated sections related to debt-financing GA.

John – for the numbers, I wasn't involved in providing the updates, so don't have much knowledge on how the numbers were put together, and the presentation decks don't provide update on those numbers, so I didn't make any update there.

Please review and let me know if you have any questions. I can consolidate my edits once Emily is done.

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 10:01 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation

FYI.

Hoping to finalize on our end by early afternoon…..Emily might have other comments.

I think what things need to be checked against the updated deck, as well.

John.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 9:59 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John, Emily,

I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.

I also made some edits to Energy's slides but not sure those are needed.

Thanks,

Francisco

> -----Original Message-----
> From: John Kim
> Sent: Saturday, January 14, 2017 11:45 PM
> To: Emily Kerr <Emily.Kerr@ofina.on.ca>
> Subject: RE: Rate Mitigation
>
> Hi Emily,
>
> Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.
>
> Thanks,
>
> John.
>
> -----Original Message-----
> From: Emily Kerr
> Sent: Saturday, January 14, 2017 7:21 PM
> To: John Kim <John.Kim@ofina.on.ca>

Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation
>
> Good morning,
>
> Attached are materials for Monday's rate mitigation meeting.
>
> Keley

Original Message

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>

Sent: Saturday, January 14, 2017 7:49 AM

To: Orsini, Steve (CAB)

Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

Hi Steve,

Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Gavin He; Shajee Kathirgamanathan |
| **Subject:** | Re: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 4:26:21 PM |

Thanks....let's send to Ron. Pls. also include the deck from Francisco.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:21 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

I am good with the notes and I don't have any additional comments, saved that in the folder.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:19 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

No reason....updated the RRRP.

I took a look at the comments in the deck and the comments are good. Given the meeting is on Monday, I am leaning towards not sending back comments on the deck back unless proposing to make edits to the text, like Francisco is in the attached.

I'm OK to send these back with cc: to Emily and Francisco unless you have additional comments, which would be welcome. Ideally would like to review further but I'm going to bed soon.

Thanks,

John.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:13 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

I reviewed the debt-financing GA sections and I am good with the edits.

I didn't review the other deck in details, but took a quick look on slide 7 and the new section at the end of the note. Just one question, is there a reason why the RRRP numbers for 2019-2021 were not updated?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:01 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

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**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation

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**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
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Thanks,

John.

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From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

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From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

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From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>

Sent: Saturday, January 14, 2017 8:16 AM

To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)

Subject: Fw: Rate Mitigation

Good morning,

Attached are materials for Monday's rate mitigation meeting.

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Original Message

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>

Sent: Saturday, January 14, 2017 7:49 AM

To: Orsini, Steve (CAB)

Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

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**From:** John Kim
**To:** Gavin He; Shajee Kathirgamanathan
**Subject:** Re: Rate Mitigation
**Date:** Sunday, January 15, 2017 4:18:38 PM
**Attachments:** Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup.docx
Proposed Initiatives to Transform Ontarios Electricity Sector 20170113_CEFD.pptx

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No reason....updated the RRRP.

I took a look at the comments in the deck and the comments are good. Given the meeting is on Monday, I am leaning towards not sending back comments on the deck back unless proposing to make edits to the text, like Francisco is in the attached.

I'm OK to send these back with cc: to Emily and Francisco unless you have additional comments, which would be welcome. Ideally would like to review further but I'm going to bed soon.

Thanks,

John.

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Hi John/Shajee,

I reviewed the debt-financing GA sections and I am good with the edits.

I didn't review the other deck in details, but took a quick look on slide 7 and the new section at the end of the note. Just one question, is there a reason why the RRRP numbers for 2019-2021 were not updated?

Thanks,
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**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

In addition, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to ~~over~~or more than $2 billion annually during the period that GA costs are deferred depending on the scenario.

**Commented [GH1]:** This was included in the debt-financing GA section below, so not sure if we need to mention it here.

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility, and provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.** | • Significant fiscal exposure -- $0.42-0.845 bn in 2017 to $0.62-1.18 bn in 2022, ~~at current levels,~~ higher if OESP is enhanced. On-bill benefits.<br>• Funding programs through tax base estimated to reduce average monthly residential bill by approximately $2 in 2017, increasing to approximately $3 in 2022.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Amortize ~~Fund~~ **conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account. ~~programs through the tax base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time~~** | • It is unclear whether consevation costs could be amortized according to accounting standards. If this option was pursued without establishing Provincial Controller agreement on accounting, there could be a fiscal risk. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base. ~~Potentially significant fiscal impact – current program costs are about $0.45 bn~~<br>o Conservation programs do provide an electricity system benefits, but ~~would now be~~ fiscal~~ly~~-funding~~ed, so~~ would result in a cross-subsidisation from tax-base |

**Commented [EK2]:** Updated based on slide 12 in Energy's updated deck.

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| | |
|---|---|
| | ○ Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value (share price) and impact fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• In the case of projects located in First Nation territories it could have an upfront fiscal impact if Province is not able to amortize those projects (TBC with OPCD).<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a windfall. It was fiscally neutral, it represented revenue to OEFC and an expense to Hydro One.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates<br>• OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding th Global Adjustment (GA) |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some** | • Incurring debt to pay the generators their contracted or regulated payments |

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| | |
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| **generation supply costs by partially financing the cost of the global adjustment (GA)** | • Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022~~Total of about $0.4 to 0.45 Billion/year~~):

~~This w~~Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), ~~-~~and ~~the~~ Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs. ~~Energy notes that~~
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
  - ~~The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).~~
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- ~~o~~ The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

~~Fund~~ Amortize Conservation Program~~s~~ Costs ~~through the Tax Base~~:

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Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization of conservation costs was not permitted, a fiscal impact could result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

~~This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.~~

- ~~Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.~~

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.

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  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income (revenue) to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income (expense) of Hydro One.
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- Having OEFC help implement this measure may require introducing changes to OEFC's objects as is legal mandate is to help reduce and pay down stranded debt.
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."

**Commented [JK3]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

**Commented [JK4]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
  - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
  - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost~~delay recovery of part~~ of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.~~by~~ This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to or more than $2 billion annually during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA

- Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
- Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years

- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

~~[Check and Update]~~

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ~~OEBT~~ RRRP ~~Pilot Nationwide~~ | | ~~398~~666 | ~~419~~684 | ~~433~~700 | ~~447~~719 |
| ~~OEBT – Enhance Benefit~~ | | 162 | 226 | 279 | 322 |
| ~~OEBT – Expand Eligibility~~ | | TBD | TBD | TBD | TBD |
| ~~Conservation Programs through Tax-Base~~ | ~~110~~ | ~~450~~ | ~~450~~ | ~~450~~ | ~~450~~ |
| [Trillium Trust] | ~~TBD~~100 | ~~TBD~~390 | ~~TBD~~390 | ~~TBD~~390 | ~~TBD~~390 |
| Departure Tax | 260 | ~~TBD~~260 | ~~TBD~~260 | ~~TBD~~260 | ~~TBD~~260 |
| DRC removal for Class B | 110 | 450 | | | |
| ~~Tax Relief for Solar and Wind~~ | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total: | ~~220~~470 | ~~1,298~~1,927 | ~~869~~1,560 | ~~883~~1,362 | ~~897~~1,419 |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total:[3] | **1,225** | **2,005** | **1,715** | **1,826** | **1,826** |
| TOTAL[3] | **1,** | **3,** | | | |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**~~December 12~~January 15, 2016**

Ontario

MINISTRY OF
ENERGY

# Proposed Initiatives to Transform Ontario's Electricity Sector – Update

## Working Draft

December 2016

CONFIDENTIAL DRAFT

# Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in Hydro One transmission and distribution systems).

- Ontario has taken a number of actions to lower electricity cost for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., GEIA renegotiation, decreasing FIT prices).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., competitive LRP, no new NUG contracting).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate ($11/month savings), updating RRRP ($45/month savings), expanding ICI (up to one-third savings for participants), suspending the LRP II and the EFWSOP (up to $3.8 billion in cost savings) and recycling proceeds to industrial/ commercial consumers.

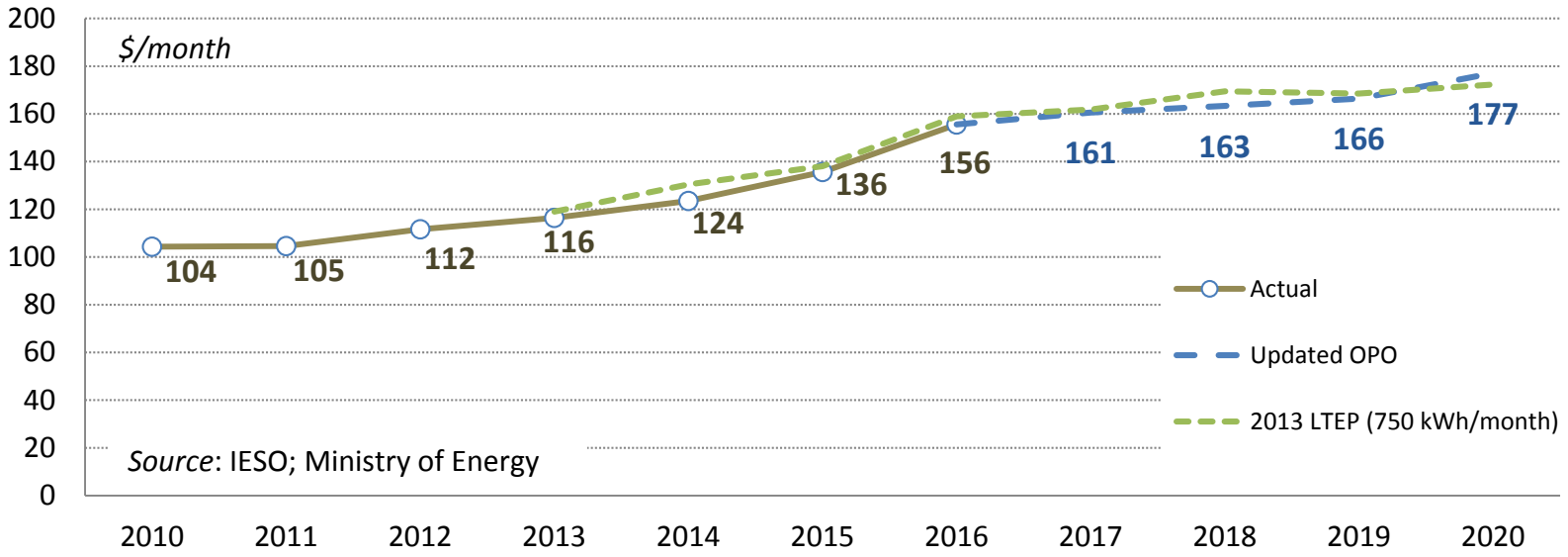
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

# Electricity Prices – Residential

- Residential consumers electricity prices continue to be a concern for many Ontarians, particularly those that rely on electric heat.
  - **Note:** The typical residential bill is currently below the 2013 Long-Term Energy Plan (2013 LTEP) forecast.

**Typical Residential Electricity Bills**
*Historical and Forecast*




**Note**: The 2013 LTEP forecast for residential bills was based on 800 kWh/month without RRRP or electric heating; the above has been rebased to 750 kWh/month for comparison purposes. Typical residential are based on Toronto Hydro. The updated OPO forecast above includes the 8% rebate to offset the provincial portion of HST, ICI expansion and RRRP expansion.

# Broad Policy Themes / Rationale

- Support the continued reduction in the differential across distribution rates (as charged by Local Distribution Companies) across the Province through the potential enhancement of Rural or Remote Electricity Rate Protection, (RRRP). In order to not increase regulatory costs to customers as a result, this program can be moved to the tax-base.
- Provide a greater focus and support on lower income Ontarians by funding the Ontario Electricity Support Program (OESP) through the tax-base, as well as enhancing the support available through the program.
- Amortize electricity conservation and demand management (DM) programs over 15-years to provide lower costs for electricity consumers.
  - Alternatively, pay for conservation/DM programs through the tax-base and transition costs to the new "green bank entity" over time. Costs would be shifted in recognition of the burden borne by ratepayers in phasing out coal generation.
- Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding, such as remote electrification, large transmission projects, new or expanded interties and expansion of natural gas to underserved areas (i.e., rural and remote communities), etc.
- Empower energy agencies to increase cost effectiveness and improve efficiency by having – IESO modernize Ontario's electricity market through electricity market renewal initiatives, the OEB identify opportunities for future LDC cost reductions/efficiencies and work with OPG to find further efficiencies in operations and pass on savings to ratepayers.
- Give consumers more choice by allowing households to "opt into" an alternative rate plan, based on a flat electricity rate, as an interim measure as the Ontario Energy Board (OEB) develops more pricing options over time. Also give consumer greater transparency with respect to electricity costs by providing more details regarding the Global Adjustment (GA).
- Help small business manage their electricity costs and provide relief for cap and trade until proceeds recycling is fully operational by ending the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers, a benefit of $7/MWh.

# Proposed Initiatives – Potential Savings for Typical Residential Electricity Consumers

| *$/750kWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 1.53 | 1.58 | 1.61 | 1.66 | 1.70 | 1.74 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.57 | 0.79 | 0.98 | 1.13 | 1.29 | 1.44 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.62 | 1.88 | 1.16 | 1.20 | 0.82 | 0.69 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 2.16 | 2.16 | 2.17 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.00 | 1.03 | Long-Term |
| b. OEB – LDC Efficiencies/Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.71 | 0.89 | 1.08 | 1.22 | 1.35 | 1.24 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. v Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 3.47 | 3.83 | 3.17 | 3.35 | 2.84 | 2.90 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | 4.40 | 4.24 | 4.10 | 4.24 | 3.73 | 3.58 | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Initiatives – Potential Savings for Average Industrial Electricity Consumers

| *$/MWh* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Timing of Benefit |
|---|---|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | | | |
| 1. Fund RRRP through the Tax-Base *** | 2.04 | 2.10 | 2.15 | 2.22 | 2.27 | 2.32 | Immediate |
| 2. Fund OESP through the Tax-Base*** | 0.76 | 1.05 | 1.31 | 1.51 | 1.71 | 1.92 | Immediate |
| a. Enhance OESP Benefit | - | - | - | - | - | - | n/a |
| b. Expand OESP Eligibility | - | - | - | - | - | - | n/a |
| 3. Conservation Funding Options | | | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | 1.12 | 1.30 | 0.80 | 0.83 | 0.57 | 0.47 | Immediate |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | - | - | - | 1.79 | 1.79 | 1.79 | Medium to Long-Term |
| 5. Dedicate Departure Tax | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | Immediate |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | | | |
| a. IESO – Market Renewal | - | - | - | - | 1.34 | 1.38 | Long-Term |
| b. OEB – LDC Efficiencies / Rates* | TBD | TBD | TBD | TBD | TBD | TBD | Medium-Term |
| c. OPG – Operational Efficiencies | 0.59 | 0.74 | 0.89 | 1.01 | 1.12 | 1.03 | Immediate |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - | - | n/a |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers)** | - | - | - | - | - | - | n/a |
| 9. Extend Length of Existing Wind /Solar Contracts at Lower Prices | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | | | |
| Fund Conservation Programs Through The Tax-Base | 2.88 | 3.17 | 2.66 | 2.77 | 2.36 | 2.41 | Immediate |
| Eliminate the Industrial Conservation Initiative (ICI) | (24.12) | (23.21) | (22.45) | (23.23) | (20.42) | (19.61) | Immediate |

**Note:** The above initiatives will provide similar benefits for non-RPP Class B electricity consumers. Proposal 2 assumes OESP participation of 50% and 5-year maturity. *Assessing the range of ratepayer impacts will be done through the LTEP development and implementation process in conjunction with the OEB. **Class B includes small-medium enterprises (SMEs). ***RRRP and OESP numbers are assumed to be at status quo.

# Proposed Taxpayer Funded Electricity Price Mitigation

| *$M* | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| **Recommended Initiatives** | | | | | |
| 1. Fund RRRP through the Tax-Base* | - | 666 | 684 | 700 | 719 |
| 2. Fund OESP through the Tax-Base | | | | | |
| a. Enhance OESP Benefit | | 162 | 226 | 279 | 322 |
| b. Expand OESP Eligibility | | TBD | TBD | TBD | TBD |
| 3. Conservation Funding Options | | | | | |
| a. Amortize Conservation Program Costs (15-Year Amortization)<br>b. Rate Smoothing of Conservation Program Costs (same impact as amortization) | - | - | - | - | - |
| 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (e.g., Transmission upgrade, natural gas expansion, etc.) | 100 | 390 | 390 | 390 | 390 |
| 5. Dedicate Departure Tax | 260 | 260 | 260 | 260 | 260 |
| 6. Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency | | | | | |
| a. IESO – Market Renewal | - | - | - | - | - |
| b. OEB – LDC Efficiencies / Rates | - | - | - | - | - |
| c. OPG – Operational Efficiencies | - | - | - | - | - |
| 7. Give Residential Consumers More Rate Choices and Greater Transparency | - | - | - | - | - |
| 8. Help Small Business Manage Their Electricity Costs (i.e., End DRC early for Class B electricity consumers) | 110 | 450 | - | - | - |
| 9. Extend the Length of Existing Wind/Solar Contracts at Lower Prices | - | - | - | - | - |
| 10. Tax Relief for Solar and Wind Contracts | TBD | TBD | TBD | TBD | TBD |
| **Considered but not Recommended** | | | | | |
| Fund Conservation Programs Through The Tax-Base | 154 | 632 | 649 | 567 | 568 |
| Eliminate the Industrial Conservation Initiative (ICI) | - | - | - | - | - |
| Cancel LRP I | - | - | - | - | - |

**Source:** Ministry of Finance, Energy
**Note:** *Assumes RRRP enhancement to reduce distribution rates to $30 for LDCs and **Assumes increase OESP credit by 50%.
Not included in chart is additional $18M/year to fund potential First Nations rate program through the Tax-Base.

# Existing Rate Mitigation Programs – Overview

- There are a number of existing programs funded by electricity ratepayers that help mitigate electricity bills for some customers, each of which has a unique policy rationale.

- Programs such as the as the Rural or Remote Rate Protection (RRRP) program are targeted at all customers who face the highest delivery costs in the province, while others such as the Ontario Electricity Support Program (OESP), are income tested and targeted at the most vulnerable energy consumers.
  - These program are not mutually exclusive and a customer could receive both the RRRP and the OESP.
  - There are other programs that are still under development such as options for a First Nations Rate currently being developed by the OEB as per the request of the Minister of Energy. These options are aimed to alleviate high delivery costs for on-reserve indigenous consumers.

- There are opportunities to enhance each of these programs. However, if enhancements are funded through the electricity rate-base, while they would lower costs for eligible consumers, they would raise costs for all other ratepayers.

- Given that these programs focus on promoting equity between different areas of the province (RRRP) or on social equity (OESP), they could be funded by the tax-base rather than the rate-base. This would allow their goals to be achieved and enhanced without increasing electricity rates. The following slides explore options to enhance each program using the tax-base.
  - These enhancements would also work in conjunction with the Ontario Energy Board's focus on reducing LDC costs outlined in option 6b.

# 1. Rural or Remote Rate Protection (RRRP) Expansion

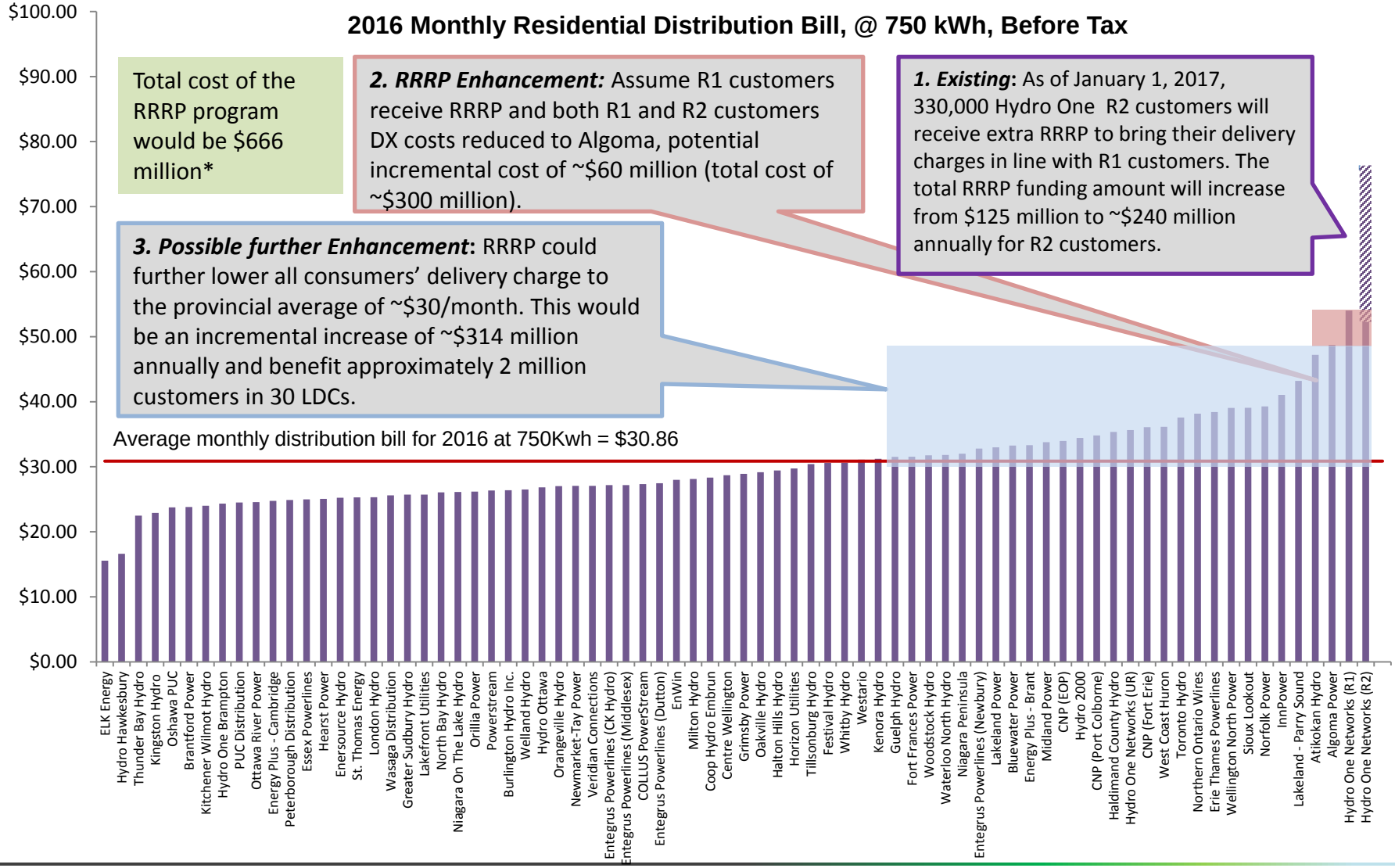
- The Rural or Remote Rate Protection (RRRP) program supports the most costly-to-serve distribution customers in Ontario. It is not income tested and most of the support goes to Hydro One's R2 (low density) rate class and remote communities.
  - Costs to these Hydro One customers are higher than average because of their relatively low density. The OEB mandates that they pay the full cost of service and in recent rate filings has asked Hydro One to ensure this through cost allocation studies.
  - To mitigate these costs, the RRRP was recently enhanced to help lower the bills of Hydro One's R2 customers to around those of its R1 (medium density) customers.
- Although other LDCs do not have medium- and high-density rates, there is a wide range of distribution costs between LDCs. The RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - Could be done on its own or as part of exploring an Ontario-wide uniform "postage stamp" delivery rate.

**Considerations**

- RRRP will be enhanced for R2 customers on January 1, 2017 to have their costs reduced to approximately R1 distribution costs levels. The RRRP could be further enhanced to include R1 customers, and have R2 and R1 customers reduce their costs down to Algoma (see next slide). This would cost $300 million in the first year (and would adjust year over year).
- If there was a desire to reduce costs for all LDCs, a simple average of distribution cost before tax, across all rate zones is $30.86 per month, for a residential customer consuming 750 kWh per month.** Bringing all delivery rates down to this average would cost approximately $500 million for the first year, with escalation in line with average distribution rate increases.
  - This assumes Hydro One R2 consume 1,200 kWh and H1 R1 customers consume 1,000 kWh per month.
- If all customers were brought down to the average costs (see the chart on the next slide for more detail):
  - It is assumed that residential customers with bills less than the provincial average see no change;
  - Majority of the enhanced benefit would go to Hydro One R1 and Toronto Hydro customers; and
  - Mechanism to ensure that LDCs continue to be motivated to achieve efficiencies would need to be designed (see section 4).
- Enhanced RRRP support may be best provided from the tax-base, because if funded from the rate-base, it would increase the costs for all customers who may argue that it is unfair that they are being asked to pay more to subsidize those in other LDCs.
- In conjunction with using the tax-base to reduce delivery charges to the provincial average, the OEB could be asked to explore moving to a province-wide "postage stamp" delivery rate that would be the same across the province to be implemented over time.
  - Could be "winners and losers" as delivery rates less than the average would go up in a postage stamp model;
  - A "postage stamp" model could help incent LDC consolidation.

**Note:** This is based on preliminary estimates and the amount will fluctuate on monthly consumption from customers and LDCs have different customer base with different consumption types.

# 1. Rural or Remote Rate Protection (RRRP) Expansion (cont'd)




*Note: this includes the ~$50M currently supporting Algoma Power and Hydro One Remotes.*

# 2a. Enhance Ontario Electricity Support Program (OESP) Benefit

- The OESP is an income-tested, application based program that lowers the electricity costs of the most vulnerable consumers by providing a rebate directly on their electricity bills. The OESP provides basic benefits to most consumers and enhanced benefits to Indigenous customers and customers with electric heat and medical devices and at launch, it was estimated ~560,000 families could be eligible and some 261,000 applications have been submitted.

- The OESP program benefits could be increased across the board by 50%, which would mean:
  - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
  - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).

- The OESP program could also be further enhanced by working to ensure the program uptake is as close as possible to 100%:
  - Streamlining the application process to make it easier and quicker to get through;
  - Putting in place a more aggressive communications strategy to make sure people are aware of the program;
  - Increasing funding for key partner agencies to work directly with individuals who are applying; and
  - Exploring automatic OESP qualification for those who receive provincial programs (e.g., ODSP).

**Considerations**

- If the OESP was funded by the tax-base, it could also be explored whether the OESP could be better delivered as a provincial program via the tax system. This may help ensure that the program's participation rate is as high as possible.
  - At the time of program design, advice was given that a 40-50% participation rate would be high for an application-based program delivered through electricity bills.
  - The province would need to work with LDCs if the rebate was to appear on electricity bills rather than be delivered via the income tax system (e.g., through the Trillium Benefit).

# 1 & 2a. Fiscal Impacts of RRRP, OESP and First Nation Rate

- Table below shows estimates of program costs up to 2022:

| Year | OESP ($M) | OESP + 50%($M) | RRRP($M) | RRRP Enhancement ($M) | First Nations Delivery Rate($M) | TOTAL RANGE ($M) (from status quo to OESP and RRRP enhancements) |
|---|---|---|---|---|---|---|
| 2017 | $108 | $162 | $292 | $374 | $18 | $418 to $846 |
| 2018 | $150 | $226 | $300 | $384 | $18 | $468 to $928 |
| 2019 | $186 | $279 | $306 | $394 | $18 | $510 to $997 |
| 2020 | $215 | $322 | $315 | $404 | $18 | $548 to $1,059 |
| 2021 | $243 | $365 | $322 | $415 | $18 | $583 to $1,120 |
| 2022 | $272 | $408 | $329 | $426 | $18 | $619 to $1,181 |

1) Ontario Electricity Support Program (OESP)
   - After almost a year in market, close to 30% of potentially eligible customers are signed up.
   - The cost projections above assume the program grows to 100% of eligible consumers by 2022 and remains at that level.
   - The second column forecast also assumes the existing credit amounts increase by 50%.
     - Forecast assumes 10% administration costs
     - Forecast does not account for the approximately 142,000 low-income households that OEB estimated are not eligible because they do not directly receive an electricity bill.

2) Rural and Remote Rate Protection (RRRP)
   - Provides benefits to R2 Hydro One consumers, Algoma, and remote communities.
   - Includes the expanded coverage that will begin on January 1, 2017.
   - Expansion to cap distribution rates for other customers is based at $374M and assumes escalation of 2.6% (historical average dx rate increase). This is a conservative estimate, as Hydro One and Toronto Hydro increases could drive program costs beyond the average increase.

3) First Nation rate reduction (currently under development)
   - On November 14, 2016, OEB presented options to the Ministry on reducing costs for on-reserve First Nation customers.
   - OEB's recommended option to provide 100% delivery rate credit, which is estimated at $18.4 million per year.
     - Other options includes a seasonal fixed credit to account for demand changes over the year ($13 million) or a 50% total bill reduction ($23 million).

# 2b. Expand OESP Eligibility

**Expanded Coverage**

- When OESP was being created, the OEB estimated that are 713,000 low-income households, of which 20% do not receive electricity bills. Thus, only 571,000 would potentially be eligible for OESP.
- If moved to the tax base, the OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity.

**Eligibility Categories**

- OESP has two credits amounts:
    1) Basic credit of $30-50 per month, based on the level of income and the number of residents.
    2) Enhanced credit of $45-75 per month for those with unique electricity needs:
        a) Electric heating,
        b) Indigenous customers, and
        c) Certain electrically intensive medical devices.
- The enhanced credit can be expanded to include additional eligibility categories of customers. For example, a new “Low Density Consumer” category could be introduced that provides Hydro One R2 customers (highest distribution rates) eligible for OESP the enhanced credit.

**Considerations**

- Potential costs for expanded coverage and new eligibility categories depend on updated estimates and changes to program design and delivery.
- There would be value in keeping the OESP as an income-tested program to distinguish it from other initiatives (e.g. RRRP, which is designed to address disparity between rural and urban distribution costs).

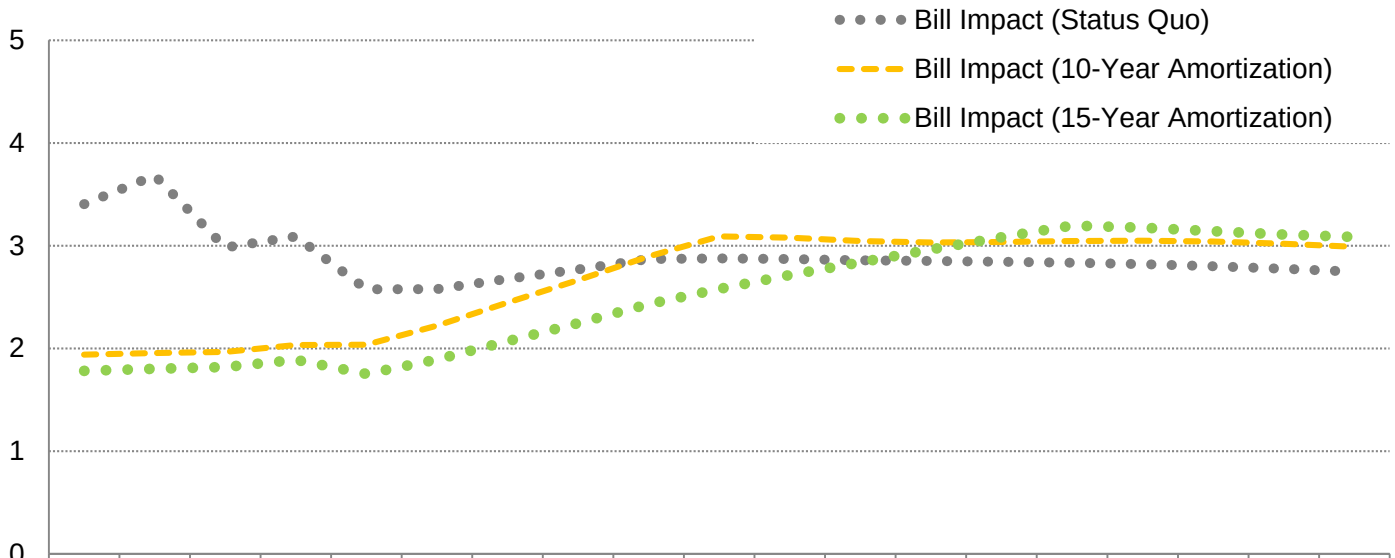
# 3a. Amortize Conservation Program Costs

- ~$3 billion from the electricity ratepayer base will be spent on conservation programs delivered under the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP) between 2015 and 2020.
- Currently, Conservation and Demand Management (CDM) program costs are recovered from the Global Adjustment (GA) mechanism about one month after expenses are incurred.
- As a potential rate mitigation measure, certain CDM costs could be amortized. This would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs).
  - The time period over which costs could be amortized would be over the lifetime of funded CDM measures.
  - ENERGY is working with IESO to determine the appropriate lifetime period – the graph on the next slide, which illustrates residential bill impacts, presents two cases: **10-year and 15-year measure lifetimes**.
- In both cases, amortizing a portion of conservation spending would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020. Over time the benefit would decrease and turn into a cost (higher electricity rates than would otherwise occur), as interest charges begin to grow. Estimated interest charges are as follows (a 3% interest rate is assumed; increases in interest rates could result in higher overall interest charges):
  - $712 million ($2016) – Amortizing eligible 2017-2035 CDM costs for 10-year period; and
  - $1.3 billion ($2016) – Amortizing eligible 2017-2035 CDM costs for 15-year period .
- Legislative changes would be needed to allow recovery of interest payments from ratepayers, or these costs could be recovered from the Consolidated Revenue Fund (CRF, or taxes).
- An alternative that could be explored would be to pay for CDM costs, or for a portion of these, from the tax-base (*see Appendix for more detail on tax funding option*).

# 3a. Amortize Conservation Program Costs (cont'd)

## Conservation Residential Bill Impact – Status Quo, 10-Year and 15-Year Amortization

***CDM Bill Impact ($/month)***




| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bill Impact (Status Quo) | 3.40 | 3.68 | 2.98 | 3.09 | 2.58 | 2.58 | 2.68 | 2.77 | 2.87 | 2.88 | 2.87 | 2.86 | 2.85 | 2.84 | 2.83 | 2.82 | 2.80 | 2.78 | 2.75 |
| Bill Impact (10-Year Amortization) | 1.94 | 1.95 | 1.97 | 2.03 | 2.04 | 2.22 | 2.45 | 2.67 | 2.90 | 3.09 | 3.08 | 3.05 | 3.03 | 3.04 | 3.04 | 3.05 | 3.04 | 3.02 | 2.99 |
| Bill Impact (15-Year Amortization) | 1.78 | 1.80 | 1.82 | 1.89 | 1.75 | 1.89 | 2.07 | 2.25 | 2.43 | 2.58 | 2.71 | 2.84 | 2.96 | 3.08 | 3.20 | 3.18 | 3.14 | 3.11 | 3.09 |

Source: IESO; Ministry of Energy

**Note**: Chart assumes that conservation incentive costs are available for amortization while administration cost are not. Although there is variable from year to year, incentives represent about two-thirds of conservation spending in Ontario. Chart assumes conservation spending continues at a similar rate beyond 2020. Chart assumes a 10 of 15-year borrowing rate of 3.0%.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- Under **Public Sector Accounting Board (PSAB) accounting standards**, used by both the Province and IESO, only certain assets can be amortized: 1) pensions and 2) tangible capital assets. Under PSAB an asset must meet several criteria to be considered a capital asset, including:
  - A tangible capital asset must be tangible and substantive and the Ontario government must have title and operate the asset.
  - A tangible capital asset must bring a tangible benefit to the government or to Ontario.

- CDM costs, on their own, do not meet the criteria of a tangible capital asset because customers would have ownership and control of installed CDM measures, not the Province or IESO.

- **Rate-regulated accounting** was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

# 3a. Amortize Conservation Program Costs (cont'd)

**Considerations**

- If some of Ontario's CDM costs could be amortized, analysis shows that ratepayer impacts would be reduced in the short-term but interest charges on the loan would result in increased overall ratepayer costs in the longer-term.
- Legislative amendments would be needed to allow recovery of loan interest charges from GA.
- ENERGY staff have developed a note to seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether CDM costs could be amortized according to rate-regulated accounting standards.
- ENERGY is working with IESO to seek an opinion on the proposal from IESO's external auditor.
- ENERGY would then send the IESO external auditor's opinion along with ENERGY's explanatory note to the Ontario Provincial Controller (OPC) to seek a formal opinion on whether CDM costs could be amortized according to rate-regulated accounting standards.
- Further legal analysis would also be required to confirm legal viability and possible approaches to implementation.

# 3b. Rate Smoothing of Conservation Program Costs

- "Rate smoothing" could achieve the same rate reduction effect as amortization.
- Instead of taking out a loan to amortize conservation costs, a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Each year, IESO would defer recovery of a portion of annual conservation costs. Financing would also be required, such as from the OFA, to pay the interest on the deferral account. Interest would accrue on the deferred amounts, likely at the same rates as for the amortization option.
- Deferred costs could be recovered over any time period. If a 10 or 15 year-period was chosen, the rate impacts would be the same as in the amortization option.

**Considerations**

- Option would **not** require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open the Ministry to criticism by the Controller and/or Auditor General since the rate impact is the same.
- The Ministry would have more control under this option to change deferred amounts each year, as opposed to the terms set by a loan agreement under the amortization example.
- There is precedence to this approach for nuclear investments, which otherwise would result in volatile increases and decreases for Ontario ratepayers over the investment period. In 2015, the Ministry amended a regulation that requires the Ontario Energy Board (OEB) to set "smoothed" nuclear rates for OPG's Darlington and Pickering nuclear stations over a 20-year period.
  - The regulation allows OPG to defer recovery in rates of a portion of its nuclear revenue during the Darlington refurbishment (expected to be complete in 2026) and recover these deferred costs over the remaining ten years.
  - OPG will establish a "deferral account" to record the deferred amounts each year up to 2026 plus accumulated interest on the balance to reflect OPG's financing costs as a result of rate smoothing. The deferral account is then drawn down on a straight-line basis between 2026 and 2036.
- At minimum, new regulation would be required. However, further analysis is needed to determine the relevant regulation or legislation, to be amended for IESO (e.g., OEB regulation of IESO costs and fees, GA regulation for how IESO recovers its conservation costs from ratepayers).

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure

- Fund investments in specific energy infrastructure projects through the tax-base. **Note:** This could include the provincial portion of funding for the Remote First Nation Connection Project, a fund to support projects that improve adequacy and reliability in areas where new transmission would unlock economic growth and expansion of natural gas service to underserved communities.

**Considerations**

- Tax-base funding would allow for energy infrastructure to be built without impacting electricity and natural gas rates.
- Would require increasing the amount of funding committed to the Trillium Trust. All fiscal impacts from broadening Hydro One have been committed to the Trillium Trust $5.7 billion target and allocated to Moving Ontario Forward projects.
- There would be an ongoing fiscal impact from the amortization and funding of the investments. Where amortization is not possible there would be an upfront fiscal impact.

*Remote Connection Project:*

- Ontario ratepayers currently support costs of remote electricity service through RRRP on the order of $28 million/year
- Connecting 21 remote communities to the Ontario grid is supported by a positive business case due to diesel cost savings over time. If RRRP is funded through the tax base as proposed above, this project represents an opportunity to reduce impacts from RRRP.
- Direct investment in Ontario's portion of the capital costs of the project through a provincial fund (e.g., Trillium Trust) could also be considered along with mechanisms for cost recovery through transmission rates to refresh the fund as industry benefits from the transmission investment.
- The amount of investment and long-term savings depend on a federal contribution to the project and ENERGY is currently in discussions with Canada with the goal of concluding a cost-sharing agreement by spring 2017.
- A move to tax-based funding may have implications for cost oversight, since the OEB's mandate is to have oversight of ratepayer impacts. Alternative methods to review cost prudence of tax-based funding may be needed.

# 4. Expand the Scope of Trillium Trust to Make Investments in Energy Infrastructure (cont'd)

**Considerations (cont'd)**

*Transmission Projects to Enhance Economic Growth:*

- A tax-based fund could target investments in projects that have been identified in IESO regional plans and that would stimulate economic growth but are not proceeding due to cost barriers under the OEB's beneficiary pays principle. Investments could also target areas where the existing system poses challenges for delivering reliable service such as in parts of Northern Ontario with long single circuits.
- Potential opportunities for investment could include a transmission reinforcement in the **Greenstone area**, upgrades south of **Red Lake** and others TBD based on program design.
- This approach would allow a potion of project costs to be socialized to advance key projects without impacting rates or OEB's principles of cost allocation. Scope and scale of fund would be refined through program design.

*Natural Gas Expansion to Underserved Communities:*

- The Government has currently committed to expanding natural gas access to more communities in Ontario (i.e., $200 million Natural Gas Access Loan and $30 million Natural Gas Economic Development Grant).
  - Natural gas is an affordable heating source in Ontario. Its continues to be less expensive than alternative sources such as electric baseboards, heating oil and propane. For example, switching from oil to natural gas can save an average consumer an estimated $1,500 annually.
  - Increasing access to other energy sources such as natural gas, provides Ontarians with more options to meet their needs, reduce their energy costs and improve their quality of life.
  - Expansion of natural gas delivery infrastructure is widely supported in underserved communities (i.e., a recurring theme at ROMA) as a means to provide consumers and businesses in underserved communities with more affordable energy choices, attract new industry to Ontario and benefit agricultural producers.
- A grant program complements the Ontario Energy Board's recent decision enabling greater rate-based expansion to unserved areas, including rural and remote communities.
  - Applying Trillium Trust funding would make it possible to enhance the Grant Program and service more communities.

# 5. Dedicate Departure Tax

- In connection with the IPO, as a result of leaving the PILs regime and entering the corporate tax regime, Hydro One was deemed to dispose of its assets for proceeds equal to its fair market value, triggering a PILs liability of $2.6 billion (Departure Tax).
- This was paid to the Ontario Electricity Financial Corporation (OEFC), to be dedicated towards repayment of electricity sector stranded debt. The Province could explore repurposing some of those funds to the benefit of ratepayers.
- This may reduce the risk that the Ontario Energy Board (OEB) assigns to ratepayers the benefit from an associated tax asset, resulting in lower earnings and decreased share value for Hydro One. This decision is currently before the OEB, as part of Hydro One's Transmission rate application.
- If the Province were to transfer $2.6 billion in economic benefits to the rate base over 10 years suggest the following fiscal impacts (assuming 140TWh per year):
  - Residential Ratepayer Impact (if spread over 10 years): up to $1.39 per month on a typical bill; and
  - Industrial Ratepayer Impact (if spread over 10 years): up to $1.86 / MWh
- There would be no certainty that the OEB could still decide to allocate some or all of Hydro One's deferred tax benefit to ratepayers which would have fiscal impact (lower share price and lower net income over time).

**Considerations**

- Cost savings to ratepayers and associated fiscal impacts would depend on timing and which ratepayers (e.g., Hydro One customers, or all Ontario customers) will benefit from some or all of the $2.6 billion value.
- The departure tax was effectively a true-up for lower PILs payments from Hydro One in previous years – it was not a one-time windfall for the Province. In other words, it ensures that Hydro One paid all its tax obligations under the PILs regime before moving into the normal corporate tax regime.
- The related ~$2.4 billion fiscal benefit to the Province (from the deferred tax benefit) has already been credited to the Trillium Trust to be used to build infrastructure under Moving Ontario Forward.
- Repurposing funds paid to OEFC would ~~may~~ have an impact on the defeasance of electricity stranded debt and would cause the first increase in stranded debt since 2004.
- While this is a shift from messaging that value from the broadening of ownership of Hydro One is being used pay down debt and fund transit and transportation, the Province could link to electricity infrastructure investments (e.g., as an offset to ~~infrastructure investments already made in the sector, or to specific initiatives such as conservation~~).

# 6a. Empower Energy Agencies – IESO / Market Renewal

- Continue to move forward with IESO's Market Renewal initiatives:
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.

**Considerations**

- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.
- The IESO's Market Renewal is a broad initiative that will impact all aspects of Ontario's electricity market. Ontario has had a uniform price since market opening.
- Adopting a technology-agnostic stance will lower the overall cost of providing electricity service by selecting the most cost-effective resources to fulfill various system needs.
- IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.

# 6b. LDC Efficiencies and Rates

- Reducing costs and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills.
  - Currently, LDCs recover costs through the Delivery line of the electricity bill, which is broken into Distribution and Transmission costs. LDCs are responsible for the Distribution costs of the electricity bill which account which account for about 20% of the total bill.
  - Distribution costs vary across the province as LDCs have different service territories and needs (e.g., geography, number of customers, density of customers, life/health of capital assets, etc). See next slide for more detail.
    - For example, comparing 2016 with 2006, distribution rates have increased by about 24.5% (or about 2.2% per year, compounded annually) across the Province, with significant variation between regions and LDCs (-17% to 148%). Overall consumer price inflation in Ontario for the same period increased by about 19% or 1.8% per year.

**Considerations**

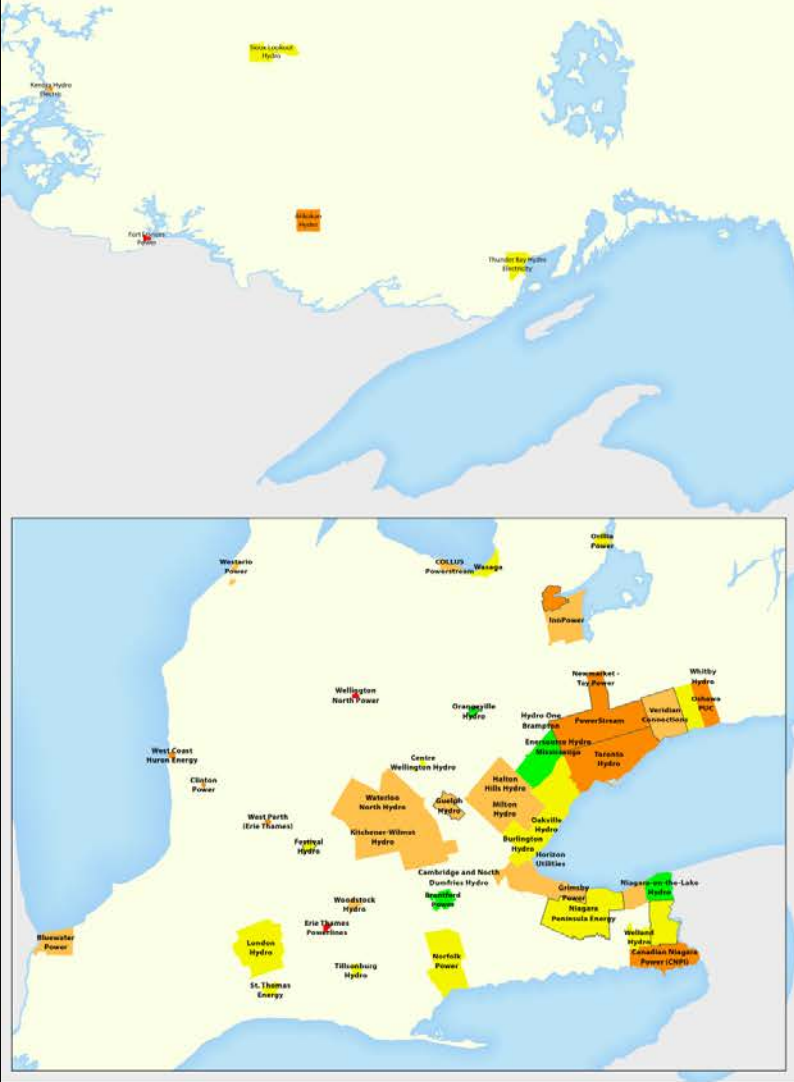
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates. Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.

- There maybe opportunities to promote further cost reductions and performance improvements within the distribution sector as there is continued evolution of the regulatory framework in Ontario.
  - Tightening LDC requirements may also indirectly incent other desired policy outcomes, such as LDC consolidation and grid modernization to realize further cost reductions.
  - To further help address the costs associated with the Delivery line of the electricity bill, program such as the RRRP (previous slide) could be expanded to include other customers that may face higher costs.

- ENERGY could help promote or accelerate these efforts by asking the OEB through the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and the 2017 Mandate Letter and other agency business planning processes.

- In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities. The panel recommended legislation to mandate consolidation.
  - Rather than mandating consolidation, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation. Further changes to the tax incentives and/or revisiting legislated consolidation could be considered.

# LDC Distribution Rate Changes (2006 vs 2016)




| Total Dx Rate | 2006 | 2016 | % Rate Change |
|---|---|---|---|
| Hydro One UR (High Density) | $29.13 | $35.65 | 22.4% |
| Hydro One R1 (Medium Density) | $37.73 | $54.02 | 43.2% |
| Hydro One R2 (Low Density) | $44.65 | $76.14 | 70.5% |

## Legend

**LDC Rate Comparison 2006 vs 2016**

**% Total Rate Change ( # of LDCs )**

- -17.3% to 0% ( 5 )
- 0.1% to 15% ( 25 )
- 15.1% to 30% ( 21 )
- 30.1% to 60% ( 16 )
- 60.1% to 89.3% ( 4 )
- Merged LDCs

Below LDCs had either acquired or merged: (# of merged LDCs)

a. Powerstream Inc. ( 5 )
b. Chatham-Kent Hydro Inc. ( 13 )
c. Veridian Connections Inc. ( 4 )
d. Guelph Hydro Electric Systems Inc. ( 2 )
e. Festival Hydro Inc. ( 2 )
f. Orangeville Hydro Limited ( 2 )
g. Niagara Peninsula Energy Inc. ( 3 )
h. Peterborough Distribution Incorporated ( 3 )

*Only LDCs with distribution rates of 2006 and 2016 are shown.*
*Only the largest distribution areas are shown and smaller satellite areas are not all shown.*

*Data source: Rate database, Rate orders and OEB yearbook*
*Produced by Strategic Policy and Analytics Branch,*
*Strategic Network and Agency Policy Division,*
*Ministry of Energy*

0 30 60 120 180 240
Kilometers

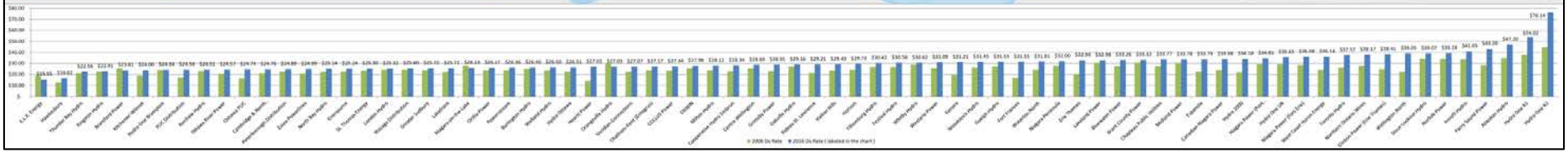
*Published December 2016*

## KEY FINDINGS

- In summary, distribution rates (including rate riders) have increased by about 24.5% across the Province, with significant variation between regions and LDCs (-17% to 148%).
- There is generally no correlation between LDC size or location and distribution rate increase in absolute or percentage terms.
- The current analysis shows no clear relationship between the percentage rate increase and the absolute rate level (that is, high rate increase LDCs may still have among the lowest rates, and low rate increases may have higher rates.
- No clear relationship between amalgamation and rates.
- The analysis does suggest that Hydro One has the highest rates, and some of their customers have seen higher than average rate increases.

## NOTES

- **Rate Calculation:** Monthly residential distribution bill rates, before taxes, are based on consumption of 750 kWh. Distribution charges account for approximately 23% of the average 2016 residential bill.
  All figures calculated by ENERGY staff without input from OEB.
- **Colours:** Colour coding of the map only depicts the change in LDC rate amounts (i.e. LDCs in red don't necessarily have the highest total rates).
- **Mergers:** Rates for customers in merged LDCs have experienced different levels of change. For merged entities, the largest LDC in 2006 was used. An accompanying map focuses on merged entities.
- **Points in Time:** Current analysis compares 2016 and 2006 only. Rates could have had an uneven trajectory, especially considering regulatory decisions such as time limited charges/rebates with temporary impacts.



# 6c. Empower Energy Agencies – OPG / Operational Efficiencies

- Provide expectation that OPG meet more aggressive cost targets, improving efficiency by ~$3/Megawatt hour (MWh).

**Considerations**

- OPG recently submitted its 2017-19 business plan to the Province for concurrence. That plan includes the following:
  - Enterprise total generating cost increasing from $48/MWh in 2016 to an average of $55/MWh over the plan period.
  - An average residential monthly bill increases of $1.05/month annually from 2017-2021.
- Much of this increase is due to the Darlington refurbishment project, which increases costs and reduces OPG's generation over the planning period.
- OPG has also shared its stretch targets for total cost of generation, which average $52/MWh over the 2017-19 plan, a ~$3/MWh reduction (5-6%) relative to its $55/MWh business plan targets.
- The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This is a public document that OEB would likely review and incorporate as part of OPG's current rate application.
- Consistent with regulations under the *Ontario Energy Board Act*, OPG is seeking smoothed rates for nuclear as part of its 2017-2021 rate application.
  - As a result, the benefit to ratepayers of reducing generation costs is uncertain.
  - Given that the application extends beyond the business plan period, and to ensure OPG does not delay costs beyond the planning horizon, the Province may want to provide additional direction for out year expenditures.
- If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.
  - The total cost of $3/MWh based on OPG's forecast production of 74 TWh/yr is about $240 million per year.
- The Province could work with OPG to craft language in the concurrence letter in order to avoid setting unintended precedents for future rate application processes.

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate

- OEB continues to move forward with its Regulated Price Plan (RPP) Roadmap:
  - The OEB is undertaking a comprehensive review of the RPP, including exploring the introduction of offering different pricing plan options for customers following the completion of pilot programs in 2018. The plan is expected to be implemented over a 3-5 year period.
- Until new pricing plans are available, the OEB could provide an "opt-in flat rate RPP" structure that could be made available to residential, farm and small business consumers on an interim basis (2-3 years) until a wider range of price plans are available, providing customers with pricing choice.
- Time-of-Use (TOU) pricing could also be introduced for non-RPP Class B consumers to reduce Global Adjustment (GA) volatility and reduce system costs.

| Current TOU | New Flat Rate |
|---|---|
| On: 18.0 ¢/kWh | 11.1 ¢/kWh |
| Mid: 13.2 ¢/kWh | |
| Off: 8.7 ¢/kWh | |

**Considerations**

- Would provide consumers with electricity pricing choice.
- The OEB has indicated that the option would lead to no overall change in system costs. Consumers with higher peak and mid-peak usage patterns would see a decrease in their electricity bills, while those with higher off-peak usage patterns would see an increase.
  - While the current strong supply conditions may allow for such an RPP structure (i.e., peak demand requirements can be easily met), administrative costs could be high (distributors would need to design/implement an opt-in process and associated billing system on an interim basis).

| | Current TOU | New Flat Rate |
|---|---|---|
| 1) Monthly electricity bill- higher peak and mid-peak usage patterns | $172 | $163 |
| 2) Monthly electricity bill- higher off-peak usage patterns | $152 | $163 |

***Note:** 1) assumes a consumer consumption pattern of 45%:30%:25% (Off-peak: Mid-peak: On-peak), while 2) assumes consumer consumption pattern of 80%:10%:10% (Off-peak: Mid-peak: On-peak). Estimates are based on OEB's online electricity bill calculator (for Toronto Hydro- November 2016 rates)

# 7a. Give Consumers More Rate Choices and Greater Transparency – Interim Flat Rate (cont'd)

**Considerations**

- The decision to undertake smart meter investments was partly justified on the basis of TOU pricing. If TOU pricing were to be made optional, some stakeholders could question the rationale for smart meter investments.
  - Rationale for offering a flat rate option could focus on providing customers with choice until new pricing plans are rolled out under the RPP roadmap.

- If a flat rate design is introduced, there could be significant consumer opposition to any return to a mandatory TOU.

- After the interim flat rate period, the OEB could offer a wider range of pricing plans to consumers.
  - As part of its RPP review, the OEB will be running pilots with LDCs to assess customer response to alternative time periods and pricing structures.
  - Learnings from these pilots will help inform potential changes to the RPP. Pilots are expected to be in market May 2017 and run for one year.

- Non-RPP Class B electricity consumers currently pay Global Adjustment (GA) on a volumetric basis. Moving them to TOU would provide an incentive to shift consumption to off-peak periods.
  - Consumers, including manufacturers, who are unwilling to shift would face higher costs and likely not be supportive of the changes.
  - The decision to pursue TOU pricing for non-RPP class B consumers will impact proceeds recycling as there is interplay between the two initiatives.

# 7b. Give Consumers More Rate Choices and Greater Transparency – Detailed Global Adjustment

- Provide electricity consumers greater transparency with respect to electricity generation costs by providing more details regarding the Global Adjustment (e.g., adding a line on hydro bills, quarterly energy reports, etc).

**Considerations**

- As electricity bills have increased, many consumers have complained about a lack of transparency on the drivers of electricity costs. In particular, consumers and legislative officers have singled out the GA.

- Providing consumers with additional information on the cost components and amounts recovered through the GA would help consumers understand how the different forms of electricity generation in Ontario contribute to consumers costs.

- Providing additional information to consumers on electricity commodity cost drivers without sufficient context or background could simply lead to increased complaints about particular generating technologies that make up large shares of costs (e.g., nuclear).

- Adding a breakout of the amount of GA on residential electricity bills could lead to further confusion due to the existing breakout of multiple time-of-use buckets.

- Alternatively, the existing quarterly Ontario Energy Report, which provides various energy sector data, could be leveraged to show a breakout of quarterly GA costs by fuel type. A link on electricity bills could point to this information.

# 8. Help Small Business Manage Their Electricity Cost – End DRC Early for Class B Electricity Consumers

- Propose to remove the $0.07/kWh Debt Retirement Charge (DRC) from the bills of commercial/small industrial Class B consumers beginning in 2017, instead of April 1, 2018.
  - **Note:** Class A consumers (e.g., large industrial) would continue to pay DRC until at least April 1, 2018.

**Considerations**

- For a Class B consumer currently paying about $152/MWh, removing the DRC would represent a savings of about 5%.
  - A 50% reduction in the DRC charge would represent a savings of about 2%.

- Alternatively, the reduction of the DRC could be to $0.035/kWh starting in 2017, to provide relief for cap and trade until proceeds recycling is fully operational.

- Residential consumers have had the DRC removed from bills since January 1, 2016. Taking DRC off commercial and small industrial bills would result in equal treatment for these groups of consumers.

- The savings for commercial and small industrial consumers associated with this proposal would drop to zero in April 2018, since this is the current planned date for removing the DRC from non-residential bills.

- Prior to moving forward with this proposal, additional analysis from Legal Services and the MOF would be needed.

# 9. Extend Length of Existing Wind / Solar Contracts

- Wind and solar developments are typically contracted through standard offer procurements on 20 year fixed terms at fixed pricing.
- Many of these projects have already reached commercial operation.
- The province could explore options for IESO to negotiate extensions to existing renewable energy contracts, for example, by 10 years, in return for the proponents agreeing to a lower price in the near term.

**Considerations**

- Projects in commercial operation offer potential for near-term rate reduction whereas projects that have yet to reach commercial operation provide potential to mitigate future rate increases only.
- The attractiveness of this option to contract holders would vary from project to project and would depend on project economics.
- Revised pricing would be subject to negotiation, and associated ratepayer savings would be difficult to forecast accurately.
- The duration of contract renegotiation is difficult to forecast and may not be achievable in the near term.
  - Proponents may have to renegotiate their project financing arrangements, ensure project investors are satisfied with any changes in ROI, and extend land leases.
- Project host communities and Indigenous communities whose traditional territory the projects are sited in may not be interested in these projects extending their operational period ; discussions/consultation may be required in advance of this potential option moving forward.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Should Ontario be successful in negotiating lower prices in the near term, it should be noted that contract holders will be in a strong bargaining position (given their existing fixed-priced contracts), and will likely extract additional value from the negotiations.

- Since the Minister of Energy is not a party, IESO would be required to renegotiate the contracts, which would likely involve a direction or directive to IESO.

- Further analysis is required as to how ENERGY could express its policy intent to have IESO renegotiate the contracts for a reduced rate at a longer term, however it is unlikely that IESO could guarantee the outcome.

- Further analysis is required to ascertain whether there is scope within the existing contracts for IESO to renegotiate their terms in this manner.

- Extending contract terms would also reduce planned flexibility and increase the risk of overpayment as this existing capacity would now be contracted into the 2040s and not the 2030s.

- Extending contract terms may require investments in component replacement and additional operation and maintenance costs that developers would seek to recover under any renegotiated contract.

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- Ontario has over 4,500 MW of wind in commercial operation, with the vast majority being large scale (>500kW) developments.
  - This includes over 2,700 MW of large FIT 1 and GEIA wind projects representing 47 contracts (average size ~58 MW) and over 1,000 MW of solar projects representing 103 contracts.

- Projects over 500 kW would offer the most savings potential as they represent the majority of installed renewables capacity and are spread across fewer contracts.

- Below are two potential approaches to reducing ratepayer costs in the near term by extending contract terms at reduced prices. An illustrative example of a typical large wind project is used.

- **Example:** 100 MW FIT 1 wind project achieving Commercial Operation in 2014 (i.e., 17 years remaining on initial 20 year contract), assuming a 10 year contract extension negotiated at the LRP I low weighted average wind price of $64.5/MWh;
  - (17 years @ $135/MWh + 10 years @ $64.5/MWh)
  - **Potential Approach 1:** Provide a single new contract price that is the average of the lower extension price and the FIT contract price over the new contract term. The new price would be lower over a longer term.
  - **Illustrative Example:** New contract for 27 years at $129/MWh.
  - New contract price set to allow 10% rate of return over 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract (remaining term extended for 10 additional years) |
|---|---|---|
| Contract Cost (NPV 2017) | $550 million | $582 million |
| Average Monthly Ratepayer Impact Over First 5 Years | $0.03 savings | |
| Average Monthly Ratepayer Impact Over Remaining 22 Years | $0.02 increase | |
| Average Monthly Ratepayer Impact Over Entire 27 Year Contract | $0.01 increase | |

# 9. Extend Length of Existing Wind / Solar Contracts (cont'd)

**Considerations (cont'd)**

- **Potential Approach 2:** Offer facilities a revised contract that extends terms and is structured to offer lower pricing in the initial contract years and higher pricing in the later years of the contract.
  - For example, the New contract is $85.9/MWh over the first 5 years and $169/MWh over the remaining 22 years.
    - Price over first 5 years is LRP I weighted average wind price.
    - Price over remaining 22 years is set to allow 10% rate of return over entire 27 year contract per FIT pricing approach.

| 100 MW Wind Project | Status Quo | 27 Year Contract | |
|---|---|---|---|
| | | Initial 5 Years | Last 22 Years |
| Contract Cost (NPV 2017) | $550 million | $632 million | |
| Monthly Average Ratepayer Impact Over First 5 Years | $0.09 savings | | |
| Monthly Average Ratepayer Impact Over Remaining 22 Years | $0.07 increase | | |
| Monthly Average Ratepayer Impact Over Entire 27 Year Contract | $0.04 increase | | |

# 10. Tax Relief for Solar and Wind Contracts

- In 2010 and 2011 Ontario procured large scale projects (>500 kW) through the FIT program at standard offer pricing.

- The FIT program was the centerpiece of the GEA which established the economic and social goals of growing the green economy, including establishing a local renewable energy manufacturing base, supporting the development of green energy jobs, and providing incentives for Indigenous participation.

- To help achieve these economic and social goals, the FIT program offered pricing at above competitive procurement rates, and provided Indigenous and Community participation adders, which resulted in economic benefits to all Ontarians, but resulted in additional costs borne by Ontario's electricity ratepayers.

- Ontario could fund the added cost of some or all of these economic and social incentives by shifting their costs from the rate-base to the tax-base.
    1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
    2. The tax base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT.

**Considerations**

- If applied to projects in commercial operation the benefit to the ratepayer would be immediate.
- Comparing FIT pricing to competitive procurement pricing could provide a reasonable representation of energy procurement without the added cost of economic and social incentives.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

1. The tax-base could fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.
   - For example, from 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
   - The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
   - If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
   - The $3.3 billion difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.
   - This represents estimated average ratepayer savings of $1.50/ month relative to OPO forecasts.
   - The same approach could be considered for solar projects however, prior to LRP I in 2016, Ontario had not procured solar capacity competitively and international cost comparisons are challenging given differences in regional development costs.
   - This example does not include the value of participation price adders available for community and indigenous participation.

# 10. Tax Relief for Solar and Wind Contracts (cont'd)

2. The tax-base could absorb the cost of the incentives paid to encourage Indigenous and Community participation in FIT 1 solar and wind projects.

   - For example, 17 large FIT 1 wind and solar projects have Indigenous and/or Community participation making them eligible for a price adder in addition to their base contract price.

   - The estimated value of these price adders is approximately $17.1 million (NPV 2017) over the expected remaining term of their contracts.

   - This represents estimated ratepayer savings of approximately $0.01/month relative to OPO forecasts.

# FIT 1 and GEIA Wind Projects in Commercial Operation
(source: IESO Active Contracts List, October 31, 2016)

| Count | Program | MW | COD |
|---|---|---|---|
| 1 | FIT 1 | 0.8 | Oct-10 |
| 2 | FIT 1 | 18 | Jul-15 |
| 3 | FIT 1 | 23 | Aug-15 |
| 4 | FIT 1 | 40 | Jan-15 |
| 5 | FIT 1 | 10 | Sep-14 |
| 6 | FIT 1 | 10 | Sep-14 |
| 7 | FIT 1 | 10 | Jun-14 |
| 8 | FIT 1 | 99 | May-13 |
| 9 | FIT 1 | 100 | Oct-15 |
| 10 | FIT 1 | 4 | Sep-12 |
| 11 | FIT 1 | 100 | Apr-16 |
| 12 | FIT 1 | 15 | Jun-15 |
| 13 | FIT 1 | 18 | Mar-12 |
| 14 | FIT 1 | 104.4 | Nov-13 |
| 15 | FIT 1 | 40 | Dec-15 |
| 16 | FIT 1 | 60 | May-14 |

| Count | Program | MW | COD |
|---|---|---|---|
| 17 | FIT 1 | 125 | Aug-13 |
| 18 | FIT 1 | 73.5 | Aug-14 |
| 19 | FIT 1 | 102 | Jan-15 |
| 20 | FIT 1 | 9 | Jan-12 |
| 21 | FIT 1 | 4.1 | Dec-15 |
| 22 | FIT 1 | 0.5 | Oct-13 |
| 23 | FIT 1 | 82.8 | Nov-11 |
| 24 | FIT 1 | 18.45 | Sep-16 |
| 25 | FIT 1 | 60 | Jul-14 |
| 26 | FIT 1 | 10 | Oct-16 |
| 27 | FIT 1 | 6.15 | Nov-14 |
| 28 | FIT 1 | 2.3 | Aug-15 |
| 29 | FIT 1 | 10 | Feb-16 |
| 30 | FIT 1 | 8.2 | Nov-14 |
| 31 | FIT 1 | 150 | Nov-14 |
| 32 | FIT 1 | 91.39 | Dec-14 |

| Count | Contract | MW | COD |
|---|---|---|---|
| 33 | FIT 1 | 25 | May-15 |
| 34 | FIT 1 | 82.8 | Nov-11 |
| 35 | FIT 1 | 30 | Mar-14 |
| 36 | FIT 1 | 17.6 | May-16 |
| 37 | FIT 1 | 23 | Dec-12 |
| 38 | FIT 1 | 99 | May-13 |
| 39 | FIT 1 | 48.6 | Dec-11 |
| 40 | FIT 1 | 19.44 | Aug-15 |
| 41 | FIT 1 | 10.8 | Mar-12 |
| 42 | FIT 1 | 38.88 | Sep-15 |
| 43 | FIT 1 | 60 | Aug-14 |
| 44 | GEIA | 270 | Mar-14 |
| 45 | GEIA | 180 | Dec-15 |
| 46 | GEIA | 148.6 | Dec-14 |
| 47 | GEIA | 270 | May-15 |

# Key Outcomes / Next Steps

- The proposed initiatives provide the following opportunities to:
  - Provide a greater focus on vulnerable consumers by funding electricity support programs through the tax-base.
    - Enhance existing and new support programs targeted at the most vulnerable consumers (i.e., OESP and RRRP); and
    - Better harmonize delivery rates across the province.
  - Re-set how energy infrastructure is funded by shifting costs to the tax-base from the rate-base.
  - Provide electricity consumers with greater choices and transparency (e.g., alternative rate plan based on a flat electricity rate, unpacking the Global Adjustment costs, etc);
  - Provide system benefits (e.g., market renewal);
  - Increase cost effectiveness and improve efficiency; and
  - Lower the cost of electricity for all consumers.

- The timing of the impact of these rate mitigation initiatives varies.
  - Immediate and near-term impacts can be achieved by shifting costs to the tax-base or changing how certain costs are recovered from consumers or eliminating certain programs.
  - Over the longer term, changes to the electricity supply mix and achieving efficiencies in the electricity market could yield system savings.

- Pursuing the initiatives would require legislative and/or regulatory amendments and working with the electricity sector agencies, LDCs and other stakeholders to implement the initiatives.

# Appendix

A. Rural or Remote Rate Protection (RRRP) – Overview and Enhancements
B. Fund Conservation Programs Through the Tax-Base
C. Eliminate the Industrial Conservation Initiative (ICI)
D. Cancel Large Renewable Procurement I (LRP I)

# A. RRRP Overview and Enhancements

- The Delivery line of the electricity bill is composed of Distribution and Transmission Costs. While transmission costs are uniform across the province, LDC costs vary by distributor and account for about 20% of the total bill for the electricity customers.
  - See slide X for a map of delivery rate increases between 2006 and 2016.
- The Rural or Remote Rate Protection (RRRP) framework was put in place in 2001 to help offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations.
- RRRP is available to: residential Hydro One R2 customers (~350,000 customers), Algoma Power customers (~11,600 customers); H1 remote customers (~3,500 customers).
  - To date, R2 customers receive a fixed amount of $125 million a year distributed amongst the customers. Algoma and Remote customers have RRRP calculated by the OEB each year that fluctuates based on average provincial distribution increases.
- Because the amount had been fixed for over a decade, the Province recently increased funding of the RRRP program for Hydro One R2 customers from $125 million to $240 million. This will be effective as of January 1, 2017, and will bring their delivery charges in line with the next highest charges from Hydro One's R1 customer class.

# B. Fund Conservation Programs Through the Tax-Base

- Propose to fund 2017-2020 electricity conservation and demand management program costs* using tax dollars instead of ratepayer dollars.
  - Funds received through the Hydro One Departure Tax could potentially be repurposed towards this.
- Total remaining 2017-2020 electricity conservation program costs are expected to be ~$2.1 billion.
- Post 2020, this option could evolve to funding conservation programs through the Greenhouse Gas Reduction Account.

**Considerations**

- Electricity conservation programs provide a number of benefits to society, however, Ontario's ratepayers have been covering these costs:
  - Avoiding/deferring future energy infrastructure investments, reducing disruption in communities (e.g., avoiding the need to build new natural gas generation);
  - Environmental benefits (e.g., reduced natural gas peaking generation and GHG emissions); and
  - Social and economic benefits (e.g., job creation and assistance managing electricity bills).
- There is precedence for using tax dollars to fund conservation programs.
  - Between 2007 and 2011, Ontario funded the Home Energy Savings retrofit program using tax dollars.
- Funding conservation programs though the tax-base is expected to result in a benefit of $3.40/month for residential electricity consumers in 2017. This could provide immediate short term relief to consumers while other rate mitigation initiatives are developed (e.g., market renewal, LDC efficiencies).

*** Note:** This includes costs towards the Conservation First Framework, Industrial Accelerator Program, Demand Response and the Conservation Fund)

# C. Eliminate the Industrial Conservation Initiative (ICI)

- The cost shift from the Industrial Conservation Initiative (ICI) could be removed from electricity bills by eliminating ICI.
  - The ICI allows large electricity consumers to lower their electricity costs by reducing their demand during peak hours.

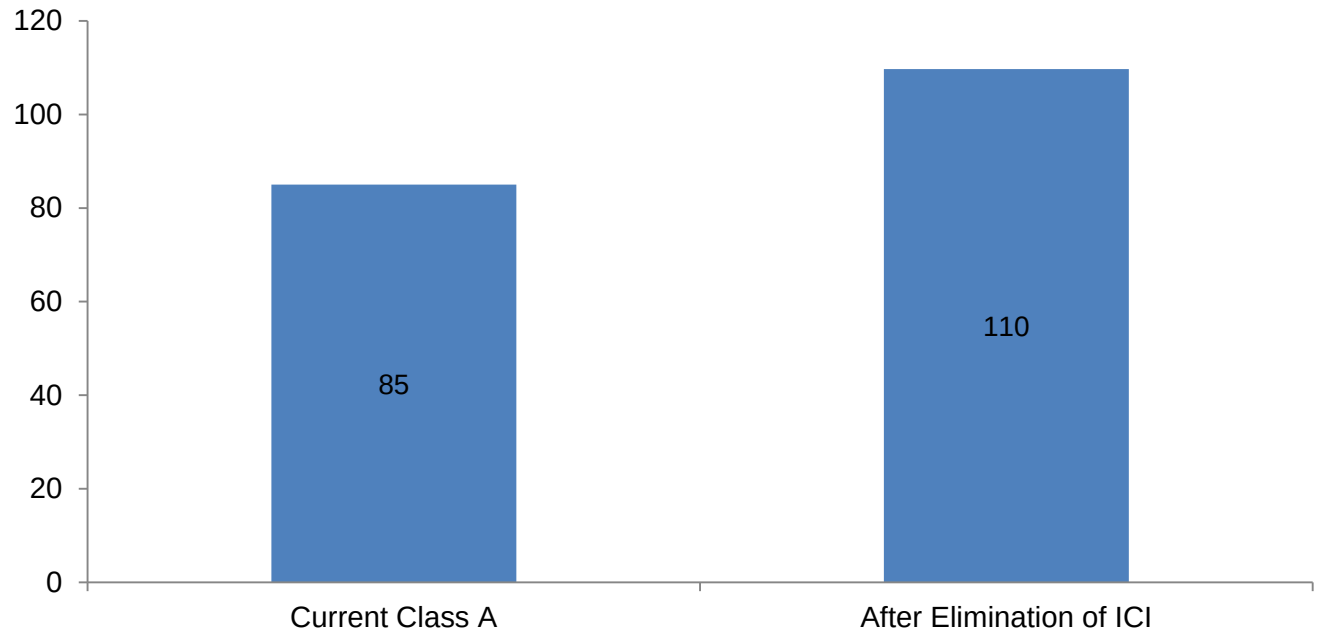
**Considerations**

- Eliminating ICI would result in a benefit of more than $4/month for residential electricity consumers in 2017.
  - However, unless government took action to mitigate the associated cost shift back to industrial consumers, typical industrial prices would increase by about one-third. Such a price increase would pose significant challenges for energy-intensive consumers.
- Industrial stakeholders have indicated that ICI as an integral factor in maintaining competitiveness and retaining industry in the province.
  - Eliminating ICI would limit the “cost shift” onto residential consumers, but it would also lead to a reduction in industrial demand. The large industrial contribution to the fixed costs of running the electricity system would then need to be covered by remaining consumers.
- If ICI is retained, current IESO projections indicate that the cost shift will decrease each year going forward as Global Adjustment (GA) decreases (due to an expected increase in HOEP).
- Alternatively, ICI could be funded through the tax-base at a cost of $900 million annually. There is precedent to use the tax-base for industrial support programs, including the Northern Industrial Electricity Rate Program (NIERP) and the Jobs and Prosperity Fund.

# C. Eliminate the Industrial Conservation Initiative (cont'd)

- ICI currently provides a benefit of about $25/MWh to Class A electricity consumers.

**All-In Electricity Price**
*in $/MWh*




**Note**: Based on year-to-date (YTD) September 2016 prices. Class A reflects a transmission-connected consumer.

# D. Cancel/Adjust Renewable Energy Procurements

- The Ministry could consider the following actions to further mitigate future impacts to electricity bills:

| Unallocated/Terminated Capacity | Announced Procurements | Executed Contracts |
|---|---|---|
| A. Do not procure unallocated or terminated capacity | B. Revise FIT 5 target | D. Cancel LRP I contracts |
| | C. Cancel FIT 6 | |

**Overarching Considerations**

- Cost savings associated with reducing or cancelling renewable energy procurements and programs will not reduce current electricity bills, but would result in future cost reductions relative to Ontario Planning Outlook forecasts.
- The IESO estimates implementing options A to C will reduce system costs by approximately $592 million ($2016) between 2019 and 2028, resulting in an average of approximately $0.50/month in savings to a typical residential electricity bill over the same period.
- The microFIT program is winding down end of 2017. Annual microFIT procurement targets have been undersubscribed.
- With a few exceptions (e.g. rollover of unallocated microFIT capacity; addition of terminated microFIT and small FIT capacity to FIT 5), plans for unallocated or terminated capacity are not defined in announcements or existing directions.

*Cancel/Adjust Announced Procurements:*

- Amendments to existing directions to IESO would be required to reduce FIT 5 and cancel FIT 6.
- The FIT 5 procurement is underway with a base target of 150 MW and inclusion of any capacity available from contract terminations under prior small FIT and microFIT procurements. The application window closed on November 25, 2016.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts

*Cancel Existing LRP I Contracts:*

- 16 LRP I contracts (approx. 455 MW) have been executed and projects are under development.
- None have met Key Development Milestones. Total value of LRP I estimated at approx. $1 billion (NPV to 2016).

**Considerations**

- To help inform a decision, IESO or OEB could be asked to evaluate and provide guidance to the Ministry on the system need for LRP I projects and potential ratepayer impacts/benefits.
- 13 of 16 LRP I contracts have Indigenous participation. Cancelling LRP I contracts would remove this economic development opportunity and likely damage relationships between Indigenous communities and the government.
- LRP I Contract includes an “Optional Termination” provision allowing IESO to terminate any contract prior to the “Commercial Operation Date” with 6 months written notice.
- The IESO obligations under the Optional Termination provision depend on whether the project has met all “Key Development Milestones”.
  - As no projects have met their Key Development Milestones, the estimated total cost payable to contract holders is about $8 million.

# D. Cancel/Adjust Renewable Energy Procurements – Existing Contracts (cont'd)

**Legal Analysis**

- Any new directive to cancel LRP I contracts would need to be approved by Cabinet, either as part of an LTEP implementation directive to IESO, or pursuant to the overall power to direct IESO with respect to procurements.
  - An amendment to an existing direction would not require Cabinet approval, however, further analysis is required to determine if direction to cancel LRP I contracts could be considered as amending existing direction.
- ENERGY has previously received advice that there is a high risk that a court would conclude that the Minister has no authority under the *Electricity Act , 1998* to issue a direction requiring IESO to terminate microFIT Conditional Offers and FIT Offer Notices that have already been issued to applicants, because these offers create vested contractual rights. This reasoning would likely apply equally to any direction to IESO to cancel LRP I contracts. Previous advice has also flagged a risk that the Province could be liable for damages in tort for inducing a breach of contract (or other claims).
- The risk and costs associated with potential law suits resulting from the cancellation of contracts requires further analysis. LSB recommends ENERGY seek an opinion from Crown Law Office Civil before proceeding.

**From:** John Kim
**To:** Gavin He; Shajee Kathirgamanathan
**Subject:** Re: Rate Mitigation
**Date:** Sunday, January 15, 2017 4:01:05 PM
**Attachments:** Comments on Electricity Sector Transformation Proposals v9 (CEFD)_Markup.docx

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Let me know what you think. If OK, could you save to the folder?

Going to quickly go through the deck.

---

**From:** John Kim
**Sent:** January 15, 2017 3:32 PM
**To:** Gavin He; Shajee Kathirgamanathan
**Subject:** Re: Rate Mitigation

Yeah, I think Shajee's point on slide 7? might be the only path. I am about to take a crack at it but I don't want to minimize the fiscal impact by taking their numbers. Thus being deliberate. Shouldn't take long.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:30 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Based on Emily's update, the impact for OESP & RRRP will be $0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022, without detailed impact on each year. So it we are going to update the table, it seems we might need to make some assumption.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:17 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yes, the OESP and RRRP that Emily updated, kind of showed me there were updates.

Ok, I need to go back to that deck.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:13 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Are you referring to the numbers for OESP and RRRP?

Also, the $2B GA amount is from scenario 2 and 3. The cap for the maximum amount of GA above the true cost is $2B.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:10 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yeah, I'm trying to decide if it's worth adding that proposal. While I am trying to minimize work, it's fiscal impact stuff.

And the table. I'm trying to assess if not updating that is an option as I'm getting tired.

What's your sense?

---

**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 3:06 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

If you're referring to #10 on renewables/wind contracts, I think it's not so much tax exempting renewables, but rather paying through the tax base the amounts above competitive electricity rates. (Eg. If competitive amount is say $80/mwh. And they have a community/indigenous adder of $40/mwh. Therefore a total contract price is $120/mwh. The proposal would shift the $40/mwh to the tax base). That's my interpretation at least.

Again it's just another way to transfer to the tax base from the rate base.

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 2:57 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks.....I think we should send the note in for about 6pm so don't worry about it. I will have a look at the deck.

The only thing that concerns me is the additional proposals like tax exempting of renewable contracts, etc. I'm debating whether they need coverage but likely to try to dodge it. I think the table at the bottom needs updating but I'm currently still assessing it.

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**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 2:54 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

I finished with my comments on the power point file. I think there were some CEFD and Energy Comments from before.

Only way to distinguish are my comments are "**CEFD Comments**" (bold), whereas before it was evidently bold and underlined.

Will take a quick review of the document, but heading out shortly for the evening. Will try to get done what I can.

Thanks,
Shajee

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**From:** John Kim
**Sent:** Sunday, January 15, 2017 2:45 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks....saw this after sending the other.

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**From:** Gavin He
**Sent:** January 15, 2017 2:41 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

Emily just finished the file. I have copied my edits in her version and saved it as v9.

Thanks,
Gavin He

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**From:** Gavin He
**Sent:** Sunday, January 15, 2017 2:24 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

In the interest of time, I have worked on v8 from my personal drive, as Emily is still in the note. I have reviewed and updated sections related to debt-financing GA.

John – for the numbers, I wasn't involved in providing the updates, so don't have much knowledge on how the numbers were put together, and the presentation decks don't provide update on those numbers, so I didn't make any update there.

Please review and let me know if you have any questions. I can consolidate my edits once Emily is done.

Thanks,
Gavin He

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**From:** John Kim
**Sent:** Sunday, January 15, 2017 10:01 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation

FYI.

Hoping to finalize on our end by early afternoon…..Emily might have other comments.

I think what things need to be checked against the updated deck, as well.

John.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 9:59 AM
**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John, Emily,

I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.

I also made some edits to Energy's slides but not sure those are needed.

Thanks,

Francisco

> -----Original Message-----
> From: John Kim
> Sent: Saturday, January 14, 2017 11:45 PM
> To: Emily Kerr <Emily.Kerr@ofina.on.ca>
> Subject: RE: Rate Mitigation
>
> Hi Emily,
>
> Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.
>
> Thanks,
>
> John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation
>
> Good morning,

Attached are materials for Monday's rate mitigation meeting.

Keley

Original Message

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>

Sent: Saturday, January 14, 2017 7:49 AM

To: Orsini, Steve (CAB)

Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

Hi Steve,

Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

**DRAFT: COMMERCIALLY SENSITIVE AND CONFIDENTIAL ADVICE TO MINISTERS**

# Comments on Ministry of Energy's Draft "Proposed Initiatives to Transform Ontario's Electricity Sector"

The Ministry of Energy (Energy) is providing an update on progress related to transforming the province's electricity sector by elaborating on potential price mitigation initiatives, as outlined in its decks.

## CONTEXT

- As outlined in Energy's update, electricity costs have been increasing following investments to transform towards cleaner generation (i.e., meeting goals to decarbonize) and modernize the electricity infrastructure (e.g., more than $35 billion in cleaner generation and $15.5 billion investment by Hydro One alone in transmission and distribution systems).

- The government has taken action to lower electricity cost pressures to all consumers by taking actions, including deferring investments in generation (e.g., new build nuclear), improving market efficiency and decreasing costs related to renewable procurement (e.g. GEIA renegotiation, decreasing FIT prices, etc).

- The government introduced the Ontario Rebate for Electricity Consumers (OREC) which will provide a rebate equal to the 8% provincial portion of the Harmonized Sales Tax, saving $11 per month starting January 1, 2017 for eligible small businesses, farms and residential consumers and has taken steps to expand the Rural or Remote Electricity Rate Protection program, expected to save eligible RRRP customers about $45 per month, when combined with OREC.

- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.

- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.

## COMMENTS

A significant number of Energy's proposals ~~generally~~ involve shifting costs from the rate base to the tax base. While the subset of costed proposals may have a fairly limited residential rate payer impact (e.g. about $5-6/month for residential, less than 5% of the average monthly bill), those proposals would come at a material incremental fiscal cost ($1 billion to $1.3 billion). Note these impacts are lower than those presented in an earlier deck ($1.3 billion to $1.9 billion). Energy also presents other proposals where costs and impacts are "TBD".

In addition, Energy is also presenting a preliminary proposal to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost of the global adjustment (GA). While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to ~~over~~or more than $2 billion annually during the period that GA costs are deferred depending on the scenario.

**Commented [GH1]:** This was included in the debt-financing GA section below, so not sure if we need to mention it here.

Over the past five years, the existing fiscally funded electricity price mitigation efforts have averaged about $1.5 billion and is already expected to increase to about $2 billion with the introduction of OREC. The existing program costs are summarized in the table below:

| ($M) | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17[1] | 2017-18[1] |
|---|---|---|---|---|---|---|---|
| OCEB | 1,033 | 994 | 1,006 | 1,078 | 860 | - | - |
| OREC | - | - | - | - | - | 300 | 1,100* |
| Ending DRC[2] | - | - | - | - | 85 | 330 | 330 |
| NIERP | 120 | 120 | 115 | 108 | 120 | 120 | 120 |
| NOEC | 23 | 24 | 25 | 24 | 26 | 25 | 25 |
| OEPTC[3] | 354 | 406 | 418 | 429 | 444 | 450 | 460 |
| TOTAL | 1,530 | 1,544 | 1,564 | 1,639 | 1,525 | 1,225 | 2,005 |

1. 2016-17, 2017-18 based on forecasted numbers
2. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit
OREC – Ont. Rebate for Electricity Consumers
NIERP – Northern Industrial Electricity Rate program
NOEC – Northern Ontario Energy Credit
DRC – Debt etirement Charge
OEPTC – Ont. Energy & Property Tax Credit

**Energy's Broad Policy Themes / Rationales**

A key theme / rationale cited by Energy is to no longer use rate-base to pay for "social programs" by shifting cost of OESP, RRRP and proposed First Nation Rate to tax-base.

- Energy has typically in the past provided a constitutional law assessment on these programs, providing support for these programs to be ratepayer-supported programs as they provide electricity system benefits / are part of a comprehensive regulatory framework.
- Switching messaging may risk criticism and legal challenges on these and other remaining rate-base funded programs.

| Energy Theme / Rationale | Key Staff Comments |
|---|---|
| **Provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility, and provide further support for rural consumers by expanding the Rural or Remote Rate Protection (RRRP) program.** | • Significant fiscal exposure -- $0.42-0.845 bn in 2017 to $0.62-1.18 bn in 2022, ~~at current levels,~~ higher if OESP is enhanced. On-bill benefits.<br>• Funding programs through tax base estimated to reduce average monthly residential bill by approximately $2 in 2017, increasing to approximately $3 in 2022.<br>• Could contemplate phase-in to manage fiscal impact.<br>• Could look at phasing out existing fiscal-funded programs also targeted to low income or identified groups (e.g., OEPTC, NOEC).<br>o Not on the bill, so less direct and visible electricity cost mitigation.<br>o Phase-out to reflect time to increase application based OESP reaching an increasing portion of eligible households. |
| Amortize ~~Fund~~ **conservation program costs to smooth recovery of costs from ratepayer. Alternatively, rate smooth conservation costs through an IESO deferral account. ~~programs through the tax base for the remaining term of the existing CDM framework and transition costs to the new "green bank entity" over time~~** | • It is unclear whether consevation costs could be amortized according to accounting standards. If this option was pursued without establishing Provincial Controller agreement on accounting, there could be a fiscal risk. Energy states total remaining 2017-2020 electricity conservation program costs are expected to be approximately $2.1 billion.<br>• Energy notes that an alternative to amortizing conservation costs would be to fund these costs through tax base. ~~Potentially significant fiscal impact – current program costs are about $0.45 bn~~<br>o Conservation programs do provide an electricity system benefits, but ~~would now be~~ fiscal~~ly~~-funding~~ed, so~~ would result in a cross-subsidisation from tax-base |

**Commented [EK2]:** Updated based on slide 12 in Energy's updated deck.

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|---|---|
| | ○ Accessing the cap & trade amount in the GGRA would crowd-out other GGRA programs, affecting overall GHG reductions and negatively affect the diccal plan |
| **Expand the scope of the "Trillium Trust" to make investments in energy infrastructure eligible for funding** | • Would require either squeezing out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source; or additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects<br>• Would have little near-term impact, unless TT funding displaces near-term, non-incremental projects coming onto service<br>• Could lower utility value (share price) and impact fiscal contributions from the electricity sector (net income), including Hydro One, by removing projects, currently and prospectively, that they might have been able to add to their ratebase and earn a return<br>• In the case of projects located in First Nation territories it could have an upfront fiscal impact if Province is not able to amortize those projects (TBC with OPCD).<br>• Energy has indicated that if these investments are provided from the OEB there would be a need to develop oversight mechanisms as is not the OEB's role to review cost prudence of tax-based mechanisms. |
| **Dedicate the Departure Tax** | • In connection with the 2015 IPO of Hydro One shares, Hydro One paid OEFC a $2.6 billion "departure tax".<br>• The departure tax was not a windfall. It was fiscally neutral, it represented revenue to OEFC and an expense to Hydro One.<br>• Repurposing the departure tax to provide rate mitigation would have a dollar-per dollar fiscal impact and could trigger an increase in OEFC's stranded debt.<br>• The Province would remain exposed to a negative fiscal impact (lower share price and lower net income) if the OEB decides to allocate all or part of the deffered tax benefit recognized by Hydro One to ratepayers. |
| **Empower Energy Agencies to Increase Cost Effectiveness and Improve Efficiency** | • IESO to modernize the electricity market through market renewal<br>• OEB to identify opportunities for future LDC efficiencies/rates<br>• OEB to work with OPG operational efficiencies and pass on to ratepayers |
| **Give consumers more choice by allowing to "opt into" alternate rate plan** | • Start with the option of flat electricity rate option<br>• OEB to develop more options over time<br>• Provide more details regarding th Global Adjustment (GA) |
| **End the Debt Retirement Charge (DRC) early for commercial and small industrial Class B electricity consumers** | • End of the DRC had previously been linked with a balance between rate mitigation and managing stranded debt<br>• Provides only temporary incremental mitigation, as DRC legislated to end April 1, 2018.<br>• End of the DRC had previously been linked to retirement of residual stranded debt<br>• Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported |
| **Consider options to defer the pass-through to ratepayers of some** | • Incurring debt to pay the generators their contracted or regulated payments |

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|---|---|
| **generation supply costs by partially financing the cost of the global adjustment (GA)** | • Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation<br>• Likely will lead to significant fiscal impact due to creation of large liability item (estimated to be up to $66Bn) either directly on the Province's books or upon consolidation<br>• Furthermore, likely entails significant legal / Constitutional Law risks. |
| **Tax Relief for Solar and Wind** | • Consider funding the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process<br>• Energy's estimation of the NPV benefit to the ratepayers at about $3.3 billion, which would be funded through the tax base, a significant fiscal hit |

**Detail on Proposals**

Energy has outlined the following rate mitigation proposals with significant bearing on the fiscal plan:

OESP & RRRP ($0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022~~Total of about $0.4 to 0.45 Billion/year~~):

~~This w~~Would shift the cost of the current and proposed expanded Ontario Electricity Support Program (OESP), ~~-~~and ~~the~~ Rural or Remote Electricity Rate Program (RRRP), to the tax base. Lower range of fiscal impat estimate is based on current programs. *Note: that the fiscal exposure would increase if the OESP take up rate is larger, and faster than assumed.*

- The fiscal impact from shifting OESP and RRRP to the tax base may also be larger if future changes are made to the programs. Upper range of fiscal impact estimate includes the following changes to the programs. ~~Energy notes that~~
  - Current RRRP mostly supports Hydro One rural consumers. RRRP could be expanded to mitigate delivery costs for not only Hydro One customers but other high-cost LDCs.
  - OESP program benefits could be increased across the board by 50 per cent, which would mean:
    - Single low income consumers would see an increase from $30 to $45/ month ($540/year); and
    - Families of four with electric heat could see an increase from $55 to $82.50/month ($990/year).
  - ~~The programs could provide greater support for lower income Ontarians by enhancing the OESP or expanding eligibility (e.g., by 50% in the table).~~
- Energy also notest that if moved to the tax base, OESP could be broadened to include all potential low-income households, despite whether they directly pay for electricity. Broadening OESP in this way could result in a further fiscal impact.
- ~~o~~ The RRRP regulation provides a funding mechanism for transmission infrastructure required to grid connect remote First Nation communities. Considerations for how that funding will be supported by the tax base will need to be determined. [The current deck links Trillium Trust for remote electrification.]

~~Fund~~ Amortize Conservation Program~~s~~ Costs ~~through the Tax Base~~:

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Certain conservation costs are proposed to be amortized over the lifetime of the benefits resulting from the funded conservation measures. Energy proposes that this would involve IESO borrowing funds from the Ontario Financing Authority (OFA) on an annual basis to fund program incentives (non-administrative costs). Energy estimates this would produce a benefit for electricity ratepayers in excess of $1/month from 2017 to 2020.

- Energy would seek an opinion from IESO's external auditor and from the Ontario Provincial Controller (OPC) to determine whether conservation costs could be amortized according to rate-regulated accounting standards.
  - Under Public Sector Accounting Board (PSAB) accounting standards, used by both the Province and IESO, only certain assets can be amortized. Conservation costs would not meet this criteria. Rate-regulated accounting was developed to recognize the unique nature of regulated entities (e.g., electricity generators, LDCs). Under rate-regulated accounting certain costs can be treated as amortizable assets that would not normally be considered assets under accounting principles.
  - Over the past several years, the Auditor General (AG) has expressed concerns about the appropriateness of recognizing rate-regulated assets in the Province's consolidated financial statements.
  - Rate-regulated accounting is currently under review by international accounting standard setting bodies and is currently permitted only on an interim basis, so its future is unclear at present.

- If amortization of conservation costs was not permitted, a fiscal impact could result from this proposal. Energy also notes directly funding conservation costs from the tax base as an alternative option.

- Alternatively, Energy proposes that a regulatory amendment could allow IESO to establish a deferral account for conservation costs.
  - Energy notes that this option would not require approval of the Provincial Controller. However, choosing this option as an alternative to amortization may open Energy to criticism by the Controller and/or Auditor General since the rate impact is the same.

~~This would be for the remaining term of the existing Conservation and Demand Management framework. Over time, the costs would be transitioned to the new "green bank entity", to shift cost recovery from ratepayers to cap and trade revenues.~~

- ~~Energy's rationale for the cost shift would be in recognition of the burden borne by ratepayers in phasing out coal generation.~~

Expanding the scope of the Trillium Trust to invest in energy infrastructure:

The Province is currently targeting $5.7 billion from asset optimization to dedicate to the Trillium Trust for investment in infrastructure under Moving Ontario Forward. The $5.7 billion target already includes all fiscal benefits expected from the sale of Hydro One common shares (this includes net gains from shares and the Provincial portion of the deferred tax benefit recognized by Hydro One in 2015).

- Expanding access to natural gas is already included under Moving Ontario Forward.
- Using the Trillium Trust for additional energy projects would require either
  - squeeze out existing Moving Ontario Forward project funding from the Trillium Trust, requiring funding from another source, or
  - additional funding from asset optimization, given that the government is committed to using the targeted $5.7 billion to fund across Moving Ontario Forward projects,
  - in effect, in both cases above, incremental investments for energy infrastructure from the Trillium Trust would have negative fiscal impacts once the assets are in-service and amortized.

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  - Inclusion of investments in First Nation communities that are not in provincial lands would trigger an upfront fiscal impact as the Province may not be able to amortize these projects (TBC with OPCD).
- Investments through the Trillium Trust instead of through other electricity sector entities (Hydro One, OPG, LDCs) could have additional negative fiscal impacts as these entities could see reduced ratebase growth, lowering the revenues that the Province realizes from these entities (e.g., consolidated net income, payments-in-lieu of taxes, etc.).
  - May also negatively impact Hydro One share price if the measure is perceived by the market as reducing Hydro One's potential ratebase growth.
  - This could also question the government's policy rationale for selling Hydro One shares when it would be effectively investing back into the electricity sector through a different vehicle.
- Unless applied to existing projects, to displace ratepayer-supported costs, this measure would have little or no near-term rate impact.

Departure Tax:

As a result of the IPO, Hydro One paid a "departure tax" payment in lieu of tax (PIL) of $2.6 billion, as a final true-up of its PILs tax obligation. Energy lists using some or all of this departure tax for price mitigation.

- This was paid to the Ontario Electricity Financial Corporation (OEFC). The departure tax payment was fiscally neutral to the Province as the income (revenue) to the OEFC was fully offset by a reduction in ESDI resulting from reduced net income (expense) of Hydro One.
- The payment was also cash neutral, the $2.6 billion were funded from a capital contribution made by the Province into Hydro One and received back by the Province in OEFC as the departure tax payment was made in cash.
- Using some or all of it for price mitigation would require restating the net stranded debt paydown by OEFC related to the IPO. It would be the first time since 2004 that stranded debt would increase. [As the departure tax paid was fiscally neutral, OEFC's uplift was primarily the result of the related deferred tax benefit, as well as the s.50.3 benefit under the *Electricity Act, 1998*.]
- Having OEFC help implement this measure may require introducing changes to OEFC's objects as is legal mandate is to help reduce and pay down stranded debt.
- This would be a one-time measure, potentially spread out over a few years, and fiscal impact, as the departure tax amount was one-time.

Energy Agencies' Cost Effectiveness and Efficiencies:

By empowering energy agencies to continue to move forward with various programs, the initiative is expected to lead to cost effectiveness and efficiencies that could be passed through to the benefit of the rate payers. These initiatives, other than the tax incentives for consolidations, are generally not considered to have fiscal impacts. [Check.]

- IESO's Market Renewal Initiatives – the current "two-schedule price setting system", which is used to settle and dispatch resources in the IESO- administered market, is under review by the IESO.
  - This review is part of a series of consultations launched by the IESO to consider the efficiency and effectiveness of various aspects of the electricity market, and will focus on the energy market pricing system.
  - As part of this review, potential design alternatives will be compared against the status quo with an overall objective of providing "an efficient dispatch and pricing process that produces transparent prices."

**Commented [JK3]:** Not sure what exactly the single schedule system means...stayed away from mentioning as a result.

**Commented [JK4]:** http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/SE-114.aspx

  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - IESO estimates that the total implementation cost – including a 15% contingency and net of avoided costs – will be $150 million. The bulk of the costs (capital) would only be recovered once the project has been implemented and as the benefits are being realized.
- LDC Efficiencies and Rates – reducing osts and having LDCs become more efficient could result in a reduction of Distribution costs on electricity bills, now accounting for about 20% of the total bill.
  - The OEB has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
  - Since 2012, the OEB has taken action – through the Renewed Regulatory Framework for Energy – to more closely link rate regulation with performance measures and outcomes.
  - In 2012, the government asked the Ontario Distribution Sector Review Panel to review the distribution sector and make recommendations about how it could become more efficient. While the Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities, the government response was to pursue voluntary consolidation and put in place tax incentives for consolidation.
- OPG Operational Efficiencies – provide expectation that OPG meet more aggressive cost targets, improving efficiency by about $3/Megawatt hour (MWh).
  - The Province could provide instructions to OPG to focus on its stretch target as part of the Minister's Concurrence letter. This would be a public document that would likely be reviewed by OEB and, if adopted by OEB, would be incorporated as part of OPG's current rate application.
  - If OPG is unable to meet more aggressive cost targets, this could impact net income, and the Province's fiscal plan.

Debt Retirement Charge (Total of about $0.45 Billion in annualized rate to 2017-18):
Ending the DRC early for Class B customers (commercial, small industrial) would have an impact of about $0.45 billion in 2017-18.

- The end of the DRC had previously been linked with balancing mitigation and progress on stranded debt reductionthe end retirement of the residual stranded debt.
- Removing additional DRC revenue from the OEFC would call into question the position that the debt and liabilities of the old Ontario Hydro can continue to be supported.

Debt Financing of the Global Adjustment Proposal :
In a draft Energy deck shared with the Ministry of Finance, Energy considers a number of electricity price mitigation options to defer the pass-through to ratepayers of some generation supply costs by partially financing the cost~~delay recovery of part~~ of the Global Adjustment (GA) and incurring debt to pay the generators their contracted or regulated payments.~~by~~ This will involve debt financing and recovering over a 25 to 30 year period.

While details of this proposal have not been developed, there is a risk of significant fiscal impacts of up to or more than $2 billion annually during the period that GA costs are deferred, depending on the scenario.

- Energy's deck analyzes the system cost and ratepayer impacts of the option, but does not address the fiscal impact/accounting treatment, or implementation. There are four options considered:
  - Option 1: Status Quo – ratepayers continue to pay the full cost of GA each year
  - Option 2: Moderate short-term cost reductions with limits of no more than $2 billion above the true cost of GA

- Option 3: Maximized short-term cost reductions with limits of no more than $2 billion above the true cost of GA
- Option 4: Maximized short-term cost reductions with no limits on the ratepayer GA over-payments in later years

- While the details of the proposal would need to be analyzed prior to a decision to proceed with further consideration of the proposal, the Office of the Provincial Controller Division's (OPCD) preliminary assessment is that this would lead to a negative fiscal impact, such as having to book a large deficit amount.

Tax Relief for Solar and Wind Contracts :
Energy's proposal would use the tax-base to fund the portion of FIT pricing that is above the cost of wind and solar generation procured through a competitive process.

- From 2017 onward, the estimated value of the more than 1,800 MW of large wind projects in commercial operation under the FIT 1 program at a price of $135/MWh is approximately $9.4 billion (NPV 2017).
- The weighted average price for large wind projects over the RES I, II and III competitive procurements was $95.1/MWh.
- If the competitive RES wind pricing were applied to the 1,800 MW of FIT 1 large wind projects, total program value would be estimated at $6.1 billion (NPV 2017).
- The $3.3 billion (NPV) difference could be considered the value of above competitive procurement pricing and could be shifted from the rate-base to the tax-base.

~~[Check and Update]~~

| ($M) | 2016-17[1] | 2017-18[1] | 2018-19[1] | 2019-20[1] | 2020-21[1] |
|---|---|---|---|---|---|
| ~~OEBT~~ RRRP ~~Pilot Nationwide~~ | | ~~398~~666 | ~~419~~684 | 433 | 447 |
| ~~OEBT – Enhance Benefit~~ | | 162 | 226 | 279 | 322 |
| ~~OEBT – Expand Eligibility~~ | | TBD | TBD | TBD | TBD |
| ~~Conservation Programs through Tax Base~~ | ~~110~~ | ~~450~~ | ~~450~~ | ~~450~~ | ~~450~~ |
| [Trillium Trust] | ~~TBD~~100 | ~~TBD~~390 | ~~TBD~~390 | ~~TBD~~390 | ~~TBD~~390 |
| Departure Tax | 260 | ~~TBD~~260 | ~~TBD~~260 | ~~TBD~~260 | ~~TBD~~260 |
| DRC removal for Class B | 110 | 450 | | | |
| ~~Tax Relief for Solar and Wind~~ | TBD | TBD | TBD | TBD | TBD |
| Proposed Program Total: | ~~220~~470 | ~~1,298~~1,927 | ~~869~~1,560 | ~~883~~1,362 | ~~897~~1,419 |
| | | | | | |
| OREC | 300 | 1,100* | 1,100* | 1,200* | 1,200* |
| Ending DRC | 330 | 330 | -- | -- | -- |
| NIERP | 120 | 120 | 120 | 120 | 120 |
| NOEC | 25 | 25 | 25 | 25 | 25 |
| OEPTC[2] | 450 | 460 | 470 | 481 | 481 |
| Existing Program Total:[3] | 1,225 | 2,005 | 1,715 | 1,826 | 1,826 |
| TOTAL[3] | 1, | 3, | | | |

1. Based on forecasted numbers
2. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

3. Total would be significantly larger with the TBDs crystalized.

**Corporate and Electricity Finance Division / Ontario Financing Authority**
**~~December 12~~January 15, 2016**

**From:** John Kim
**To:** Gavin He; Shajee Kathirgamanathan
**Subject:** Re: Rate Mitigation
**Date:** Sunday, January 15, 2017 3:32:35 PM

---

Yeah, I think Shajee's point on slide 7? might be the only path. I am about to take a crack at it but I don't want to minimize the fiscal impact by taking their numbers. Thus being deliberate. Shouldn't take long.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:30 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Based on Emily's update, the impact for OESP & RRRP will be $0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022, without detailed impact on each year. So it we are going to update the table, it seems we might need to make some assumption.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:17 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yes, the OESP and RRRP that Emily updated, kind of showed me there were updates.

Ok, I need to go back to that deck.

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**Subject:** Re: Rate Mitigation

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And the table.  I'm trying to assess if not updating that is an option as I'm getting tired.

What's your sense?

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**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 3:06 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

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**Subject:** Re: Rate Mitigation

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**Subject:** FW: Rate Mitigation

FYI.

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I think what things need to be checked against the updated deck, as well.

John.

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**Sent:** Sunday, January 15, 2017 9:59 AM
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**Subject:** RE: Rate Mitigation

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> Thanks,
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> Sent: Saturday, January 14, 2017 7:21 PM
> To: John Kim <John.Kim@ofina.on.ca>
> Subject: RE: Rate Mitigation
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> HI John,
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> Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.
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To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

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Apologies on the timing.

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> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
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> Subject: Fw: Rate Mitigation
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> Keley
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> Sent: Saturday, January 14, 2017 7:49 AM
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> To: Orsini, Steve (CAB)
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> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
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> Subject: Rate Mitigation

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Serge

**From:** John Kim
**To:** Gavin He; Shajee Kathirgamanathan
**Subject:** Re: Rate Mitigation
**Date:** Sunday, January 15, 2017 3:16:44 PM

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**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Rate Mitigation

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**Subject:** FW: Rate Mitigation

FYI.

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I think what things need to be checked against the updated deck, as well.

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I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.

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To: John Kim <John.Kim@ofina.on.ca>
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Good morning,

Attached are materials for Monday's rate mitigation meeting.

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Original Message

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>

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To: Orsini, Steve (CAB)

Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

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Serge

| | |
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| **From:** | John Kim |
| **To:** | Shajee Kathirgamanathan; Gavin He |
| **Subject:** | Re: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 3:10:19 PM |

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**Subject:** Re: Rate Mitigation
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Thanks,
Ron

Begin forwarded message:

> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation
>
> Good morning,
>
> Attached are materials for Monday's rate mitigation meeting.
>
> Keley
>
> Original Message
>
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
>
> Sent: Saturday, January 14, 2017 7:49 AM

To: Orsini, Steve (CAB)

Cc: Bromm, William (CAB); Katona, Keley (ENERGY)

Subject: Rate Mitigation

Hi Steve,

Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

| | |
|---|---|
| **From:** | John Kim |
| **To:** | Gavin He |
| **Subject:** | Re: Rate Mitigation |
| **Date:** | Sunday, January 15, 2017 4:50:47 PM |

---

You too!

---

**From:** Gavin He
**Sent:** January 15, 2017 4:48:49 PM
**To:** John Kim
**Subject:** RE: Rate Mitigation

Hi John,

No problem. Sent them to Ron and cc'ed you, Francisco, and Emily. Hopefully they are fine.

Going to log off now. Have a great evening.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:37 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks Gavin.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:35:58 PM
**To:** John Kim
**Cc:** Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Sure.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:35 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Let's send the first two with the aim to send the third tomorrow if still asked.  I will review the third one, the GA one, again either tonight or tomorrow morning.

John.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:32 PM
**To:** John Kim
**Cc:** Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Sure, just to confirm, I will send all the attached to Ron?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:26 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks....let's send to Ron.  Pls. also include the deck from Francisco.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:21 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

I am good with the notes and I don't have any additional comments, saved that in the folder.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:19 PM

**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

No reason....updated the RRRP.

I took a look at the comments in the deck and the comments are good. Given the meeting is on Monday, I am leaning towards not sending back comments on the deck back unless proposing to make edits to the text, like Francisco is in the attached.

I'm OK to send these back with cc: to Emily and Francisco unless you have additional comments, which would be welcome. Ideally would like to review further but I'm going to bed soon.

Thanks,

John.

---

**From:** Gavin He
**Sent:** January 15, 2017 4:13 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

I reviewed the debt-financing GA sections and I am good with the edits.

I didn't review the other deck in details, but took a quick look on slide 7 and the new section at the end of the note. Just one question, is there a reason why the RRRP numbers for 2019-2021 were not updated?

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 4:01 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Let me know what you think. If OK, could you save to the folder?

Going to quickly go through the deck.

---

**From:** John Kim
**Sent:** January 15, 2017 3:32 PM
**To:** Gavin He; Shajee Kathirgamanathan
**Subject:** Re: Rate Mitigation

Yeah, I think Shajee's point on slide 7? might be the only path. I am about to take a crack at it but I don't want to minimize the fiscal impact by taking their numbers. Thus being deliberate. Shouldn't take long.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:30 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Based on Emily's update, the impact for OESP & RRRP will be $0.42-0.85 bn in 2017 to $0.62-1.18 bn in 2022, without detailed impact on each year. So it we are going to update the table, it seems we might need to make some assumption.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:17 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yes, the OESP and RRRP that Emily updated, kind of showed me there were updates.

Ok, I need to go back to that deck.

---

**From:** Gavin He
**Sent:** January 15, 2017 3:13 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John,

Are you referring to the numbers for OESP and RRRP?

Also, the $2B GA amount is from scenario 2 and 3. The cap for the maximum amount of GA above the true cost is $2B.

Regards,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 3:10 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Yeah, I'm trying to decide if it's worth adding that proposal. While I am trying to minimize work, it's fiscal impact stuff.

And the table. I'm trying to assess if not updating that is an option as I'm getting tired.

What's your sense?

---

**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 3:06 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

If you're referring to #10 on renewables/wind contracts, I think it's not so much tax exempting renewables, but rather paying through the tax base the amounts above competitive electricity rates. (Eg. If competitive amount is say $80/mwh. And they have a community/indigenous adder of $40/mwh. Therefore a total contract price is $120/mwh. The proposal would shift the $40/mwh to the tax base). That's my interpretation at least.

Again it's just another way to transfer to the tax base from the rate base.

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 2:57 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He

<Gavin.He@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks.....I think we should send the note in for about 6pm so don't worry about it. I will have a look at the deck.

The only thing that concerns me is the additional proposals like tax exempting of renewable contracts, etc. I'm debating whether they need coverage but likely to try to dodge it. I think the table at the bottom needs updating but I'm currently still assessing it.

---

**From:** Shajee Kathirgamanathan
**Sent:** January 15, 2017 2:54 PM
**To:** John Kim; Gavin He
**Subject:** RE: Rate Mitigation

I finished with my comments on the power point file. I think there were some CEFD and Energy Comments from before.

Only way to distinguish are my comments are "**CEFD Comments**" (bold), whereas before it was evidently bold and underlined.

Will take a quick review of the document, but heading out shortly for the evening. Will try to get done what I can.

Thanks,
Shajee

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 2:45 PM
**To:** Gavin He <Gavin.He@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** Re: Rate Mitigation

Thanks....saw this after sending the other.

---

**From:** Gavin He
**Sent:** January 15, 2017 2:41 PM
**To:** John Kim; Shajee Kathirgamanathan
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

Emily just finished the file. I have copied my edits in her version and saved it as v9.

Thanks,
Gavin He

---

**From:** Gavin He
**Sent:** Sunday, January 15, 2017 2:24 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John/Shajee,

In the interest of time, I have worked on v8 from my personal drive, as Emily is still in the note. I have reviewed and updated sections related to debt-financing GA.

John – for the numbers, I wasn't involved in providing the updates, so don't have much knowledge on how the numbers were put together, and the presentation decks don't provide update on those numbers, so I didn't make any update there.

Please review and let me know if you have any questions. I can consolidate my edits once Emily is done.

Thanks,
Gavin He

---

**From:** John Kim
**Sent:** Sunday, January 15, 2017 10:01 AM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
**Subject:** FW: Rate Mitigation

FYI.

Hoping to finalize on our end by early afternoon…..Emily might have other comments.

I think what things need to be checked against the updated deck, as well.

John.

---

**From:** Francisco Chinchon
**Sent:** Sunday, January 15, 2017 9:59 AM

**To:** John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
**Subject:** RE: Rate Mitigation

Hi John, Emily,

I added to John's draft with respect to DT and TT. I don't have more to add so feel free to share with Ron once you are ready.

I also made some edits to Energy's slides but not sure those are needed.

Thanks,

Francisco

-----Original Message-----
From: John Kim
Sent: Saturday, January 14, 2017 11:45 PM
To: Emily Kerr <Emily.Kerr@ofina.on.ca>
Subject: RE: Rate Mitigation

Hi Emily,

Just put down some quick updates to the existing note so that we could have a reasonable starting point. Pls. feel free to edit and update and maybe we could try to combine tomorrow.

Thanks,

John.

-----Original Message-----
From: Emily Kerr
Sent: Saturday, January 14, 2017 7:21 PM
To: John Kim <John.Kim@ofina.on.ca>
Subject: RE: Rate Mitigation

HI John,

Let me know if there are parts of the note you want me to review and update. I will be around tomorrow to add material or comments to the note/deck.

Emily

-----Original Message-----
From: Ronald Kwan
Sent: Saturday, January 14, 2017 11:21 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Emily Kerr <Emily.Kerr@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: Fwd: Rate Mitigation

Hi,

There's a meeting on Monday on Energy's rate mitigation decks.

Would you be able to review over the weekend -- perhaps updating the materials from December, as applicable -- so comments can get to the DMO Sunday night?

Apologies on the timing.

Thanks,
Ron

Begin forwarded message:

> Original Message
>
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
>
> Sent: Saturday, January 14, 2017 8:16 AM
>
> To: Castillo, Mardy (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
>
> Subject: Fw: Rate Mitigation
>
>
>
> Good morning,
>
> Attached are materials for Monday's rate mitigation meeting.
>
> Keley
>
>
> Original Message
>
> From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
>
> Sent: Saturday, January 14, 2017 7:49 AM
>
> To: Orsini, Steve (CAB)
>
> Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
>
> Subject: Rate Mitigation

Hi Steve,

Attached are two decks on rate mitigation. We can use the decks as the basis for discussion at our meeting on Monday. I'll ask Keley to share with the other participants.

Serge

**From:** Shajee Kathirgamanathan
**To:** John Kim
**Cc:** Salman Qadir
**Subject:** Re: for tomorrow - price mitigation
**Date:** Monday, September 05, 2016 12:39:20 PM

---

Yup, I made most of Ron's updates to this version and kept our overall layout/ points . (E.g. *Small* farms etc).

No, I'm out for most of today, will double check tomorrow and hopefully we can finalize.

Thanks,
Shajee

Sent from my mobile device, please excuse any typos or brevity.

On Sep 5, 2016, at 9:05 AM, John Kim <John.Kim@ofina.on.ca> wrote:

> Hi Shajee,
>
> As a general ask, the version that was signed off for TB briefing last week, could we incorporate as much of those contents in this version?
>
> Connection this morning is very unstable so hard for me to check.
>
> John.
>
> ---
>
> **From:** Shajee Kathirgamanathan
> **Sent:** Monday, September 05, 2016 12:10 AM
> **To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
> **Subject:** RE: for tomorrow - price mitigation
>
> Hi John,
>
> Since we're having the Cabinet Briefing on Wednesday, just wanted to finish off this note for your (and eventual) review by Ron. (Also not sure, but would TPD also need to review this note (?). Madeleine invited Sriram along with us.)
>
> File attached and found here:
> S:\Users\CEF\Hydro 2016\Cabinet Submissions\Electricity Price Mitigation\Cabinet Note - Electricity Price Mitigation v4.docx
>
> Also I generated some new calculations from the latest Ontario Provincial Outlook (OPO) produced by the IESO. They only had revised demand information; not prices.

| | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
|---|---|---|---|---|
| ENERGY | **261** | **1006** | **1004** | **994** |
| CEFD-LTEP | **224** | **909** | **958** | **1005** |
| CEFD-OPO | **218** | **880** | **911** | **934** |

Thanks,
Shajee

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** Shajee Kathirgamanathan
**Sent:** Thursday, September 01, 2016 1:20 PM
**To:** John Kim <John.Kim@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** RE: for tomorrow - price mitigation

Will do.

Thanks

**Shajee Kathirgamanathan**
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

---

**From:** John Kim
**Sent:** Thursday, September 01, 2016 1:17 PM
**To:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>
**Subject:** for tomorrow - price mitigation

As discussed, could we aim to compile some information RPP and Cap and Trade in an internal note or some sort of a dump for tomorrow?

Thanks,

John.

Y. John Kim
Director (A), Electricity Finance Branch
Corporate & Electricity Finance Division

Ontario Financing Authority
Ph: 416-212-6996
Email: john.kim@ofina.on.ca

**From:** Adam Prokop
**To:** John Kim; Salman Qadir
**Cc:** Shajee Kathirgamanathan; Gavin He
**Subject:** Re: rate mitigation
**Date:** Thursday, January 12, 2017 2:43:44 PM

---

Agreed,

And I think slide 4 is critical with the key risks. A suggestion that has a greater capability to exacerbate an issue rather than solve it is not really a solution.

Kind regards,

Adam Prokop

---

**From:** John Kim
**Sent:** Thursday, January 12, 2017 2:12 PM
**To:** Salman Qadir
**Cc:** Shajee Kathirgamanathan; Gavin He; Adam Prokop
**Subject:** RE: rate mitigation

To me, the proposals are tough to sell for two reasons before we get to the fiscal impact. 1. The intergenerational equity and 2. The optics.

But the challenge would be to put that down in an elegant way.

---

**From:** John Kim
**Sent:** Thursday, January 12, 2017 1:49 PM
**To:** Salman Qadir <Salman.Qadir@ofina.on.ca>
**Cc:** Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>
**Subject:** Fwd: rate mitigation

FYI

These proposals seem to relate to the transferring the contracts to oefc but not 100%

Begin forwarded message:

> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** January 12, 2017 at 1:25:20 PM EST
> **To:** John Kim <John.Kim@ofina.on.ca>, Emily Kerr <Emily.Kerr@ofina.on.ca>
> **Subject: FW: rate mitigation**

Hi,

FYI. Some implementation questions.

Ron

---

**From:** Ronald Kwan
**Sent:** January-12-17 12:37
**To:** Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>
**Subject:** RE: rate mitigation

Hi Scott,

The quick thought I had was then on a question on what the roles of each OEFC and IESO would be.

I had thought what was being contemplated was that IESO would be held whole, and OEFC would "pay" -- borrowing money to do so], instead of IESO having ratepayers pay through the GA. In this scenario, OEFC has an expense to IESO, financed through debt as OEFC has no associated revenue (at least at the outset until the relative GA size is reversed over time. As a sub-option, if the contracts could be assigned to OEFC, then OEFC's NUG regulation could potentially be listed and have OEFC recover the costs over time, not in the year-of – but that would have a fiscal impact since expense in the early years would exceed recoveries through the GA.

Your alternative seems to be where IESO simply borrows from OEFC, so for OEFC all of this is happening on the balance sheet, where OEFC borrows from the Province and then lends to IESO, so no net income statement or stranded debt impact on OEFC. However, in this case, IESO is short. It has cash from the OEFC financing, but it doesn't have the annual revenue to cover its contractual obligations. Wouldn't that likely affect the IESO and how it accounts for the contracts?

In either case, I'd think that implementation and accounting questions would need to be addressed, (e.g., objects of the corps, legislation / regulations).

Ron

---

**From:** Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
**Sent:** January-12-17 12:04
**To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
**Subject:** rate mitigation

Hi Ron,

Thinking more about our conversation yesterday around financing of a

portion of “out-of-market” generation costs. If IESO entered into a financing arrangement with OEFC and agreed to repay these costs + interest over a set time period, could OEFC record a receivable to offset / avoid the in-year expense?

I ask this in part because one of the other options on the table is to renegotiate wind contracts to reduce current costs by offering to extend the length of the contracts. That will rely on private proponents’ cost of capital. We could do the same thing using the Province’s costs of funds by financing a portion of the current cost through the OEFC and then agreeing to have ratepayers repay in years 20-30, once contracts have expired, but the facilities potentially still have remaining operating life.

Just a thought – happy to chat.
Scott

| | |
|---|---|
| **From:** | Shajee Kathirgamanathan |
| **To:** | John Kim |
| **Subject:** | cost shift charts |
| **Date:** | Monday, November 21, 2016 12:10:56 PM |
| **Attachments:** | Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides.pptx |

---

Hi John,

Just a really first crack at the table and timeline, attached also found here: S:\Users\CEF\Hydro 2016\Electricity Prices\Cost Shifts\Cost Shifting - Sent to MO on 2016-11-18 - w CEFD Slides.pptx

Is the timeline what you were thinking will look like?

I'll continue after lunch, including find our existing language on some of these. Also I believe there were previous incarnations of some of these programs we may want to highlight (eg. OEPTC/NOEC and NIER).

Thanks,
Shajee

**Shajee Kathirgamanathan**
Senior Advisor
Electricity Finance Branch, Corporate and Electricity Finance Division
Ontario Financing Authority
Office: 416-325-1402 | Mobile: 647-294-3359
shajee.kathirgamanathan@ofina.on.ca

Ontario

MINISTRY OF
ENERGY

# Cost Shifts in Ontario's Electricity Sector

## Working Draft

November 2016

CONFIDENTIAL DRAFT

# Context

- Necessary investments in Ontario's electricity system have led to increased prices, prompting government to introduced a number of price mitigation programs for all consumer types.
  - In addition to existing rate mitigation programs, the 2016 Throne Speech announced a package of rate mitigation initiatives to address electricity prices for residential, commercial and industrial consumers.

- Ontario has a number of programs in place to manage residential electricity prices, including:
  - Ontario Electricity Support Program (OESP);
  - Rural or Remote Rate Protect (RRRP);
  - Northern Ontario Energy Credit (NOEC); and
  - Ontario Energy and Property Tax Credit (OEPTC).

- Ontario also has a number of programs in place to manage industrial electricity prices, including:
  - Industrial Conservation Initiative (ICI);
  - Industrial Electricity Incentive (IEI);
  - Industrial Accelerator Program (IAP);
  - saveONenergy for Business Program; and
  - Demand Response.

# Context (cont'd)

- Several programs in the electricity sector “shift costs” from one group of electricity consumers to another:
  - **Rural or Remote Rate Protect** (**RRRP)** is a longstanding program that reduces the delivery charge for rural electricity consumers and is paid for by all consumers in Ontario through a regulatory charge on bills.
  - **Ontario Electricity Support Program (OESP)** is funded via a regulatory charge on consumer bills and provides support for qualifying low income electricity consumers.
  - **Industrial Conservation Initiative (ICI)** empowers large consumers to lower their costs by reducing their demand during peak hours. In the process, ICI shifts costs from large electricity consumers to all other consumers in Ontario.
  - **Industrial Electricity Incentive** (**IEI**) program, offers reduced electricity prices for companies starting or expanding operations in Ontario. All electricity consumers in Ontario pay for the price reduction that IEI participants receive.

# Cost Shifts in Ontario's Electricity Sector

- The tables on the right show the estimated cost shifts that result from existing government programs.
- ICI has had the largest cost shift of all the programs, due to the large size of Global Adjustment (GA) and the way that it is recovered from consumer classes.
- RRRP and OESP impact the regulatory line on consumer bills, while ICI, IEI and conservation affect GA (i.e., Electricity line on bills of Regulated Price Plan consumers).

**Cost Shift Impacts - Residential Bill**

*Typical 750 kWh/month Toronto Hydro consumer*

| *$/month* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 2.65 | 3.25 | 3.88 | 3.53 | 4.75 | 4.77 |
| RRRP | 0.90 | 0.82 | 0.84 | 0.92 | 0.93 | 0.94 |
| OESP | - | - | - | - | - | 0.84 |
| Conservation | 1.85 | 1.92 | 2.00 | 1.58 | 2.43 | 2.45 |
| IEI | - | - | 0.08 | 0.09 | 0.11 | 0.12 |
| **Total** | **5.41** | **5.99** | **6.81** | **6.13** | **8.21** | **9.12** |

**Cost Shift Impacts - Industrial Bill**

*Typical Class A consumer*

| *$/MWh* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | -22.17 | -26.36 | -30.29 | -25.91 | -33.79 | -33.92 |
| RRRP | 1.20 | 1.10 | 1.12 | 1.23 | 1.24 | 1.25 |
| OESP | - | - | - | - | - | 1.13 |
| Conservation | 1.53 | 1.59 | 1.66 | 1.31 | 2.01 | 2.02 |
| IEI | - | - | 0.07 | 0.08 | 0.09 | 0.10 |
| **Total** | **-19.43** | **-23.67** | **-27.44** | **-23.29** | **-30.45** | **-29.43** |

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

# Cost Shifts in Ontario's Electricity Sector (cont'd)

- The table on the right shows the total cost for various government electricity programs. These programs are currently funded through the electricity system ratebase.

- Funding of these programs through the fiscal plan would remove these costs from the electricity system (i.e., Placing these costs on the taxbase).

**Cost of Programs**

*By government program*

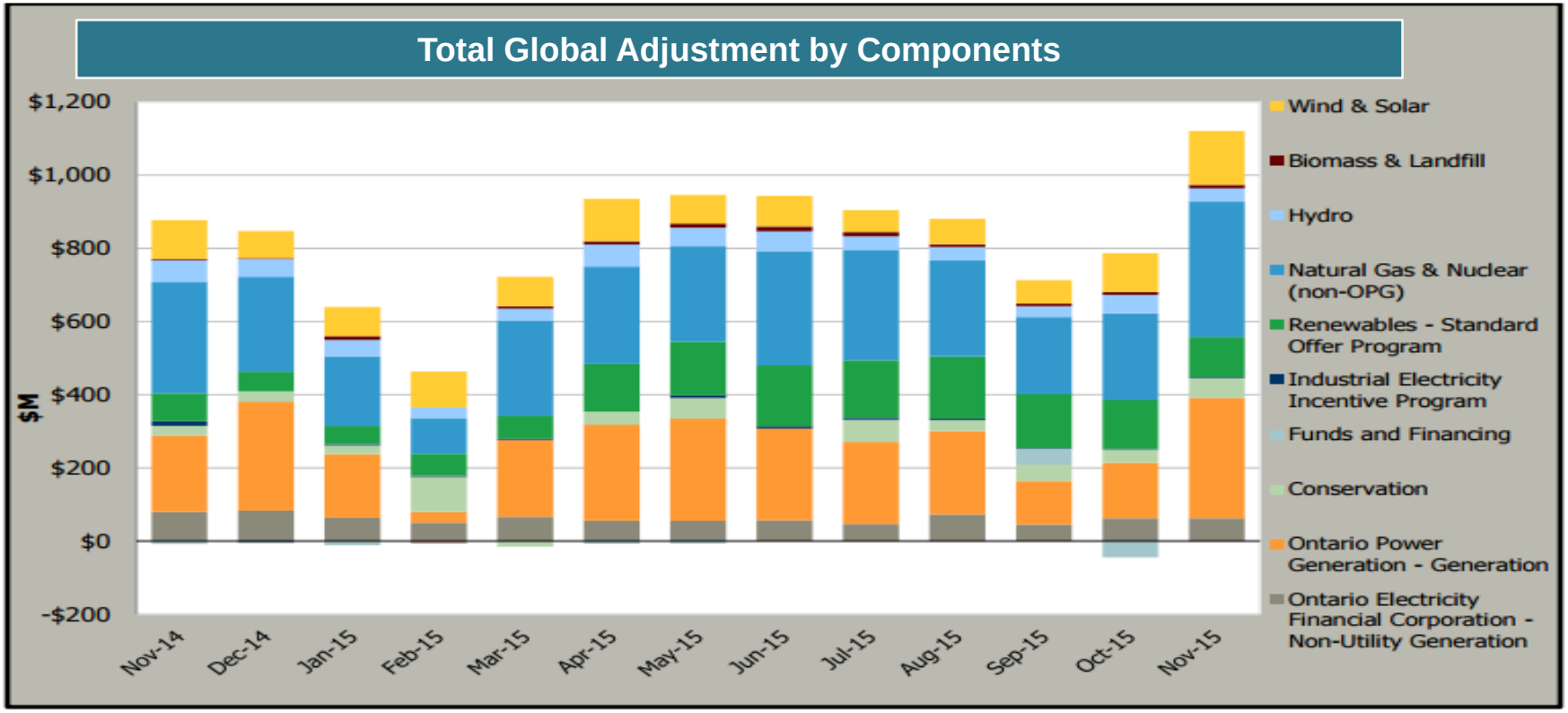
| *$M* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| ICI | 506 | 615 | 736 | 670 | 890 | 893 |
| RRRP | 172 | 156 | 159 | 176 | 174 | 176 |
| OESP | - | - | - | - | - | 158 |
| Conservation | 329 | 339 | 354 | 280 | 425 | 428 |
| IEI | - | - | 15 | 16 | 18 | 19 |

- For example, removing the roughly $900 million of program cost from the Industrial Conservation Initiative (ICI) program would save the typical residential electricity consumer $4.77 per month in 2016.

**Note:** OESP did not come into effect until 2016. The 2016 values represent forecasts and are subject to change.

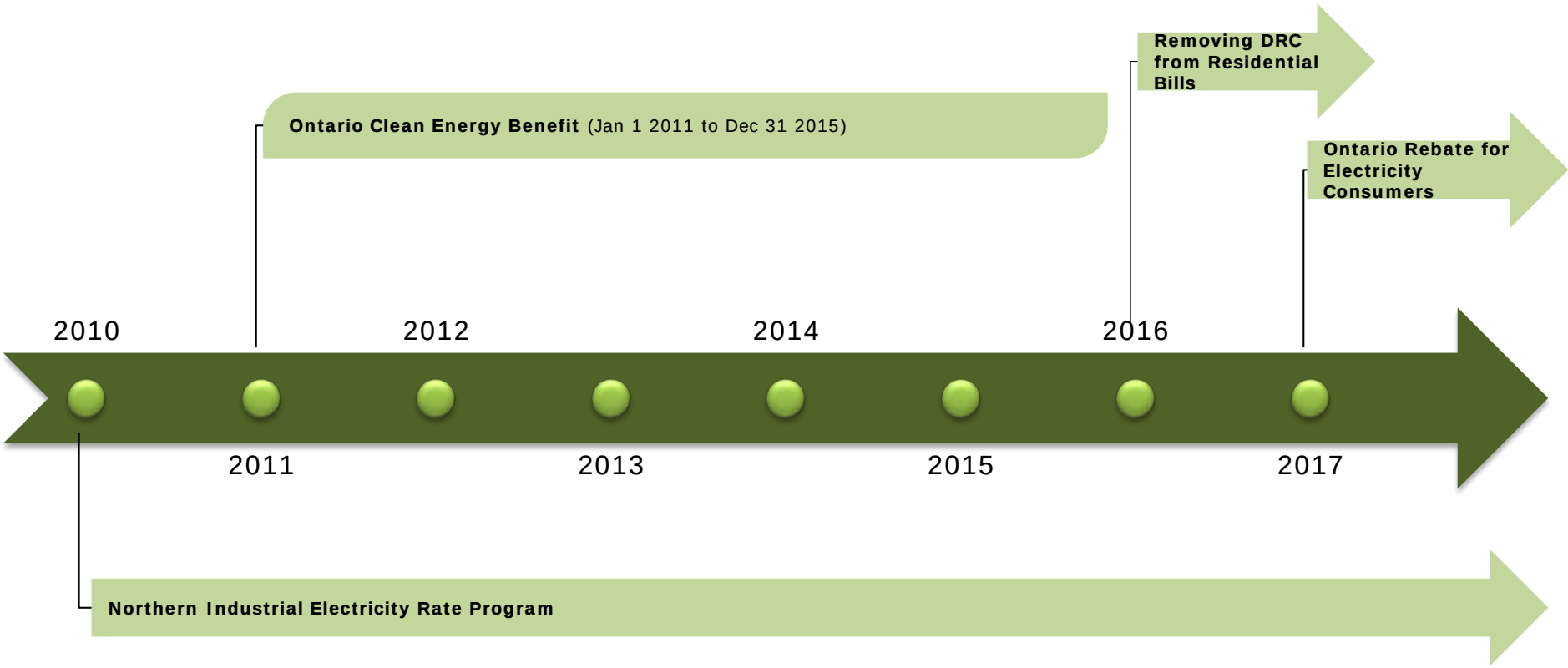
# Total Components of Global Adjustment

- Global Adjustment (GA) is a market mechanism that recovers costs from electricity consumers, including the cost of almost all conservation programs in the province (i.e., approximately half a billion dollars in 2016).




**Source:** IESO Monthly Market Report (November 2015)

# Taxpayer funded Electricity Price Mitigation

| Program | Annual Fiscal Impacts ($M) | Date | Details |
|---|---|---|---|
| Ontario Clean Energy Benefit (OCEB) | 1,000 | Jan 1 2011 to Dec 31, 2015 | |
| Ending DRC from Residential Bills | 300 | Jan 1, 2016 onward | |
| Ontario Rebate for Electricity Consumers (OREC) | 1,000 | Jan 1, 2017 onward | Rebate -- directly on consumers' residential electricity bills -- an amount equal to the provincial portion of the Harmonized Sales Tax (HST), an eight per cent savings. |
| Northern Industrial Electricity Rate Program | 120 | 2010-2011 fiscal year onwards | Provides a $20 per megawatt hour rebate, up to a maximum of $20 million, for qualifying large northern industrial consumers. |
| Northern Ontario Energy Credit | 25 | | Delivered as part of the Ontario Trillium Benefit, provides individuals living in northern Ontario with a credit of up to $146 per year for the 2016 benefit year, and families up to $224. |
| Ontario Energy Property Tax Credit | 445 | | Delivered as part of the Ontario Trillium Benefit, provides up to $1,008 per year for low-to moderate-income individuals and families, and up to $1,148 for qualifying seniors. |
| Ontario Sales Tax Credit (?) | | | |

# Taxpayer funded Electricity Price Mitigation